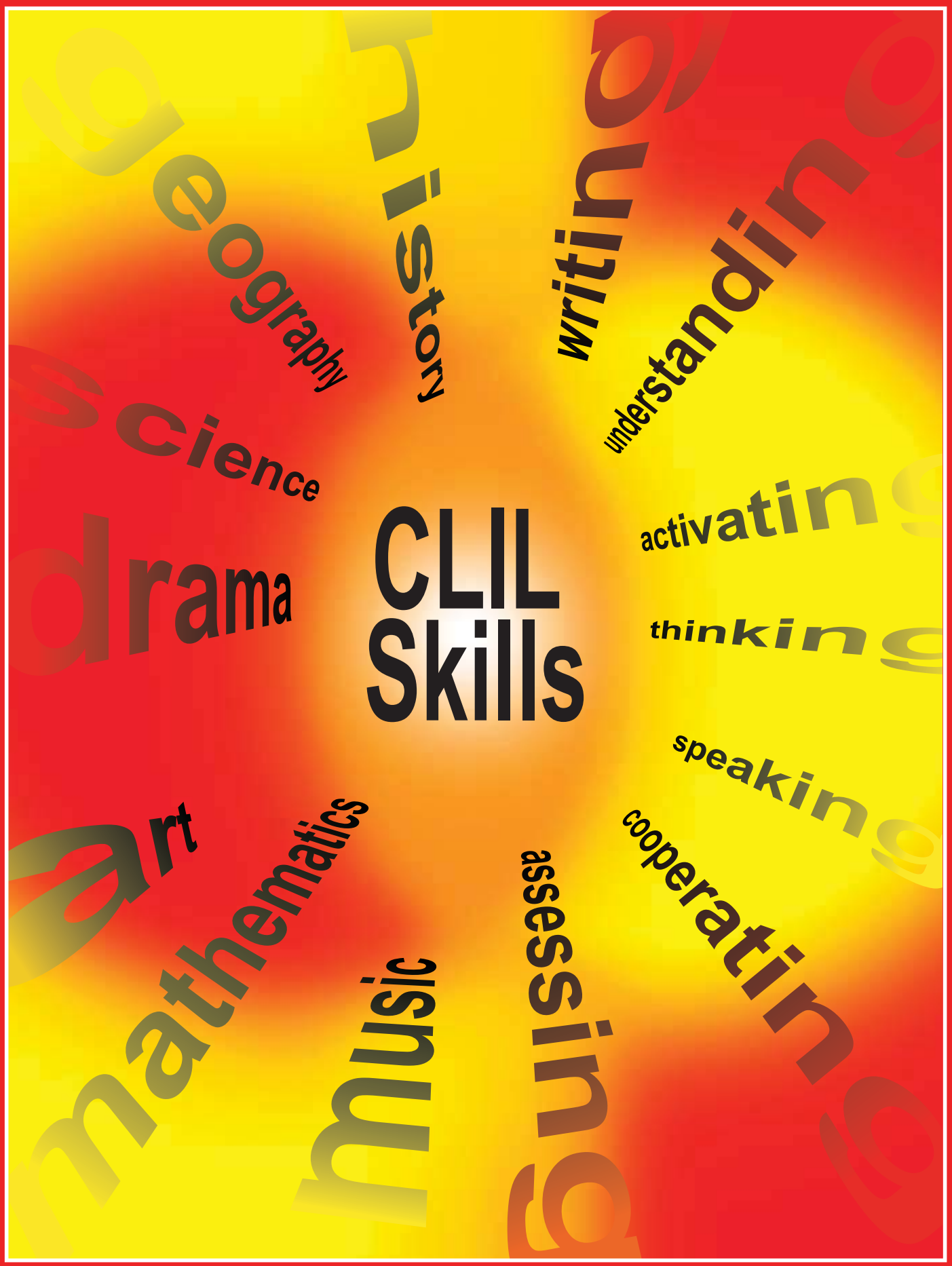

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CLIL Skills

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ISBN 978 90 815184 1 3

Text: Liz Dale, Wibo van der Es, Rosie Tanner
Illustrations and cover design: Total Shot Productions, Delft

Design: UFB/GrafiMedia, Leiden
Printed and bound in Leiden

First published 2010

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Acknowledgements

We would especially like to thank the following CLIL teachers for their valuable and creative contributions, feedback and materials during expert meetings: Yvonne Boelman (history), Tikvah Breimer (social science), Jan Flokstra (physics), Sally Hill (biology), Heidi Krieger (geography) and Dennie Lodders (physical education). A special thanks to Tikvah for suggesting that we enliven the text with colourful cartoons and illustrations.

We would also like to thank the following teachers who gave us feedback or contributed practical lesson ideas: Jan de Brauwer (history), Lorna Dunn (religious education), Bob Gembey (English), Arthur de Graaff (biology), Scarlett Hassel (mathematics), Mathijs Hekkelman (English), Mireille ter Horst (history), Sissi Hubers (religious education), Frankje Huisman (physics), Vincent Koerse (biology), Marjolijn Kruijt (geography), Johan Lamberts (history), Annelet Lykles (English), Fred Oosting (history), Nigel Osborne (international business studies), Stephen Pegg (art), André van Raalte (biology), Florentina Rosca Pruna (physics), Menno Ruppert (geography) and Mark Steenvoorde (technology)

To the following schools we are grateful for granting their teachers permission to contribute to this project and for provided learner work: Amsterdam International Community School, Cals College Nieuwegein, Christelijk Lyceum Zeist, Herman Wesselink College Amstelveen, International School of The Hague, Isendoorn College Warnsveld, Laar en Berg Laren, Dr. Mollercollege Waalwijk, Rijnlandse Lycea Oegstgeest, Sassenheim and Wassenaar, Van Der Capellen Scholengemeenschap Zwolle and Vechtstede College Weesp.

Many thanks to the following publishers, authors and organisations for granting permission to reproduce texts and/or illustrations free of charge: BBC, British Museum, Christine Counsell, Council of Europe, Department for Education and Skills, Factworld (The Forum for Across the Curriculum Teaching), Heinemann, Learning and Teaching Scotland, Malmberg, Oxford University Press, Texamen, The Historical Association, Thieme Meulenhoff.

A great deal of credit goes to the following people who have contributed to this book by reading and listening to our ideas and giving us useful and detailed feedback: **Rick de Graaff** of **IVLOS Institute of Education, Utrecht University** kindly edited and gave constructive feedback on the book. His comments helped us ensure what we wrote made sense. His valuable questions supported us in rethinking and reorganising our writing in ways that contributed greatly to the quality of our book. **Gerrit Jan Koopman** of **IVLOS Institute of Education, Utrecht University** played a critical role in the early brainstorming sessions that led to this book and provided valuable contributions and useful feedback on the initial drafts of our chapters. **Bernice Rieff** of the **National Centre for Modern Languages** gave patient administrative support. **Stephan Timmers** of **Total Shot Productions** designed hilarious cartoons, brilliant illustrations and striking icons. Without his creative contributions the layout of the book would have been much less exciting. **Fulco Teunissen** and **Kate Kirwin** of **Twelvetrees Translations** proofread meticulously, which really enhanced the clarity of this book. **Machteld Reuser** of **ICLON Leiden University School of Teaching** and **Rob Goedemans** of the **Faculty of Humanities**, **Leiden University** gave very valuable and scrupulous support during the editing phase. And lastly, but most importantly, we are grateful to **Alessandra Corda** of the **National Centre for Modern Languages** for shepherding our book through the brainstorming, writing and publishing process, for supporting us through the writing and editing process and for believing in us.

If by any chance you also contributed to *CLIL Skills* and we have not mentioned you, please contact us.

December 2009
Liz, Wibo and Rosie

Foreword

CLIL is one of the most innovative and successful developments of Dutch and European education. The European Platform has actively supported CLIL since its earliest beginnings in the Netherlands, by acting as national contact for information and advice on CLIL, offering general and financial support to schools, monitoring the quality of CLIL through school visits and certification, and cooperating with researchers and teacher training institutes. In the past twenty years, the number of schools offering CLIL education in the Netherlands has rapidly increased. More than a hundred schools are now members of the school network that was founded by the European Platform in 1994.

This is not an isolated phenomenon: we see a steady expansion of CLIL provision in school education in the great majority of European countries, supported by EU and national policy initiatives. Educators, policy makers and parents consider CLIL a strong means to offer children a better preparation for their future life, in which international contacts and mobility will be increasingly more widespread.

Faced with such a growth of CLIL education, one of the crucial challenges that we have to deal with is the provision of good pre- and in-service teacher training and effective teaching materials. From this perspective, I highly appreciate that we can now offer Dutch CLIL teachers a comprehensive handbook, aimed at supporting them in their daily work. In *CLIL Skills* the team of authors, composed of teacher trainers working at Dutch teacher training institutions involved in CLIL, have brought together broad knowledge and long experience in this field, and have created a valuable instrument for the professional development of teachers.

I am confident that *CLIL Skills* will meet the needs of many CLIL teachers: it clearly presents the theoretical background on which CLIL is founded, showing the implications for classroom practice and offering useful practical ideas for CLIL lessons.

I sincerely hope that this handbook will be of value to all who read it.

Jindra Divis
European Platform - internationalising education
General Director

Introduction

Tweetalig onderwijs (TTO) or Content and Language Integrated Learning (CLIL) is well established in the Netherlands. More than a hundred schools offer their learners the opportunity to participate in a bilingual *VWO*-stream. Over twenty-five schools offer a bilingual *HAVO* programme, and a few *VMBO* schools offer a number of curriculum subjects taught in English. Much progress has been made since 1989, when TTO began on a very small scale. The Netherlands now harbours an established network of schools, co-ordinated by the European Platform. Its quality assurance system of inspection and certification ensures that learners are provided with valuable and challenging learning opportunities.

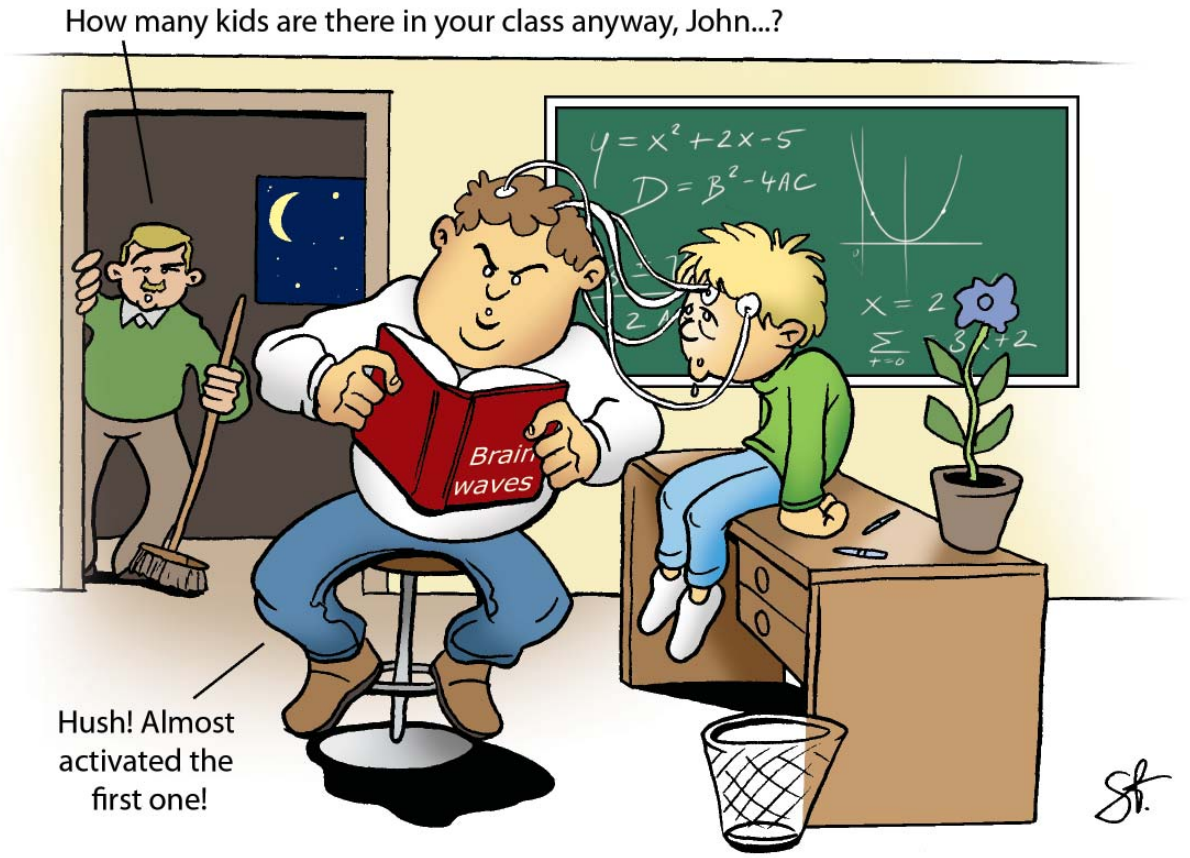
As many CLIL teachers will testify, teaching a school subject through a second language brings with it a variety of challenges. How can subject teachers make sure that learners understand everything they need to know about the subject when a second language is being used by both the teacher and the learners? How can teachers help learners acquire not only the content of their subject but also the language they need to demonstrate their understanding of the content? How can learners learn both content and language at the same time? This handbook aims to explain some underlying principles that will help teachers to answer these questions and to give practical examples of what they can do to meet the challenges that CLIL brings. It is aimed both at teachers already teaching their subject through English and at teachers who will be doing so in the future. The book can be used as a general resource for individual teachers and as a tool for further professional development, either individually or in teams. In every chapter, the sections *Lead in* and *Ideas for teacher development* contain tasks to help teachers develop deeper insight into specific CLIL issues. In some cases, a key to these tasks is provided in the Key to all tasks at the end of the book, so that readers can compare their ideas with those of the authors.

The handbook is the result of activities of the *Expertisecentrum Moderne Vreemde Talen* (National Centre for Modern Languages), a joint project of *Leiden University, Hogeschool Leiden* and *Hogeschool Rotterdam,* co-funded by the Dutch Ministry of Education and coordinated by *ICLON, Leiden University School of Teaching*. It covers six major *CLIL skills*. Chapter One covers the importance of activating what learners already know and provides examples of how this can be done in practice. Chapter Two deals with selecting challenging materials for CLIL classes, and Chapter Three goes on to show how teachers can set tasks that encourage learners to interact with the materials. Chapter Four explores ways of encouraging learners to speak and write about a subject in the English language. In Chapter Five, assessing learners and providing feedback are highlighted, and Chapter Six demonstrates ways of setting up cross-curricular projects to encourage transferable language skills. Throughout the book, we explain which key teaching principles support our ideas and show how these can help subject teachers in teaching both content and language. At the end of each chapter a number of practical lesson suggestions are given which show how the ideas can be put into practice in the class.

Every chapter is structured around the same sections: an introductory section (summary, introduction, lead-in), followed by a case study (a concrete example from CLIL practice, to illustrate the topic of the chapter), background (general information about theoretical insights), applications for CLIL (how the theory is applied to practice, again illustrated with examples from Dutch CLIL practice). In the conclusion, the topics of the chapter are briefly summarised. In the last part of the chapter, ideas for teacher development and practical lesson ideas are provided. In this way, readers can easily find their way through the book. The practical lesson ideas section can be used independently from the contents of the chapter, and all activities can be easily found through a separate index. The glossary provides explanations of key words. Words appearing in the glossary are marked by this symbol: [#] the first time they appear in the text. The book discusses language mistakes made by CLIL learners. To make it clear that these are mistakes, an asterisk is used: *.

The approach to writing the book has been collaborative. The authors all have experience in pre- and in-service CLIL teacher education in the Netherlands. A group of expert CLIL teachers representing a range of secondary school subjects from schools all over the Netherlands was involved from the start. These teachers read and reviewed draft versions of chapters, provided examples of activities that they had used successfully in their schools and gave feedback on the relevance of the topics chosen for inclusion in the book. By taking this approach, the authors hope that a balance between theory and practice has been achieved, and that this handbook will both inform and inspire practising and future CLIL teachers.

1 Activating for CLIL



1.1 SUMMARY

This chapter covers:

- what activating for CLIL[#] is;
- why activating is important;
- different types and ways of activating in the CLIL classroom;
- practical CLIL classroom activities to activate and motivate learners;
- suggestions for follow-up activities on activating.

1.2 INTRODUCTION

Lighting up those brains at the beginning of a lesson is central to CLIL. This chapter is about activating. Activating - sometimes referred to as *activating prior knowledge* or *activating existing knowledge* - involves getting the learners' brains working at the start of a topic or theme, as well as motivating them to learn. It means engaging learners in the topic of a lesson, and helping them to access what they already know about the topic, so that they can link that knowledge to the material that must be learned. In CLIL, it is important to activate both ideas and language.

1.3 LEAD-IN

Your own ideas about activating

In this section, we intend to activate your own ideas about activating! Before you read further, we would like to ask you to carry out these two tasks.

Task 1 Images of activating

Look at the following six images and answer these questions:

a. Write down a title for each image. Which underlying theory or belief about activating knowledge for learning does each image represent for you?
b. Which image best illustrates your own ideas about activating prior knowledge, and which one the least? Rank them on a scale fo 1 to 6 according to your order of preference.

You can find a suggested response to this task in the Key to all tasks at the end of the book.

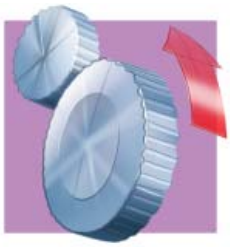
Task 2 Activating language

a. Write down as many synonyms and associations for the verb *to activate* as you can. How many different words can you think of that mean something similar to activating?
b. Compare your list with the thesaurus entry in the Key to all tasks at the end of the book.

Comment

By asking you to carry out these two tasks, we are activating the knowledge, associations and language you already have about activating. All three are important in CLIL. In Task 1 (working with the images), you tap into your own *ideas and knowledge* and *associations* about activating. In Task 2 (the language task), you activate the *language* you know that is associated with 'activating'.

When performing these tasks, each reader will respond differently and make meaning for themselves in their own individual way, choosing a different image and generating their own language, according to their individual previous knowledge and beliefs. However, readers will all start thinking about the topic, which is necessary to process the information which follows.



1.4 CASE STUDY

Here is a description of how a geography teacher activated her learners at the beginning of a series of lessons on the topic of China. The lesson is for third year CLIL learners (14-15 year olds).

The content# aims of this part of the lesson are that learners can:

- identify key issues relating to China;
- categorise them in geographical terms (environmental, historical/social, political and economic).

The language aims are as follows: at the end of the lesson, learners:

- know key vocabulary for describing issues in China;
- can skim# and scan# for specific information in newspapers.

I wanted to introduce the topic of China. Before the lesson, I asked the learners to bring in a broadsheet newspaper from home. I started the lesson by hanging four large empty sheets of paper on the board. Each poster had a title: Environmental, Historical/social, Political and Economic. Then I handed out a worksheet containing an overview of the lesson, and gave the class one minute to write down, individually, at least five things about China they already knew. I told them to keep the list for later and handed out copies of *The Economist* magazine and English broadsheet newspapers, asking them also to take out the newspapers they had brought from home. I then asked the learners to work in pairs and find headlines relating to China. The next step was for them to write the headlines into one of the four categories on the posters. Then the class discussed the headlines, the meanings of the different categories and whether these covered all the topics in the headlines. I highlighted the topical geographical issues relating to China, linking these to issues they had talked about in previous lessons. Finally, I referred the learners back to their brainstormed notes and asked them to say if any of the points they had thought of were not yet on the board, and in which categories they would put them. The class decided to add one new category, Culture, based on their notes from the initial brainstorm, so we added that.

Figure 1.1 Activating in a geography lesson

Why is this CLIL?

This start to the lessons about China contains many characteristics of activating that can help learners to acquire both subject and language skills#. By reading, speaking and writing about the headlines referring to China, learners can access existing ideas, associations and language that they have about China. Asking the learners to bring in broadsheet newspapers from home helps them to make links between their own culture and language (Dutch or any other home spoken language and culture) and the target culture and language (how people think and talk about countries in geography). It builds on what the learners already know from daily life in different languages, by adding new information and language from newspapers and/or reinforcing the ideas and language knowledge they already have.

The use of newspapers in a number of possible languages (brought in by the learners) is interesting; by bringing both their worlds into the classroom, it acknowledges that the learners are bilingual and bicultural. In addition, the categorisation activity requires the learners to process the ideas at a deeper level, by having to place a headline in a geographical category. The final class discussion brings together the associations they already had with a geographical way of thinking about developments (the culture of geographical thinking). It also brings together fresh language and content# input# from newspapers, their peers and the teacher. This shows how a teacher can link the learners' existing ideas and language with new subject-specific ideas and thus expand both knowledge and language in a CLIL classroom.

1.5 BACKGROUND

In this section we discuss some key ideas related to activating. We discuss its importance in CLIL and show how learning theories inform our ideas about not only activating, but all the topics of the chapters in this book.

1.5.1 Why activate?

There are some general reasons why it is effective to activate in all classes.

Motivation and raising interest

Activating prior knowledge can increase the learner's motivation. At one end of the motivation continuum, we have *intrinsically* motivated learners, who love learning for itself. At the other end, we have learners who are only *extrinsically* motivated and who need rewards to learn (and sometimes punishment!). Tapping into learners' prior knowledge and finding ways to connect to their existing knowledge can be useful to increase their motivation.

Expectations

Another reason for activating is to create expectations about a topic. In real life you know what to expect when you do something. For example, if you watch TV you know that at a certain time the News will be broadcast, and if you switch to another channel, you know what type of programme to expect. In a lesson, the learners come 'cold' to a subject, so activating prior knowledge helps them to create a context and expectations about what is to come.

Focusing

Focusing is another reason for activating. Learners come into our lessons from other subjects and need to tune in again to a new one. Activating helps them to focus on the topic and the language of the lesson, or to return to a topic which they were dealing with in previous lessons.

Individual differences

Learners are different. They know different things; they have different cultural and linguistic# backgrounds. They have different experiences outside school. They have different interests, learning styles and intelligences. Activating helps these differences to become visible to the teacher, so that the teacher knows how to link in to what different learners know. Moreover, it makes the differences visible to the learners, revealing to them that they can gather both information and alternative ways of learning from each other.

1.5.2 Why activate in CLIL?

When activating, a CLIL teacher needs to help learners make explicit in the target language# both the ideas *and* the language they already know, so that they can make sense of new content as well as new language. Giving learners time to work on what they already know also makes clear the differences or the gap between what they already know and what they do not know yet. In this way, both teachers and learners become aware of this gap, which can make learning more effective. So, activating is important both for CLIL learners and CLIL teachers (Mehisto, Marsh & Frigols, 2008).

The reasons for activating mentioned above have led many teachers to start their lessons by engaging their learners' attention in some way and reviewing what the learners already know about the topic. In the CLIL classroom, learners are learning new ideas through a foreign language, which makes the issue more complex. Although some learners may already have some knowledge of a topic and be able to understand everything the teacher tells them about it, they may not be able to produce the language to articulate their ideas. Accessing prior knowledge, experiences and language are all vital here.

In terms of language, CLIL teachers may choose to introduce subject-specific terminology#. For example, in a biology lesson on the respiratory system, they might focus on specialist labels for the respiratory system, such as *trachea*, *bronchia*, *diaphragm* and verbs like *inhale* and *exhale*. However, because the pupils are learning in a foreign language, there may also be gaps in their everyday language, such as the phrases *breathe in* and *breathe out*. A CLIL teacher, therefore, needs to activate and check the learners' everyday language# as well as subject-specific language.

There may be a role for the first language at the activating stage of the lesson, as learners might know concepts and words in their first language and simply not know the words in English. However, the use of the learners' first language in the classroom is something that many teachers try hard to discourage. As with many classroom issues, ultimately, the solution is a question of balance and context. Some background to this topic is covered later in this chapter when we discuss the idea of Common Underlying Proficiency#.

Not activating

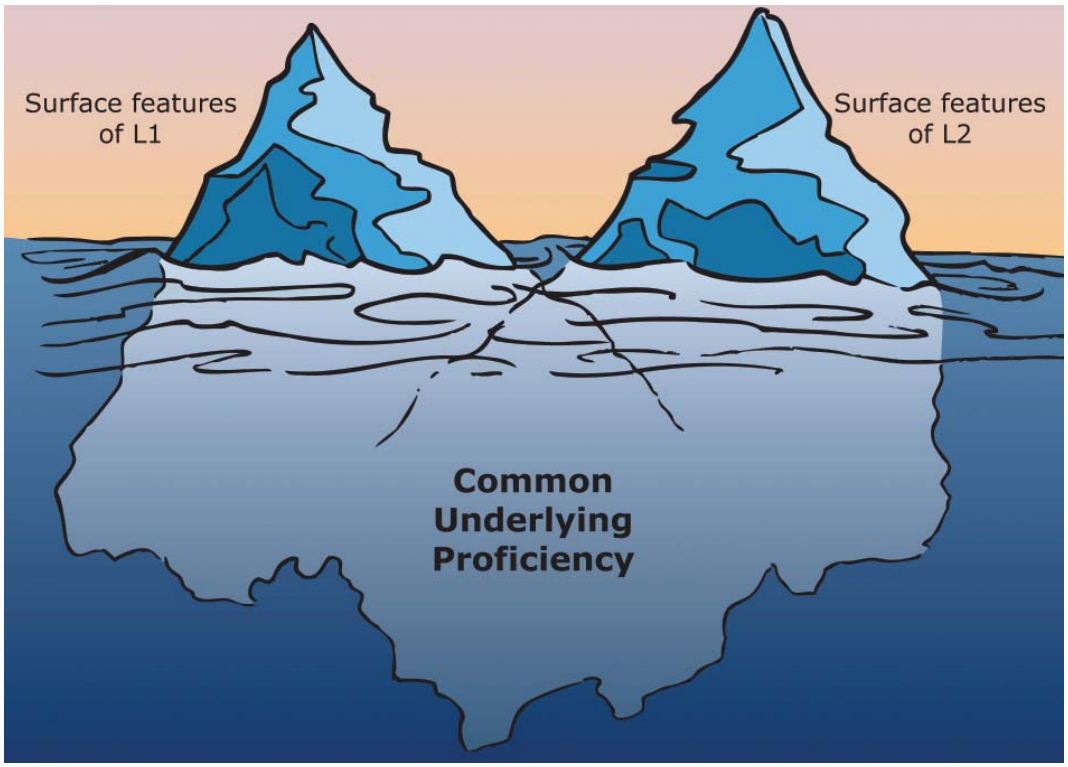
Another way of looking at the topic of activating is to think of what happens if teachers do not have an activating stage in their lessons. Not activating what the learners already know can mean that less learning takes place. The content and language in the lesson are less likely to be remembered and will be more difficult to reproduce later. Without this stage, CLIL learners may take longer to process and understand the subject concepts covered in the lesson. After all, activating helps to make connections. The stronger the connections, the better the learners store the information and the better they will be able to retrieve it when they need it. In other words, if teachers do not activate, the learning process may turn out to be both less effective, as the learners may learn less, and less efficient, as they may learn more slowly.

1.5.3 Which learning theories are important in activating and CLIL?

In this section, we give a brief overview of the main theories which have influenced our writing in this and the following chapters. These include ideas relating to bilingualism, second language acquisition, cognitive learning, constructivism# and social constructivism#. These theories do not only underpin the importance of activating, but they also form the basis of all of the ideas and suggestions we make in this book. Some of them are not just related to the importance of activating, but are indeed linked to many of the points we make. Rather than repeat them in each section, we have decided to explain them here, in the first chapter.

Bilingualism

The image of an iceberg is sometimes used to explain the way that bilingual learners' brains use two languages to make sense of their world (Cummins, e.g. 2005).



Cummins compares bilingual learners' brains to an iceberg, with parts of their knowledge invisible, under the waterline, and parts of it visible, above the waterline. Underneath the waterline, the learners have experiences and knowledge of the world, as well as an understanding of how language is used to express their thoughts; all of which is independent of the language they use to express this - this is what Cummins calls Common Underlying Proficiency. Above the waterline, there are the two or more languages bilingual learners can use to express or interpret ideas. Activating in CLIL is important because it shows us what the learners already know in terms of both language and content, i.e. it makes part of their Common Underlying Proficiency visible to the teacher, themselves and others. Some of what learners know may be visible in their first language (L1[#]); in other words, they know both the words and the concepts in their first language. For example, they may know the concept of 'metamorphosis' and the word *metamorfose* in Dutch. This knowledge may not be visible in the second language (L2[#]), as they do not know the pronunciation (where the stress falls) and spelling of the English word *meta'morphosis* (the ' comes before the stressed syllable[#]). What they need to add, is not the understanding of the concept, but just the label (the word *metamorphosis* and how to pronounce and spell it) in the second language. If they know neither the concept of 'metamorphosis' nor the language used to describe it, they will need to develop both the concept and the language at the same time.

Second language acquisition theories

Four language acquisition theories are key to understanding how we learn languages and why activating is important. These are: input theories, intake theories, interactionist theories[#] and output theories[#]. The following paragraphs briefly explain these theories. (For more information, see Lightbown & Spada, 2006).

Language input is the language we read and hear. Input theories of second language acquisition (input hypothesis#) suggest that language input which leads to language learning should be meaningful, relevant and realistic. It should also be at a slightly higher level of language than learners are able to understand (sometimes referred to as i + 1, i being the level the learners are at), and there should be plenty of it (see section 2.5). It is important that there may be a difference between what learners can *understand* in the L2 and what they can *produce* in the L2. The activating stage of a lesson can be used to provide rich, plentiful, varied and repeated exposure to the language needed in the lesson, which will help them to move from just understanding to producing. This in turn helps language acquisition.

Intake# is input coupled with understanding. Intake theories suggest that learners will learn language if they come across it frequently and if they take some time to process this language. The activating stage of a lesson can provide familiar and perhaps new language, and ensure that some time is spent using it. Intake is more likely to happen when learners use language during learning activities. These activities should encourage them to notice both what is being said and how it is being said.

Interactionist theories have shown that meaningful interaction is important in language learning, and that learners who focus on the meaning of what they hear or read and speak or write are more effective language learners than those who concentrate mainly on grammatical accuracy. CLIL may be helpful for language acquisition because it provides both the content (meaning) needed for language acquisition and the language needed for subject development. Activating ideas, experiences and language will help learners with their language acquisition as these bring together the learners' ideas and language with new ideas and language in a meaningful context. For this, it is important to use pair and group work so that the learners interact with each other during the activating stage of a lesson.

Output hypothesis# argues that in order to learn a language, learners need to produce language, in other words speak or write. This is because when they speak or write, learners can notice the gap between what they can say and what they want to say. They can experiment, be creative, and make mistakes. All of this will help them to become more proficient users of language. Output can be produced at all stages in the lesson, and is also important in the activating stage of the lesson.

Cognitive learning theories

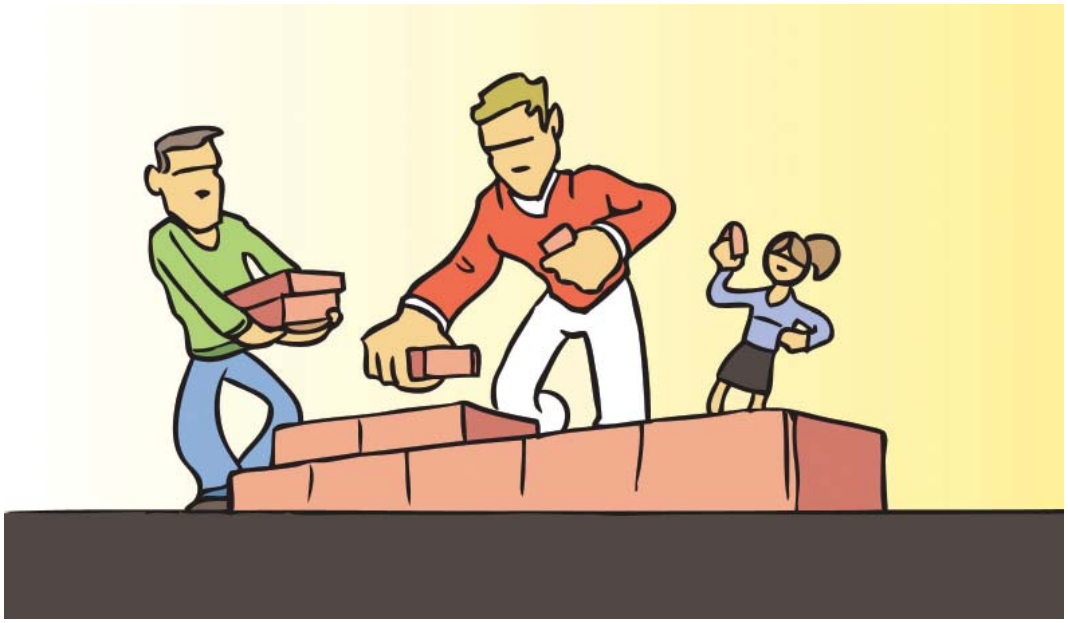
Another set of theories, which are important in CLIL, are cognitive learning theories, including constructivism and social constructivism, which we discuss below. Cognitive learning theories# suggest that people remember things more effectively if they spend more time thinking about them, and if their brains have to work harder to complete a task. From this perspective, CLIL may be a useful tool for learning, because learners have to work harder if they learn in a second language. As a result, CLIL learners are more likely to remember what they have learned, not only in terms of language, but also in terms of content. Activating is a way of starting up the thinking processes that will help learners to remember what they learn.

These theories also suggest that we learn when there is a conflict between our existing ideas and new ideas, when we notice a difference between the language we are using and new language needed to express the new ideas, and when attention is paid to how language works to express the new ideas. The activating stage can challenge learners' assumptions about a subject, and draw their attention to different meanings in different contexts, to how words change form in different contexts, differences between languages, and differences between everyday language and academic language# (register). Lightbown & Spada (2006) present more information on this subject.

Constructivism

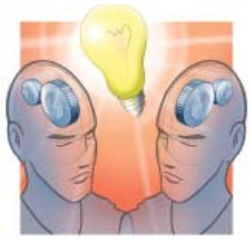
In constructivist theories# of learning, learners are thought to build up knowledge for themselves. These theories stress that worthwhile learning involves the creation of new personal meaning with the new material, and combining it with what is already known. Moreover, these theories argue that learning takes place when learners themselves make sense of what they are learning. Therefore, learners need to get their bearings at the start of a lesson or topic, to gather the information which they already know, so they can make meaning of the new information. They can do this by comparing new ideas, information and language with their existing knowledge and experiences. We need to emphasise here that it is essential that it is not the teacher, but rather the learners themselves who make the link between their prior knowledge and the content of the subject.

Social constructivism



Social constructivist# theories of learning emphasise that learning is a social, dynamic process, and that learners create meaning together, through interacting with one another. By participating in activities and working with other learners or with the teacher during the activating stage of a lesson, learners will also

create meaning for themselves. Williams & Burden (1997) present more information about constructivism and social constructivist theories in relation to language learning.



1.6 APPLICATIONS FOR CLIL

CLIL teachers can activate a new subject in different ways. They can deal with one or more of the following aspects of a topic:

- language;
- knowledge;
- experience;
- thinking.

The choice of activating tasks will largely depend on the lesson or series of lessons which follow. Although they may sometimes appear time-consuming, these tasks are often worth implementing, since in the long run they will make learning more effective.

Teachers can also select activating tasks which take into account:

- interactions;
- multiple intelligences.

Learners have many different kinds of existing knowledge about a topic. A teacher will determine what to include in the lesson, based on what level of prior knowledge the learners already possess. We have already seen an idea for activating in the geography example in 1.4. Here we shall illustrate the topic of China further, suggesting more ways of activating these four aspects (language, knowledge, experience and thinking) at the start of a series of geography lessons.

1.6.1 Language

We can think about features of the word *China* and its use. We know the word *China* cannot take an *-s* to make it plural, that it can be the subject of a sentence (*China is developing rapidly*), or the object of a sentence (*A European minister is visiting China*), that it changes to *Chinese* to describe the people and the nationality (not into **Chinish*). It occurs more frequently with certain words and topics than with others (restaurant rather than station, gymnastics rather than football, red rather than blue, chopsticks rather than spoons). In this way the CLIL teacher can activate words, help learners notice the way they behave grammatically, how they are pronounced or spelt, and how they are used in sentences. Multiple meanings and false friends[#] can also be discussed.

When activating language, the CLIL teacher can check understanding, correct misinterpretation, focus on important words, personalise the meanings of words, highlight the differences between everyday and academic words, give models of commonly used structures to discuss a topic (such as cause and effect and conditional sentences).

1.6.2 Knowledge

The CLIL teacher may deal with one or more of the following aspects related to knowledge about a topic:

- cultural aspects of a subject;
- background or factual aspects.

A geography teacher introducing the topic of China has a wealth of existing knowledge in the learners that she can tap into.

Cultural aspects of a subject

We attach social and cultural significance to the word China. When we say "Let's have a Chinese tonight" we expect everyone to understand that we mean food, not a person! Each school subject will have different associations with China. If we talk about China in a geography lesson, we may think of high population figures; in physical education, we may think of gymnastics or the Olympics; in art, we may think of calligraphy, porcelain, and bamboo; in history, we may think of Marco Polo; in biology, of panda bears and mongooses.

In other words, how we think about China will be different in different subjects - in a geography lesson we might want to explore demographic issues, whereas in social studies we might want to consider political systems. So, we also want to activate a particular way of thinking about a subject: a subject-specific discipline.

Background or factual aspects

When we think of the word *China*, we have many different kinds of associations which are not only about the meaning of the word. We might know various facts about China; for example, it is a country in Asia, ruled by Communists, hosted the Olympic Games in 2008 and has implemented a one-child policy to reduce population expansion.

1.6.3 Experience

The CLIL teacher can also tap into different kinds of experiences:

- personal experience;
- academic experience;
- beliefs, opinions or attitudes.

It is likely that the personal experiences of all the learners vary greatly: some will have more associations with China than others, and the sources of these associations may also differ - film, martial arts, family and travel, for example. The learners may share more academic experiences - they may have discussed China in class before, but what they remember of these references to China at school may also vary greatly. Finally, the way they react to and interpret references to China will depend on their own beliefs, opinions or attitudes.

Personal experience

We also conceive China through our own experiences, for example through watching or reading the news, seeing Chinese films, having visited the country as a tourist, meeting Chinese people living in the Netherlands, or having family associations such as Chinese relatives.

Academic experience

Learners will have come across China in an academic context in other subjects at school, as well as in previous lessons in a particular subject. They may have discussed China in relation to global warming in geography, greenhouse gases in biology and the role of industrialised and developing countries in contributing to global warming in social studies.

Beliefs, opinions or attitudes

We also have opinions about China. We may think that all Chinese people eat with chopsticks, or we may not agree with the one-child policy. If we are concerned about the environment, we may think that China should reduce the number of cars to combat pollution.

1.6.4 Thinking

When CLIL teachers activate existing knowledge and experiences, they can do so in ways which create a 'conflict' or puzzle in the learners' brains (a cognitive conflict[#]). This can be accomplished by creating doubt in the learners' minds about how complete their picture of China is, or how accurate their ideas about China are, and how appropriate their ways of thinking about China are with regard to this school subject. This conflict can be triggered by new information, which may come from the teacher, other learners, spoken and written texts or images.

Here are some examples of different ways of activating in a lesson about China, dealing with each of the aspects above.

Example 1 Activating activities

What is being activated?	**Short description of a possible activating activity for a CLIL lesson**
Language	Make a word web with the word CHINA in the centre, and then sort all the words about China into different categories.
Knowledge: cultural aspects	Make a list of similarities and differences between The Netherlands and China in relation to demographics and population control.
Knowledge: background or factual aspects	Scatter some facts or numbers about China on the board, e.g. 1 321 216 931 (population in 2007) 12 794 801 (population growth in Nov 2007) Ming (dynasty 1368-1644) one child (policy in force since 1979) 1921 (founding of Communist state) hammer and sickle (yellow, found on red flag) Learners guess what the numbers and facts mean, and predict what the lesson will be about.
Experience: personal experience	Discussion in class about meeting Chinese people, watching Chinese films, doing martial arts, travelling to China, or eating Chinese food.
Experience: academic experience	Ask learners to spend 5 minutes writing down all the links to China they can think of that have been made in any lessons during the last 5 weeks.
Experience: beliefs and attitudes	Give each learner a red and green card. Read out statements, one by one, which provide an opinion about China. Learners all indicate AGREE with a green card, or DISAGREE with a red card. Ask learners further about their beliefs, once they have stated their opinions.
Thinking skills[#]	Ask learners to sort all the words the class has brainstormed into six provided categories, for example *history, environment, food, society, politics, other.*

Activating tasks encouraging interaction and appealing to different types of learners are important, too.

Interactions

At the activating stage of the lesson, a teacher can organise the class in such a way that the learners talk to each other, and thus use language in interactions. Setting up pair or group work at this stage, as well as whole-class discussions, can make the activating stage more effective.

1.6.5 Multiple intelligences

Teachers can also think about activating learners through different learning styles or multiple intelligences, so as to reach a larger number of learners and interest them in the topic. Here are some examples of activating based on the eight multiple intelligences. The topic is population growth in China. You could invite learners to choose the activity or activities they personally prefer to carry out. We are not suggesting that a teacher always carries out eight different types of activities; this will depend on the learners and teacher in each class.

Example 2 Activating through multiple intelligences

Intelligence	Way of activating through each intelligence
Logical-mathematical	Learners match labels (the names of different countries) to different graphs indicating population growth. One should be for China.
Bodily-kinaesthetic	Teacher prepares statements about population growth with which learners agree or disagree. She reads out the first statement. Learners who agree go to one part of the classroom; those who disagree go to another part. They discuss their opinions about the statement. The same with statement 2, and so on.
Linguistic	Teacher writes the title of an article about China on the board, e.g. "Population growth: Friend or foe?" or "Who controls the family?" Learners guess what the article will be about, using the prompts Who? Where? What? When?
Musical	Play Chinese music (e.g. Monkey: Journey to the West) as learners brainstorm all the ideas they have about China.
Interpersonal	In pairs, learners discuss what they know about population growth and the one child policy in China.
Intrapersonal	Individually, learners complete a sentence stem 10 times, such as *China is...* (see practical lesson idea 1.9.15).
Naturalist	Learners work in small groups to predict the environmental impact of population growth, using key words# such as *water, forests, air* and *travel*.
Visual-spatial	Show a picture of a very crowded Chinese scene. Ask learners some prompting questions, such as Where do you think this is? Why is it so crowded? Where are these people going? What time of day is it? What are they thinking?

1.6.6 Link to lesson

The information, skills or language which teachers activate need to be linked, of course, to the lesson a teacher is preparing to teach. A teacher in a vocational hotel and catering school doing a unit on international food, who wants her learners to create a menu for a delicious Chinese meal at a four star restaurant in Amsterdam, might choose to activate the language of Chinese food. She could ask groups of learners sitting around a large sheet of paper to brainstorm Chinese food in English (chop suey, sweet and sour pork, noodles). On the other hand, if a geography teacher's aim in his lesson is for learners to understand the ideas and policies of China related to the population explosion, then a more appropriate activating activity might be to ask them to agree or disagree with a number of statements related to the one-child policy in China; for example, "Everyone in the world should be allowed to have as many

children as they like", "Chinese people should be sterilised after having one child" or "We should have a two-child policy in The Netherlands".

The amount of time a teacher spends on the activating stage of a lesson depends on the context. It may take two minutes, ten minutes or a whole lesson. In any case, it is worth spending some time at the beginning of any lesson on making explicit links to what bilingual learners already know.

1.7 CONCLUSION

We have seen in this chapter that it is an essential part of the learning process to help CLIL learners to activate the many different kinds of knowledge, experiences and language that they already possess and then use these to build on. When learners are learning a subject through a foreign language, they are learning both new ideas and new language. Therefore, it is important for the CLIL teacher to encourage activation of the knowledge, experience and language networks in the brain, in order to strengthen the connections and speed up the number and rate of activations. This will ultimately help learners to learn both the language and the content more effectively.

To sum up, an activating stage of a CLIL lesson can:

- engage the learners' interest and curiosity and thus motivate them;
- provide rich (plentiful, varied, repeated) language input;
- help learners notice features of the language (meaning, form, differences between Dutch and English, or between everyday and academic language);
- help learners notice the gap between their knowledge and understanding of concepts in their L1 and in the L2;
- help learners notice the different labels used for concepts they already knew in their L1, but did not yet know in the L2;
- help learners to make the language and content of the lesson meaningful to them personally;
- stimulate interaction between learners;
- encourage learners to produce (spoken or written) language;
- activate relevant, useful or half-remembered language for the lesson;
- activate relevant cultural and background knowledge for the lesson;
- activate relevant personal or academic experiences which will help the learners in the lesson;
- activate existing beliefs about and attitudes to the topic of the lesson;
- challenge or surprise the learners in some way;
- challenge the learners to think more deeply about the topic of the lesson;
- appeal to different learning styles or multiple intelligences.

1.8 TEACHER DEVELOPMENT

As a follow-up to the ideas in this chapter, we suggest you do one or more of the following activities:

1. Select three different activating ideas from this chapter, and then use each one to design three activating activities for your own subject.
2. Choose the five activating activities which you like most in this chapter. Which theory or theories are reflected in each of the activities you have chosen? What does that say about your own personal ideas about learning and activating?
3. List your own criteria for what makes a successful activating stage in a lesson, and put them in order of importance.
4. Choose a topic you will be covering in class, and design eight multiple intelligence activating ideas.

1.9 PRACTICAL LESSON IDEAS

How can you activate your learners? Some practical ideas for activating at the start of a new topic.

Activity 1.9.1 Key words

Guess the topic of the lesson and explain useful words
Description Randomly write about ten key words about the topic on the board. Ask learners to answer these questions: • What will the lesson be about? • Which words could they add to these? • Which words are unfamiliar? Give definitions of the least familiar words.
Subject example **Biology: Classification** Write the words *kingdom*, *class*, *family*, *species*, *genus* and *phylum* on the board: Ask learners to guess what the lesson will be about, and whether they could add any more words related to this classification. Then ask them to look up and write a definition for one word. In turns, learners read aloud their definition and everyone writes down which word is being described.

Activity 1.9.2 Competition: Quickest or most

Quickly list a fixed number of words or produce as many as you can, related to the topic of the lesson
Description Write the topic of the lesson on the board. Learners work in pairs to either 1. be the first pair to write down ten verbs related to the topic; or 2. be the first pair to write down the most verbs (or nouns) related to the topic.
Subject example **Geography: Global warming** *Quickest* Ask learners to work in pairs and write down ten verbs used to talk about global warming. Which pair is the first to get ten? *Most* Give learners one minute to write down as many verbs used to talk about global warming as they can think of. Which learner produced the most in the time available?

Activity 1.9.3 Questions

Write down ten questions about the topic of the lesson
Description Write the topic of the lesson on the board. Learners work in pairs and write down ten questions about the topic - at least four should begin with who, what, how and why.

Subject example

History: The slave trade
Ask learners to write down ten questions they would like to have answered about the slave trade. They might produce questions like:

- Who owned slaves?
- What happened to children born into slavery?
- How were slaves treated?
- Why was slavery acceptable to people at the time?
- Where did the slaves come from?

Activity 1.9.4 Scrambled sentence

Mix up the words of a sentence about the topic and ask learners to re-create the original sentence

Description
Choose one sentence or question which is relevant (humorous, interesting, controversial) to your topic and mix it up. Write the scrambled words on the board, or create small cards, one word per card. Ask the learners to create one sentence from your mixed up words. If it is a question, you can ask for their answers and discuss these.

Subject example

Science: Nuclear power
Scramble the sentence: Nuclear power is the most environmentally friendly means of generating energy.

Nuclear	environmentally	is
the	power	most
energy.		of
means	friendly	generating

Ask learners to recreate the sentence. Once they have completed that task, they discuss how science might prove or disprove this claim.

Alternative
You can scramble a paragraph or complete text, too. Make cards or a handout of the mixed-up sentences or paragraphs and ask the learners to reconstruct the text or paragraph.

Activity 1.9.5 Red and green cards: True/false statements

Decide if statements about a topic are true or false

Description
Create a list of ten true and false statements about a topic you are going to cover. Each learner receives one red and one green card. Read your true/false statements out one by one. The learners each decide if the statement is true (green card) or false (red card). Once the statement has been read out, they hold up a green or red card. After each statement, you can either discuss their answers, or leave them unanswered and repeat the activity once the lesson is over. In the latter way, you can check learning.
This activity can also be done with agree/disagree statements, for example if you are discussing an ethical topic.

Subject example

Physics: Solids, liquids and gasses
Read out these statements:

1. A brick can be compressed.
2. Oxygen has a fixed shape.
3. Water can change its shape to fit any space.
4. Metal can flow.

Activity 1.9.6 Props or visuals

Ask questions about objects or pictures connected to the topic

Description
Bring in and display a number of objects or visuals related to the lesson.

Subject example

Art and design: The construction of pop-up cards
Props
Show learners four examples of pop up cards and ask them questions, such as "which do they like best and why?", and "which would be the easiest and/or most difficult to make and why?"

Visuals (Optical illusions)
Select an intriguing picture, cartoon or photograph, regarding the topic to work on. Make enough copies for everyone, or show the picture on a smart board or with a data projector. Ask learners to identify the techniques that create the optical illusion. You can find examples of optical illusions at www.yourdailydump.com/category/optical-illusion

Activity 1.9.7 Video clip

Watch a short video clip related to the topic and answer questions

Description
Search for a video clip related to your concept or topic on YouTube or elsewhere on the Internet to show to your learners. Give them some viewing questions beforehand. Discuss the questions afterwards.

Subject example

Social Studies: Gender differences
Learners watch the clip (a comedy sketch about the effect of education on men and women) and say which differences between men and women are emphasised in the clip.
The effect of education on men and women: www.youtube.com/watch?v=jLYc6tMbPHk

Variation
Biology: Homeostasis and the pancreas
Learners watch the clip. While watching they need to write down what the pancreas does and why it is important in the body.
Song about the pancreas: www.youtube.com/watch?v=Tq_-zxPgFzE

Activity 1.9.8 Internet

Learners find information on the internet individually about a topic before the lesson and then sort all the information they have found into categories

Description
For homework, ask learners to bring an image or a text they have found on the Internet about the topic you are going to cover in the lesson. At the beginning of the lesson, they pool all the images or texts and then categorise them.

Subject example

History: Spanish occupation of the Netherlands
Ask learners to find a 50 word text about or an image of the Spanish occupation of the Netherlands and bring a copy to the lesson; their copies need to be large enough for other learners to be able to read at the back of the classroom. As they enter the classroom, learners stick their texts or images on the board with tape and sit down. In pairs, the learners then look at the ideas and/or images on the board. Their task is to think of four or five main categories into which all the texts and/or images could be placed.

Activity 1.9.9 Spider diagram

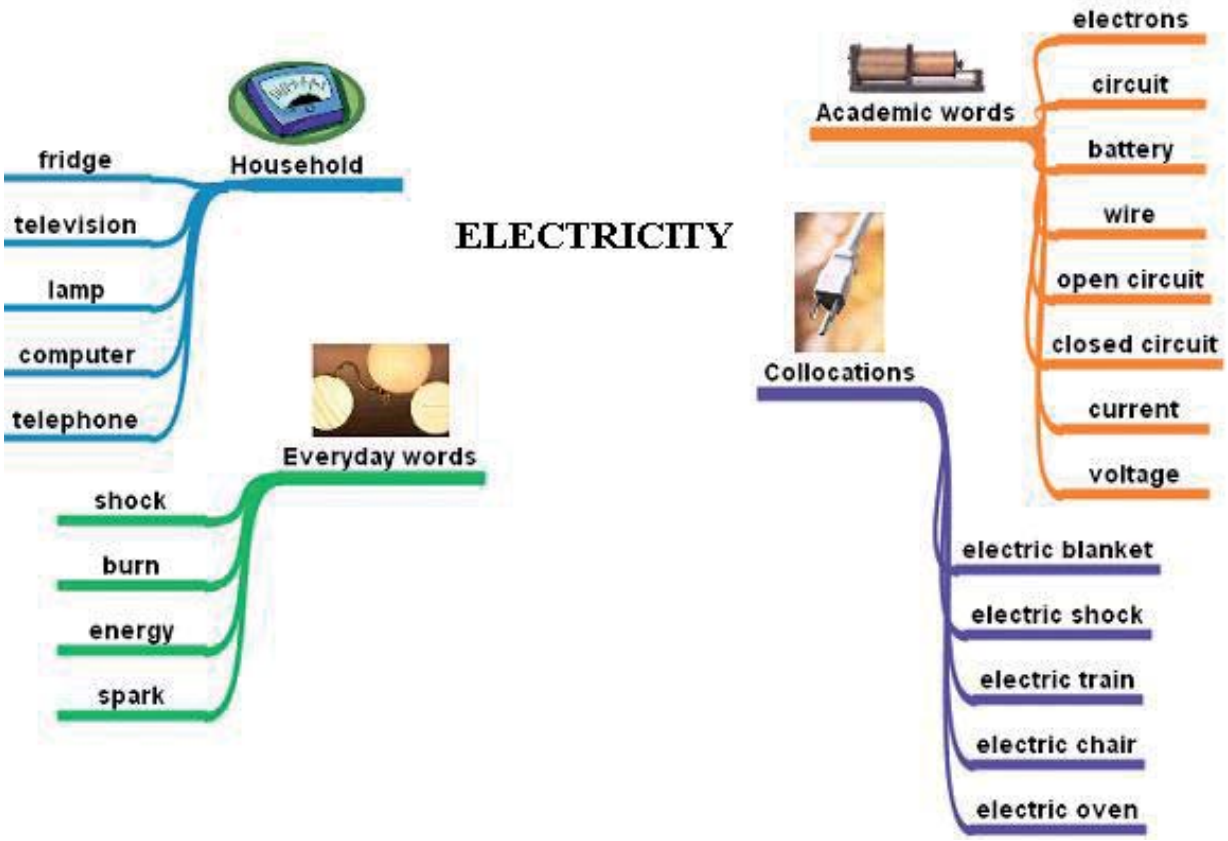
Create a mind map of useful words for a topic

Description

Choose a main concept related to the material you are going to cover. Place it in the middle of the board in a circle or square. Ask learners to call out sub-topics related to your main concept. Create, with them, a spider diagram related to the topic, each arm of the spider relating to a sub-topic. You can do this in two stages, first ask for as many associations as possible, and then ask learners to put all the words they have brainstormed into categories. Once learners have made a number of spider diagrams, they can create them themselves or in small groups.

Subject example

Physics: Electricity



Activity 1.9.10 KWL (know, want, learn) grid

Learners list what they know, want to know and have learned about a topic

Description

Learners complete the three columns of the KWL (know, want , learn) grid. In the first column, they write what they know; in the second column what they want to know. At the end of the unit, they write briefly in the third column what they have learned. To use this activity effectively and to focus the learners, it is important that they are clear about the final product, since it is hard to complete a KWL grid without an explicit aim.

Subject example

History : Project making a newspaper article dated somewhere in the autumn of 1939

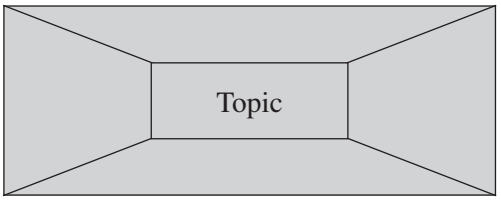
Know	**Want**	**Learn**
Start of WW2	Where is our story?	
First year of war	Who was involved?	
Germany involved	What was happening?	
	Countries involved?	
	Famous people	
	Role of The Netherlands	

Activity 1.9.11 Placemat

Learners write ideas about a topic individually and then compare and combine their ideas

Description

Make groups of four (maximum). Learners sit around a table with a large sheet of poster paper in front of them. Each learner needs a marker, too. First ask the learners to make a 'placemat' on their paper, as follows:



Round One

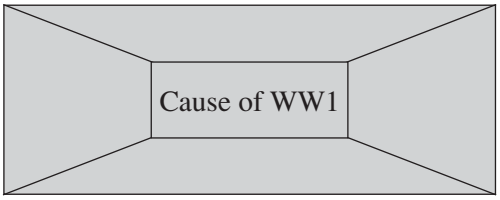
Provide the learners with a question or issue. Write this in the middle of the placemat. Each learner then writes a comment or opinion in their own space on the placemat.

Round Two

The learners read what the others have all written (by turning the placemat around) and discuss a 'sponge' question. This is a question which aims to combine or categorise the ideas from Round One. It is important to have a fresh question at this stage which further processes the ideas from Round One.

Subject example

History: Causes of World War 1
Round One



What do you think were the causes of the Great War?

Round Two ('sponge' question)
Discuss and read each other's ideas. In the centre of the placemat, write what you all consider to be the two most important causes of the Great War.

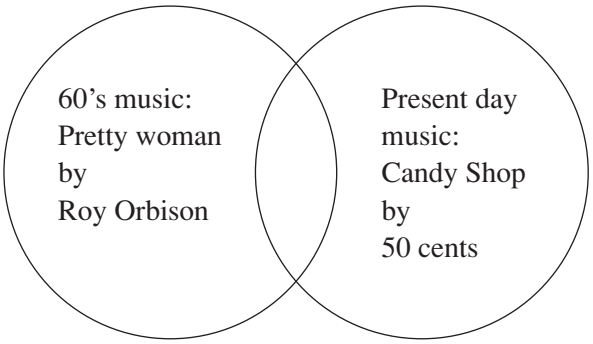
Activity 1.9.12 Venn diagram

Complete a Venn diagram# about a topic

Description
A Venn diagram is an excellent tool to activate prior knowledge in order to highlight similarities and differences related to a topic. Learners write the two chosen topics to compare in the two outer circles, and then write similarities between the topics in the middle (overlapping) space, and differences in the outer spaces.

Subject example

Music: 60's and 90's songs
Provide each pair of learners with an empty Venn diagram on a sheet of paper. Choose two songs which the learners know to compare. They write the title of Song 1 in the left circle, the title of Song 2 in the right circle. Ask them to write similarities and differences between the two songs.



Activity 1.9.13 Think, pair, share

Learners answer a question first individually, then in pairs and then share their answer with the whole class

Description
Think, pair, share is a simple technique which gets everyone thinking about a topic. Individually, each learner writes down their answer to a key question (on language, knowledge or content) provided by the teacher. This gives them some time to think for themselves. Next, in pairs, give learners time to compare and discuss their answers with each other. Finally, have a short plenary discussion of some of the groups' answers.

Subject examples

Geography: Earthquakes
Key question: What do you think causes earthquakes? Or: Why do earthquakes happen?
Music: Rap music
Key question: What do you think are the characteristics of rap music? Or: What is a rap song? Think about for example beat, background, topic, story, rhyme and refrain.

Activity 1.9.14 Predict, observe and explain

Present an event and ask learners to predict what they think is going to happen, then watch what actually happens and explain why they were right or wrong

Description
A predict, observe and explain sequence is one in which your learners are expected to predict the outcome of an event or experiment, observe what actually happens and then explain why their prediction was either right or wrong. This activity is best applicable in science classes. It can be an individual assignment or a small group activity. The aim of this activity is not only to activate prior knowledge but also to promote personal involvement of your learners.

Subject example

Science, Maths
On www.conceptcartoons.com interesting examples can be found of the use of cartoons for predict, observe and explain activities.

Activity 1.9.15 Sentence stem

Learners complete a sentence about a topic

Description
Using the topic you want to introduce, think of a 'sentence stem' on an aspect of that topic which can be completed in various ways. Write the stem ten times on a worksheet or the board. It must be the beginning of a sentence that learners can actually complete; in other words, it should not be too difficult. For example:

Shakespeare….
Shakespeare….
Shakespeare….
(etc.)

The learners have to complete the sentence in as many different ways as they can. The follow up can be done as a Think, pair, share or Placemat activity.

Subject examples

Geography: Deserts
The desert is…
Biology: Cells
Cells…

Activity 1.9.16 Target practice

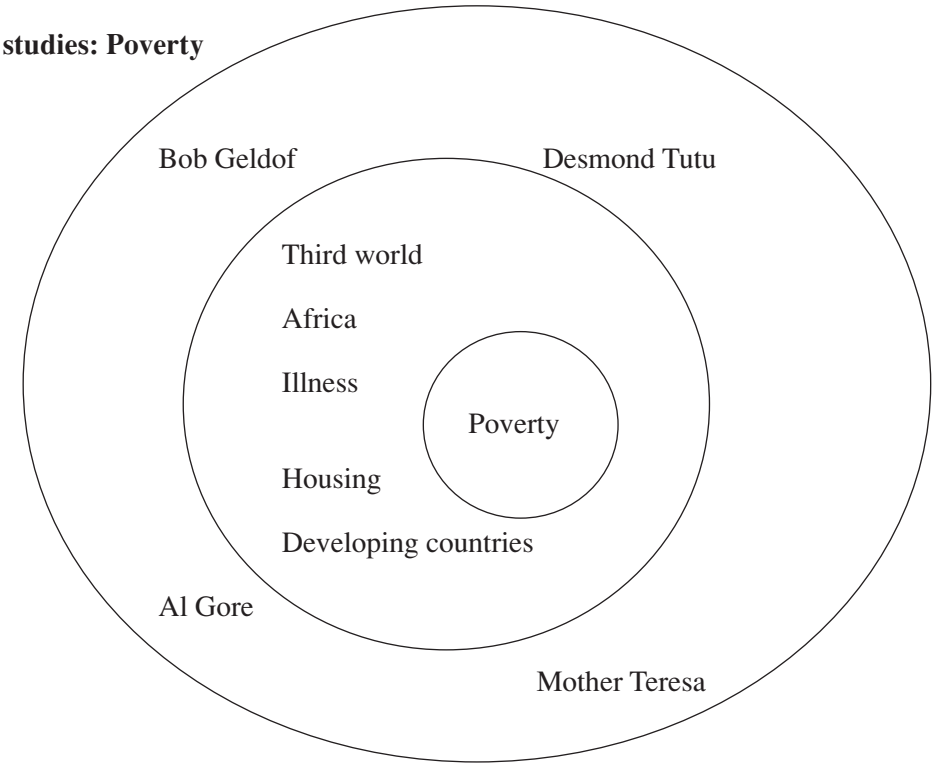
Learners complete a target image with ideas and people related to a topic

Description

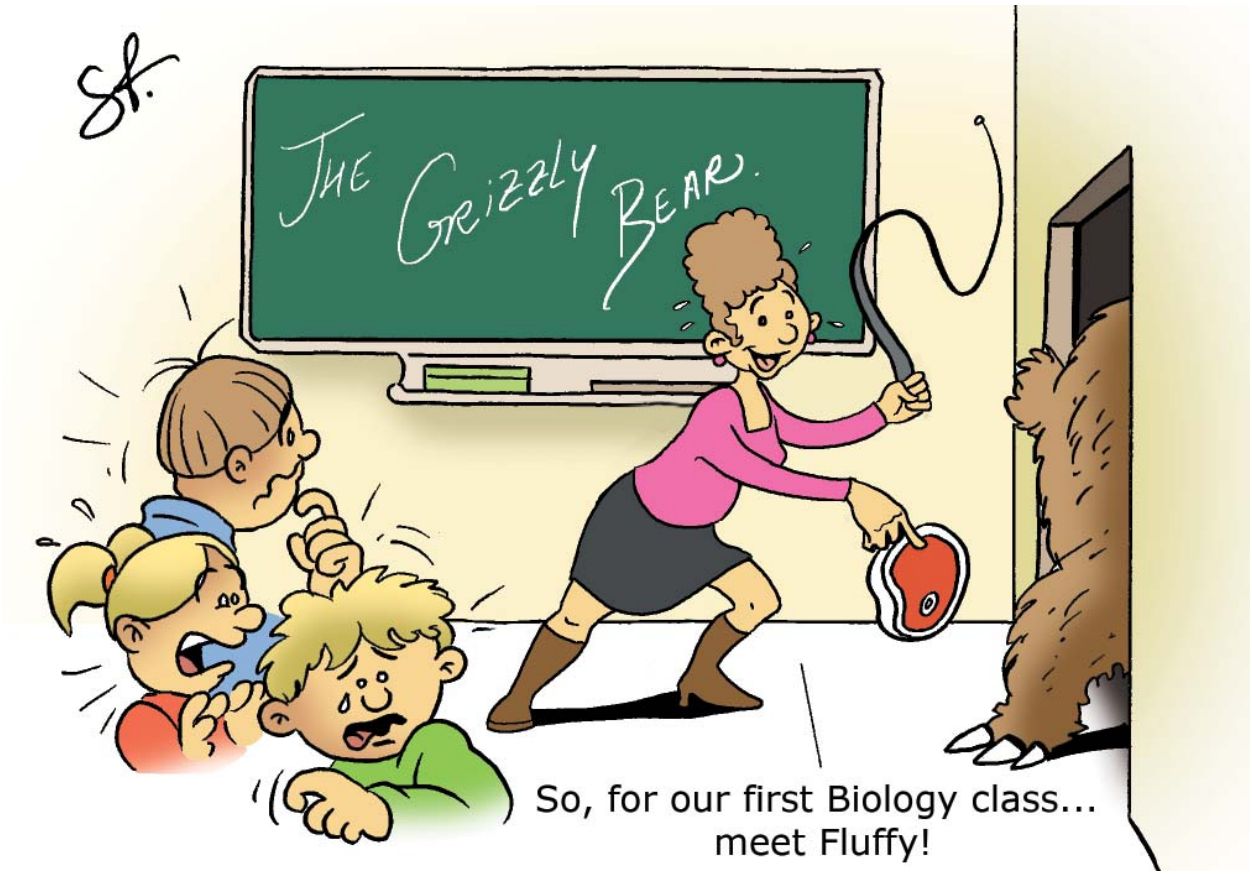
Provide a handout of a target for each learner, with the topic of the lesson provided in the centre of the target. In the second, slightly larger circle, learners brainstorm ideas which they have about the topic. In the outer circle, they write down the names of people who might have influenced thinking related to the topic (either their ideas or the topic in general).

Subject example

Social studies: Poverty



2 Providing lesson input for CLIL



2.1 SUMMARY

This chapter covers:

- what lesson input for CLIL is;
- why lesson input is important;
- different sorts of lesson input;
- difficulties learners have with input;
- different ways of evaluating lesson input;
- BICS# and CALP#;
- practical CLIL classroom activities for providing lesson input.

2.2 INTRODUCTION

Would you bring a grizzly bear as lesson input into your classroom to get your learners excited about a new topic, or would a picture or a DVD about Fluffy be enough? Lesson input can be defined as 'the information used to help learners understand ideas and construct meaning'. Input is the foundation of every lesson, and can be linguistic or non-linguistic#. It may consist of items from a video clip or a text in a course book or it may be a graph or a photograph. Whereas linguistic input is based on language, such as a text, non-linguistic input is not based on language, and may be a model, a photograph or a live example, such as Fluffy in the cartoon. Our learners listen to, watch, look at or read input; they get information and language from input, which they can use to carry out tasks or activities. This chapter deals with providing, selecting and adapting lesson input for CLIL; Chapter 3, 'Guiding understanding for CLIL', considers ways in which teachers can stimulate the processing of lesson input.

2.3 LEAD-IN

Task 3 Your own ideas about input

What kind of input do you use? Do you think mainly about content, or do you also consider language when you provide input? This activity is designed to start you thinking about these issues.

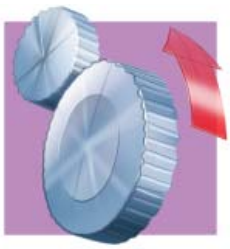
1. List six different types of input you have used in your CLIL classes.
2. For each of your examples, note down what the content and the language input is, like in the following example:

Type of input	What is the content input?	What is the language input?
Video about Hinduism and Buddhism	Important stages of religious ceremonies	Terminology used to describe Hindu and Buddhist ceremonies

3. Analyse the type of input you use in your lessons, in terms of:

- the type of input you provide (spoken, written, visual, hands-on);
- the amount of input you provide;
- how much visual support[#] there is;
- the language used in the input;
- the level of the input.

These are some of the issues related to providing lesson input for CLIL which will be dealt with in this chapter.



2.4 CASE STUDY

Input in a CLIL history lesson

Here is a short description of the input a CLIL history teacher used. She was teaching first year pupils aged about 12 or 13. The lesson was about Britain and the Netherlands in Roman times.

The main content aim of this initial stage of the lesson is that learners can:

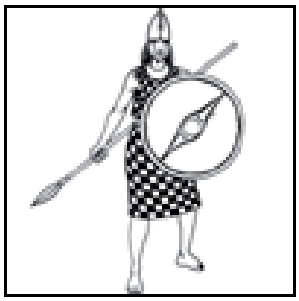
- divide information into two themes - lifestyle and warfare

The language aims are as follows. At the end of the lesson the learners can:

- scan texts for specific information;
- understand words related to lifestyle and warfare.

The input for my lesson was a dozen or so photocopies of illustrations and extracts from observations by Roman writers about the lifestyle and ways of warfare they encountered on arrival in Britain and the Netherlands. These included, for instance, short texts written by Roman authors, drawings of houses, people dressed for war and household objects.

Figure 2.1 Teacher's comment



Source 1

The Britons with their long swords and short shields, showed determination and skill in evading or brushing aside the Roman missiles, while on their own side they launched dense volleys or spears. Then the Roman general Agricola ordered his soldiers to bring things to hand to hand fighting. This manoeuvre was difficult for the enemy, whose shields were short and swords too long.

Source 2

The Celts had a fighting season (a bit like a football season), which lasted during the spring and summer months. As the season got nearer, the men sharpened their spears and polished their shields. They painted their bodies with magical, swirling patterns using blue dye called woad. They washed their hair with clay and water which made it stand up in spikes! Many of the battles were fought between local tribes about land or stolen cattle.

Figure 2.2 Input for a history lesson

Why is this CLIL?

Providing input in this lesson helps the learners with the information in several ways. The form of input is a mixture of illustrations and text, which is multimodal#, (provided through several different channels, visual, auditory and written), and therefore allows some content to be processed visually as well as linguistically; the visuals support the textual input and both new and familiar language are supported with images.

In Chapter 3 you can read how this lesson continues and how the teacher continues to help her learners process the input.

2.5 BACKGROUND

2.5.1 Providing and processing input

There are two main ways in which CLIL teachers work with input:

- They provide appropriate input in English.
- They help learners to process input in English.

This chapter is about providing lesson input: choosing input in terms of subject, academic, and language level. Chapter 3 is about processing input#: ways to guide learners to understand and process the input. Separating these two aspects of input allows teachers to think more carefully about each aspect.

In the CLIL classroom, when learners are learning content through a second language, there are several factors related to input to take into account. Firstly, working with input involves providing appropriate content material or resources, which make the right intellectual or academic demands on the learners. Secondly, it involves providing this input at the appropriate English level for them. This can be more challenging for CLIL teachers than for teachers working in a monolingual setting: input at the right cognitive level might use language which is too difficult for their learners, while input at the right language level may not be challenging enough in terms of content.

Example 3 is taken from a history book for learners in their first year of CLIL. The cognitive demands of this extract are at the appropriate level, but the language level is far too advanced for first year learners.

Example 3 History text

Papyrus grew abundantly in the marshy Nile Delta. The Egyptians used these reed-like plants for many purposes. They cooked and ate the stem. When dried, the stems were used for making rope, mats, baskets and huts. What are the men on this relief making from the plants?

(From Buskop et al., 2008, p. 35)

The next example is taken from a biology book, which is also aimed at learners in their first year of CLIL. In this extract, the language demands are at the appropriate level for initial learners, but the cognitive demands are not challenging enough.

Example 4 Biology text

People aged 12 to 18 are called teenagers. They start to look quite different. The period during which these changes take place is called puberty. Boys and girls start to look more like adult men and women. When you become an adolescent, you become more independent of your parents.

(From Smits et al., 2008, p. 14)

So, when selecting input, teachers need to take both language and cognitive level into account. In addition, providing input at the right language and cognitive level is not enough. Learners also need to be actively engaged with the content in some way in order to learn both the content and the language. For example, a teacher describing a chemical process or a historical event in a lecture for a whole lesson with no visual support. This will probably not help learners to understand or remember the input very efficiently. Therefore, in addition to selecting appropriate input, CLIL teachers need to help learners to understand and process both content and language. If the language or content is not at the right level for the learners, they may find it too difficult or too easy to process.

The four factors related to providing and processing input are illustrated in Table 2.1; teachers will stimulate more effective processing of the ideas and language to be learned if they consider all of these factors in their lessons.

FACTORS	**Appropriate cognitive demands**	**Appropriate language demands**
Providing input	√	√
Tasks for processing input	√	√

Table 2.1 Factors to consider related to providing and processing input

Teachers can influence the learning process by their choice of lesson input. In the following sections, we shall discuss how CLIL teachers can provide input at the appropriate content and language level for their learners. The main points dealt with are:

- multimodal and varied input (real objects, photographs or models, spoken input, hands-on and practical input, written input; example of input);
- amount of input;
- visual support;
- using input for different purposes;
- BICS and CALP;
- Cummins' Quadrants[#] and input;

- level of input or comprehensibility#;
- vocabulary and comprehensibility;
- knowing vocabulary;
- vocabulary difficulties;
- working with vocabulary;
- difficulties CLIL learners may experience with input.

2.5.2 Multimodal and varied input

Since learners use different ways to take in input, it is useful if input is multimodal at various stages of a lesson or lessons. In the CLIL classroom, it is even more important to exploit as many input modes as possible, both linguistic and non-linguistic, in order to ensure that as many learners as possible understand the input.

What kinds of input are there for CLIL? Input can be:

- visual;
- spoken;
- hands-on and practical;
- written.

In the following tables you can find examples of different kinds of input, related to content and language.

Visual input (real objects, photographs or models)

Input example	Content Input	Language Input	Subject
Real objects - a glass of water tipped on its side.	The characteristics of an ellipse.	Language of description, e.g. simple present tense to describe the shape of water. Nouns and adjectives, e.g. *ellipse, elliptical*.	Maths
Photographs - historical events.	The chronology of a historical period.	Numbers, e.g. how to say years (2050 *two thousand and fifty*, 1950 *nineteen fifty*). Present simple tense for permanent states.	History

Models - a model of the human body.	Looking at where main body parts are.	Adverb phrases and prepositions such as *on the right/left, above, below, under/underneath*. Vocabulary of parts of the body.	Biology

Table 2.2 Visual input

Spoken input (with or without visual support)

Input example	**Content Input**	**Language Input**	**Subject**
Spoken and visual - teacher explanation with drawing on board	The properties of a right-angled triangle	The use of the simple present tense for facts. Vocabulary of the characteristics of a triangle	Maths
Spoken and visual - PowerPoint presentation	Different types of memory storage in a computer	Linking words, such as *firstly, secondly, next, finally, lastly*	ICT
Spoken and visual - demonstration of a tennis ball dropped from one metre above the ground	Height and velocity; describing the functions determined by the height of a bouncing ball	Language of prediction, *if* sentences in the present tense (*if* and *will* used together). Language of questioning, e.g. *What do you think might happen if...?*	Physics
Spoken and visual - video or DVD on earthquakes with journalistic commentary	The damage done during different strengths of an earthquake (Richter scale)	Present continuous tense used to describe events happening right now	Geography
Spoken - podcast recording of Martin Luther King's "I have a dream" speech	Martin Luther King's character and appearance; qualities of a good orator	Rhetorical elements in a charismatic speech, e.g. repetition of words (*history, negro, justice)* or phrases (*Now is the time... I have a dream*). Use of dramatic pause. Pace and tempo. Tone and pitch of voice. Starting and ending of a speech	History
Spoken - song about Henri Matisse	Information about Matisse's life and art, e.g. from www.songsforteaching.com	Regular and irregular past tenses, e.g. (regular) *named, painted, owned, started, liked,* (irregular) *felt, thought, sold, taught*	Art

Table 2.3 Spoken input

Hands-on and practical input

Input example	Content Input	Language Input	Subject
Experiment - to create stalagmites. A week before a lesson on stalactites and stalagmites, learners carry out an experiment, which is a fast way of showing how stalagmites form. Fill two jars with warm water. Mix in Epsom salts (hydrated magnesium sulphate or $MgSO_4$ $7H_2O$) until no more will dissolve. Wet a piece of string and tie a weight or stone to each end. Drop one end of the string into each jar. Put a plate between the two jars, with the string hanging over the plate. Learners observe what happens and report back during the next lesson (a 'stalagmite' will form on the plate).	How stalagmites are made.	Language of instruction, e.g. use of imperatives. How to say chemical elements in English ($MgSO_4$ is *M G S O four*).	Chemistry
Experience - learners rub a balloon in their hair and then dangle the balloon from a string in front of a television screen to observe what happens.	Electrostatic forces: what are they and where can they be found in our lives?	Language of prediction, *if* sentences in the present tense (*if* and *will* used together).	Physics

Table 2.4 Practical input

Written input (with or without visual support)

Input example	Content Input	Language Input	Subject
Visual written (diagrams, cartoons) - a flow chart describing homeostasis.	The processes involved in homeostasis in living organisms.	Words frequently used to indicate a process, e.g. *first, next, later, after that, afterwards, when, meanwhile, then.*	Biology
Visual written - a bar graph showing the world population in billions and the availability of water per capita between 1950 and 2050.	Looking at population expansion predictions and the amount of water available for these expanding populations around the world.	Numbers, e.g. how to say years (2050 *two thousand and fifty,* 1950 *nineteen fifty*). Vocabulary related to graphs, e.g. *axis, histogram, bar graph, line graph*. The language of probability (*might, could, perhaps*) and the use of *will* to predict future events.	Geography

Visual written - poster of the periodic table.	Showing the relationship between different chemical elements.	Pronunciation of chemical elements (*aitch two oh* for H_2O).	Chemistry
Written - reading text on inflation.	The causes and effects of inflation.	Language of cause and effect. Vocabulary, e.g. *consumer, purchasing power, currency, credit, debit.*	Economics
Written - modelling. An advisory brochure which resembles one that the learners will be producing themselves on a different topic.	Demonstration of the organisation and layout of a good brochure.	Language for clear instructions (use of imperatives; use of clear titles and headings; few adjectives).	All

Table 2.5 Written input

Example 5 Poem poster

Figure 2.3 shows an example of input provided by Sally Hill, a CLIL biology teacher. It is a model of a poem poster, which the teacher created herself in order to show her expectations regarding a task: writing and illustrating a poem and poster about a sea creature.

Figure 2.3 Model of a jellyfish by Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle

Amount of input

In order to learn a language, learners need to receive a great deal of input in the target language (in this case, English). Ellis even goes as far as to say that "in general, the more language exposure# they receive, the more and the faster (learners) will learn" (Ellis, 2005). It is important, therefore, that learners read and

listen to English a great deal in the CLIL classroom and preferably outside the classroom, too. Moreover, teachers need to consider the difficulty level of new concepts and the amount of new information learners can take in at any given moment. Teachers also need to find a balance between the amount of new information and the language and content level of the information they choose to provide.

Visual support

Another aspect which determines how easily input can be understood is the amount of visual support and the layout of input. If the content or language is difficult, a teacher can support text with visuals or hands-on activities, or provide a number of different tasks. Teachers can exploit the visuals provided in course books, or actively look for other visual support to aid learning, such as photographs or video clips. Both the history lesson (see 2.4) and the model of the sea nettle (see Example 5) are good examples of visuals and text to assist understanding of both content and language.

Using input for different purposes

Teachers can use different kinds of input for different purposes. In real life, we read, watch or listen extensively for pleasure, when reading a novel or a magazine or watching a television programme. When we read a text book or watch an educational DVD for study purposes, we read more closely. We read newspaper headlines quickly in order to decide what to read, or skim a book in a bookshop to decide whether to read it, and we scan a TV guide to decide what to watch on television.

In the CLIL classroom, teachers can also help learners to use input for different purposes. Sometimes learners need to understand more or less every aspect of a topic; at other times, a more superficial understanding of the general meaning of the input is enough. However, sometimes the learners need to focus on the language used, as they will need it to perform the tasks based on the information. CLIL teachers can help their learners to process their lesson input by selecting input that is related to the content and language aims of their lessons. If we look back at the example of the history lesson in 2.4, the teacher selected a variety of texts and visuals in order to reach her aims of clarifying aspects of lifestyle and warfare in Roman times and introducing words that describe lifestyle and warfare in Roman times.

2.5.3 BICS and CALP

CLIL teachers may sometimes wonder why their learners seem to be able to speak English fluently but still have difficulty understanding more academic English, for instance when reading a text on nutrition for biology, discussing graphics in mathematics, reading a newspaper article about communism for history, or analysing a written experiment for physics. In a CLIL context, learners receive many different kinds of input. These kinds of input have been divided into two types of input by Cummins. He distinguishes between two dimensions of language: conversational and academic. To describe these dimensions, he uses the terms Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (Cummins, 2000).

The abbreviation BICS refers to the ability to understand and take part in everyday conversations and carry out daily activities in the target language. BICS are basic language skills used in informal communication, for example at school breaks or parties, on the telephone, or when playing sports. In terms of lesson input, BICS include day-to-day language and many contextual clues# to help understanding. BICS involve situations in which learners can use visual clues, gestures or facial expression to communicate with each other. Second language learners generally achieve BICS in two to five years.

The abbreviation CALP refers to the dimension of more formal, academic language learning which is important in order for learners to do well at school. CALP requires higher thinking skills# such as applying, analysing and creating (see Chapter 3). In CALP, clues to help learners understand are often reduced or absent. Lesson input for CALP is read from a textbook or presented by the teacher, and the concepts are often academically more demanding. Consequently, the spoken and written language that learners need to understand and produce for CALP is more complex than for BICS.

Teachers can teach their learners specific CALP skills and they can guide their learners to gradually move from BICS to CALP (see Chapter 4). It may take five to seven years for second language learners to become proficient in academic language skills (Collier, 1995).

2.5.4 Cummins' Quadrants and input

In the ideal CLIL classroom, lesson input is provided at the appropriate subject, academic and language level. Teachers play an important role in the learning process by providing lesson input that is both academically challenging and linguistically not too difficult. Cummins developed four quadrants that can be used to describe the cognitive and language level of lesson input (Cummins, 2000). Cummins' Quadrants distinguish between lesson input that is either BICS or CALP. Consider the following quadrants, which distinguish between easier and more difficult input in terms of context and thinking:

LESSON INPUT: CAN BE UNDERSTOOD WITHOUT MUCH THINKING

A LOT OF CONTEXT	**Quadrant 1** Input supported with many visual cues and day-to-day language Geography: Erosion *DVD designed for children telling the story how a rock becomes a pebble*	**Quadrant 2** Input with little context, cognitively undemanding, day-to-day language Geography: Erosion *Radio programme for children telling the story how a rock becomes a pebble*	**LITTLE CONTEXT**	**B** **I** **C** **S**
	Quadrant 3 Input supported with much context but cognitively demanding, more abstract language Geography: Erosion *Nature documentary on erosion*	**Quadrant 4** Input with very little context, cognitively demanding, more abstract language Geography: Erosion *Scientific article in a geography journal on rock erosion*		**C** **A** **L** **P**

LESSON INPUT: NEEDS DEEPER THINKING

Figure 2.4 Cummins' Quadrants applied to providing lesson input

In Quadrant 1, the language of the input is concrete and there are many contextual clues to help understanding, such as photographs or diagrams. An example here might be watching a DVD of the story about how a rock becomes a pebble. The lesson input is academically not very challenging.

In Quadrant 2, the language of the input is also concrete, but there are fewer contextual clues and the concepts are more difficult: for example, a radio programme for children telling the story of how a rock becomes a pebble.

In Quadrant 3, the lesson input is academically challenging and there is a lot of contextual support to help learners understand. Moreover, the language level is more abstract. An example may be a nature documentary on erosion.

In Quadrant 4, the lesson input is most challenging with regard to both language and contextual support. The language is abstract, and there are no illustrations or visuals. An example is a scientific article on erosion that contains abstract explanations and has no visual clues to support the context.

Quadrant 1	Input supported with many visual cues and day-to-day language	BICS
Quadrant 2	Input with little context, cognitively undemanding, day-to-day language	BICS
Quadrant 3	Input supported with a lot of context but cognitively demanding, more abstract language	CALP
Quadrant 4	Input with very little context, cognitively demanding, more abstract language	CALP

Table 2.6 Lesson input at appropriate level

Using the Cummins' Quadrants can help CLIL teachers to determine whether or not the intended input is appropriate for the content and language goals that they want their learners to achieve. What is difficult for one learner or class may be easy for another: it all depends on the context and the educational level of the learners. Teachers can assess input in terms of both language and content for the learners they are teaching, and it may be useful to evaluate input by asking questions like these:

- How easy or difficult is the information in the input for learners?
- How much context is provided to help learners understand?
- How easy or difficult is the language for my learners?
- In which of the four quadrants would I place my input?
- Is that quadrant appropriate for these learners?
- How can I adapt the input to make it easier (or more difficult) for my learners?

There are a number of short texts in this chapter (see 2.6.5), which we would place in the quadrants as follows. Refer to them as you read this section.

LESSON INPUT : CAN BE UNDERSTOOD WITHOUT MUCH THINKING

	Quadrant 1 **Text A:** 'Girl, 16, now has SEVEN children'	**Quadrant 2** **Text B:** 'Fire Making'		**B** **I** **C** **S**
A LOT OF CONTEXT	**Quadrant 3** **Text C:** 'Send fewer to jail, Straw urges courts'	**Quadrant 4** **Text D:** 'The Climax of Humanity'	**LITTLE CONTEXT**	**C** **A** **L** **P**

LESSON INPUT: NEEDS DEEPER THINKING

Figure 2.5 Cummins' Quadrants applied to short texts

Text A in Quadrant 1, 'Girl, 16, now has SEVEN children' (see 2.6.5), is a concrete story about everyday life, written in day-to-day language. The title clearly predicts the contents of the text and the bold print and capitals draw attention to important information. Few verb forms are used - mainly the simple past tense - and the verbs 'to have' and 'to be' are repeated. Words have mainly one or two syllables and the paragraphs and sentences are short.

Text B in Quadrant 2, 'Fire Making' (see 2.6.5, Example 6), is more specialised than Text A but not over-specialised. The verbs are mainly in the simple past tense, sentences are relatively short, and there is some repetition (*fire, skin).* Words are mainly concrete.

Text C in Quadrant 3, 'Send fewer to jail, Straw urges courts' (see 2.6.5), uses dense language, long words, only full sentences and well-structured paragraphs. The article deals with a specialist subject. Paragraphs are not overlong. The title is popular but reflects the contents of the piece.

Text D in Quadrant 4, 'The Climax of Humanity' (see 2.6.5, Example 7), is one long paragraph and contains mostly formal language. The title only becomes clear after the text has been read. Many words are abstract, long and uncommon. Sentences are long and often complex.

2.5.5 Level of input, or comprehensibility

The level of input needs to be appropriate for learners. For the CLIL teacher, this means thinking about both content and language, which are interrelated. This input needs to be comprehensible.

We use the term 'comprehensibility' to include 'readability'[#], which relates to understanding written text (e.g. course books), and 'listenability'[#], which relates to understanding the spoken language (e.g. the teacher's spoken input, video or audio material). By 'comprehensibility', we mean how understandable the language is.

The term comprehensible input[#] is sometimes used to describe language input which is slightly higher than the learners' present level (Krashen & Terrell, 1983). This idea is symbolised as i + 1, where i is the present language level. In order to encourage language acquisition, CLIL teachers should aim to provide content and language input which is comprehensible: i + 1, in other words, just above what the learners already know.

Two aspects play a role in determining the comprehensibility of input. The first aspect is the type and level of input: learners understand input if it is at the appropriate language and intellectual level. The second aspect is the experience and knowledge which the learner brings: their understanding is affected by factors such as their own personal interest in the subject and their knowledge and understanding of the topic (see Chapter 1). In other words, it depends on the way learners interact with the input.

Comprehensible subject input

It is easy to work with resources which deal with relatively simple concepts, require lower level thinking skills and assume that learners are already fairly familiar with the subject. Working through input which is more difficult - for example, which is more academic or contains abstract concepts - requires analysis, synthesis and deep thought. Based on their experience, CLIL teachers will often know instinctively how difficult the content of a text is for their learners, i.e. whether the cognitive demands are high or low.

Comprehensible language input

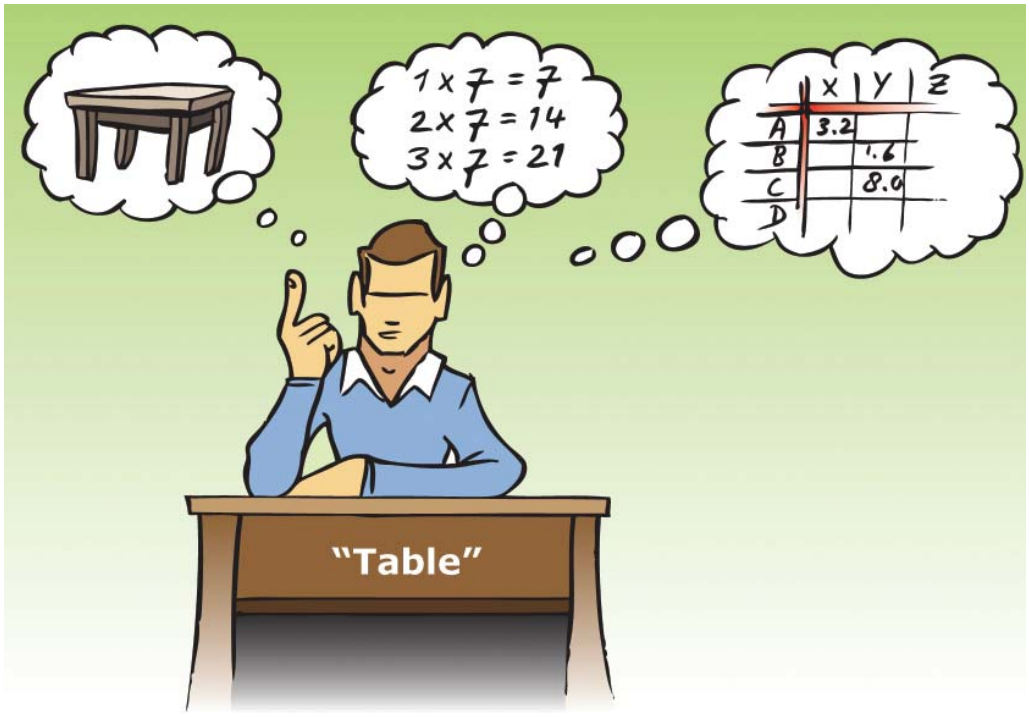
Easier language input often contains few new words, short sentences, short words, and words or forms which resemble L1 words or constructions. More difficult language input is dense, written in long, complex sentences using specialised vocabulary with long words. There are various ways to support the CLIL teacher in gauging the language level of input; these will be discussed in section 2.6.

Advantages for CLIL teachers
Some items are actually easier for learners to comprehend in English classrooms than in regular Dutch classrooms. For example, in chemistry the abbreviations of the elements are usually more transparent in English than in Dutch: O is the symbol for Oxygen, which is *zuurstof* in Dutch. In Physics, f is the symbol for force, which is *kracht* in Dutch.

2.5.6 Vocabulary and comprehensibility

CLIL teachers provide input and deal with vocabulary with their learners. Even though a good native speaker reader recognises about 50,000 words, a vocabulary of only about 2,000 words is enough for a learner to recognise 80% of most texts. A vocabulary of about 5,000 words is enough to read and understand academic texts.

Vocabulary can be divided into three categories: general vocabulary[#], subject terminology and academic words. As shown in the following illustration, the same word (*table*) can have different meanings depending on whether it is used in everyday language, in subject language or in academic texts. CLIL learners need to learn and use words and phrases from each category.



General vocabulary refers to the most ordinary words used in everyday language; these are the social words you need to function on a day-to-day basis, such as *the, be, book,* and *table*. The General Service List (1995), a list of the 2,284 most frequent written words, can be found at jbauman.com/gsl.html.

Subject terminology is the specialised language for each subject, for example *molecule* in chemistry, *electromagnetic* in physics, *revolution* in history, *Hinduism* in religious education, *cell* in biology, and *multiplication tables* in mathematics. This is the language a subject teacher deals with naturally in a monolingual setting. Subject dictionaries and glossaries in textbooks are a good source for subject terminology.

Academic words are those more formal English words commonly used in academic texts; words such as *adaptation, policy, stability,* and *voluntary.* These words can be found in the Academic Word List (AWL) and are used in every subject. In the Academic Word List, the words are divided into ten shorter sub-lists according to frequency. Sub-list 1 is a list of the most frequent academic words; it includes words such

as *area, benefit, define, factor, environment, issue, research* and *vary*. Sub-list 10 includes less frequent words such as *adjacent, forthcoming, integrity, levy, notwithstanding, panel, persistent* and *so-called*. It is important for CLIL learners to recognise, understand and eventually use these words, as they gradually need to develop a more academic, formal language in order to move from BICS to CALP. A version of the Academic Word List can be found at www.uefap.com/vocab/select/awl.htm

What is knowing vocabulary?

'Knowing' vocabulary is more than just recognising a word, or knowing how to pronounce it, and it is more than just reproducing a dictionary definition (for a list of dictionaries, see the References at the end of this book). Getting to really know words is a long-term process. It involves coming across words and phrases in different contexts. It means gradually using and recycling them so that they move from people's receptive vocabulary[#] into their productive vocabulary[#].

As well as recognising, understanding and eventually using words, learners need to know how words combine to make new ones (for example *star* and *fish* make *starfish*, and *book* and *worm* make *bookworm*). They need to know that some words combine together, sometimes in a particular order, such as *black and white* (but not *white and black)*, *heart attack,* and *take off*.

We cannot expect our learners to be able to use words when they meet them for the first time; before they can use these words actively and independently, we need to support them in recognising words, by recycling them in activities. Coming across words repeatedly and using them in different contexts or tasks is by far the best way of ensuring that they are learned (Nuttall, 1996). A more extended discussion of vocabulary and memory can be found in Chapter 3.

Vocabulary difficulties

What is it that makes vocabulary difficult for learners? There are several aspects of vocabulary that make it hard; here are some examples:

- Words may have multiple meanings or may be used as different parts of speech; for example, the same word can be used as both a verb and a noun. Even if you know that a *dog* is our four-legged friend, you might not understand the sentence *These thoughts had dogged him for some time*. Another example is the noun *star* (heavenly body) which is also used as a verb *to star in a film* and as a noun for a reward: *She received a star for her essay.*
- Words may mean different things in everyday and subject-specific contexts, such as *force* or *mass*: in everyday language *force* means physical strength, whereas in physics it means a power that makes something move.
- Verbs can change their meanings when they become phrasal verbs. For example, *put* means something totally different when we use it to *put across* a point of view or to *put someone down*.
- In idiomatic language, the same word can have a literal and a figurative meaning. For example *The grass was growing* (literal meaning) and *He was put out to grass* (figurative meaning).
- Technical jargon can also provide difficulties.

2.5.7 Language characteristics of input for different subjects

A history teacher at a bilingual school contacted her English teacher colleague during the first few weeks of term about her first year classes, with this request:

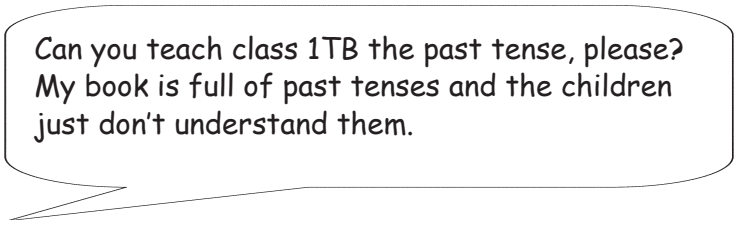


Figure 2.6 A history teacher's request

Each CLIL subject is concerned with its own content and language input, or 'discourse'. CLIL teachers often provide glossaries of specialised vocabulary for their subject. However, in addition to this specialised vocabulary, each subject also has its own characteristic language features. For example, the language of geography contains many prepositions and present tenses, the language of history is in the past tense right from the start, science subjects are often concerned with the language of hypotheses ('if' sentences), and physical education makes frequent use of imperatives. That is why it is useful for CLIL teachers to become aware of the language features that are often used in their subject area, so that they can help their learners to notice how language is used in their subject, too.

Formulating language aims

Once teachers have evaluated their material for its language characteristics, it can be useful to formulate language aims for a lesson, in terms of what new things the learners can do at the end of the lesson or lesson series. For this, it is useful to concentrate initially on only one or two essential language aspects. Some concrete language aims are provided in Table 2.7.

Content	**Language aims**
Biology lesson on diseases cured in the 20th century	Learners can complete a short paragraph with gaps about a deadly disease of their choice, explaining what caused it and how it was cured
Social sciences lesson on how adoption works	Learners can explain the steps involved in adoption in the first person# and past tense, as if they were the adopted child
Economics lesson introducing NASDAQ with a video clip, e.g.: videos.howstuffworks.com/howstuffworks/412-how-nasdaq-works-behind-the-scenes-video.htm	Learners can understand the meaning of these words and phrases: *NASDAQ, electronic stock exchange, matching engine, transaction bus, stocks, makes a trade*. (Other difficult words in the video clip are less relevant for understanding and are ignored, such as *executes, handle, data feeds, buy and sell order,* and *NASDAQ platform*)

Table 2.7 Language aims

2.5.8 Difficulties CLIL learners may experience with input

What types of difficulties have you noticed your learners having with input? Learners of CLIL face particular challenges related to input, such as these.

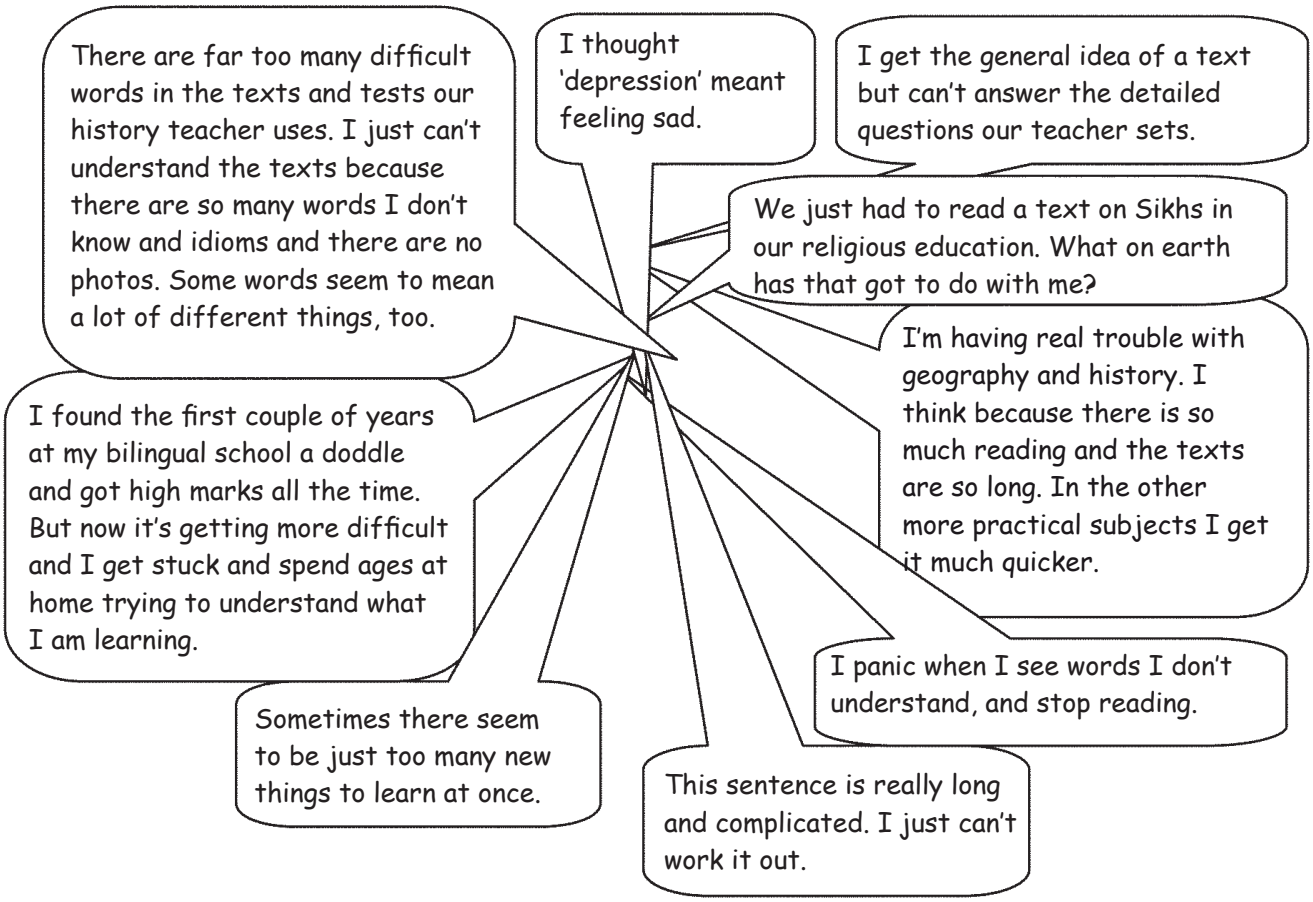


Figure 2.7 Difficulties for learners with input

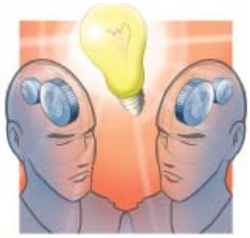
These quotes illustrate that CLIL learners may have difficulties with both *content* and *language* input, which probably influence each other. Typical CLIL learners' problems include problems with understanding language, such as:

- reading (or listening) for detail in a text with many unfamiliar words;
- inferring information from spoken or written texts which include few visuals;
- spoken text which is spoken quickly or delivered in a heavy accent;
- unknown grammar;
- idioms, words with multiple meanings or figurative language;
- reading texts which include many reference words (like *it*, *these*, *them, they);*
- very long sentences with many sub-clauses;
- passive sentences (e.g. *We have inflation when the money supply is increased faster by the government than the quantity of goods is increased*);
- everyday words used in a subject-specific way (e.g. *depression* in geography and history);
- the over-use of verbs as nouns (e.g. *the formation of crystals* instead of *we form crystals*);
- specialised subject-specific vocabulary and technical terms;
- understanding the relationship between main and sub-topics.

Other problems for CLIL learners involve understanding ideas, such as:

- abstract concepts, for example black holes or DNA, the process of precipitation;
- content which is outside learners' experience, for example quadratic equations or British history;
- culturally-specific references, for example the significance of Bonfire Night and Guy Fawkes to democratic processes;
- algebraic calculations and describing these in words;
- putting a concept in context, for example placing a painter in a specific art movement;
- not being able to identify the main ideas in a text and going into too much detail.

We shall deal with these issues in the next section.



2.6 APPLICATIONS FOR CLIL

There are several ways in which teachers can evaluate lesson input to see if learners are likely to understand it. In this section of the chapter we deal with:

- estimating the comprehensibility of language in lesson input;
- working with vocabulary and glossaries;
- organisation of input;
- the Common European Framework of Reference for Languages[#] (CEFR);
- adapting lesson input.

2.6.1 Estimating the comprehensibility of language in lesson input

How can teachers assess how much learners will understand of the language in their lesson input? Below are a number of issues for CLIL subject teachers to consider, so that they become aware of the language used in their own material. These issues are followed by a commentary to help learners access the input better.

The amount of lesson input and visual support

How long is the input? How long are the paragraphs in a text? How long are the sentences? How much visual support does the input contain to aid understanding? What are the language functions[#] of this material (e.g. does it describe, persuade or instruct)? A longer text or video demands more of a learner in terms of understanding, whereas shorter chunks[#] of information are easier to follow. In texts, longer sentences with many sub-clauses are difficult to comprehend. A text with subtitles, visuals such as a photograph or illustrations, or input divided into steps is easier to follow than one long, dense text consisting only of words.

Tips for dealing with the amount of lesson input and visual support

If you realise a topic is going to be difficult for your learners, choose input that is easy to divide into shorter chunks. Divide it and deal with it in shorter pieces; draw learners' attention to visuals or create visuals surrounding a written text, or show a DVD.

Language in the input: tenses and vocabulary

Which tenses are used in the material? The more complex or unfamiliar the tenses (e.g. passive or conditional tenses), the less accessible the input. How much new vocabulary is there? Which important vocabulary or phrases in the material do learners need to recognise and use? How long are the words? The more new vocabulary there is in the input, the harder it is to follow. One-syllable words are generally easier to understand than those made up of several syllables.

Tips for dealing with tenses and vocabulary

Think about whether the learners will understand the tenses in the input. For example, do they understand regular and irregular verb forms? Point these out or design activities to help them notice the aspects of language that need to be dealt with. In written text, count the number of words (average) learners will probably not understand per page. One rule of thumb is that 10-15 new words or about 5% of the words per page is enough - above this and it will be difficult for them to gain a detailed understanding of the ideas in the text (see below for more on measuring readability). Decide in advance which words learners really need to know before they read, and only pre-teach# key words# which if unknown would really limit their understanding on a first read. Encourage learners to guess the meanings of words by looking at them in context, or at the form of words (e.g. prefixes such as *un-, in-, dis-* indicate opposites; suffixes such as *-ment, - sion, - tion* indicate nouns). More ideas for dealing with vocabulary can be found in the practical lesson ideas in Chapter 3.

2.6.2 Working with vocabulary

Here are some general suggestions for dealing with vocabulary when providing lesson input:

- Provide a photo, video or diagram of important concepts, so that learners can understand the meaning using a different medium.
- Teach words in themes, so that learners can understand the links between them. For example, show mind maps to illustrate the connections between words or ask learners to make their own.
- Provide easy (frequently used) synonyms for the words.
- Use body language or acting out to explain.
- Make a link to a word or concept in another language.
- Pre-teach# important concepts or key words. Beware, though, that you do not pre-teach too much: a handful of the most important concepts is enough.
- Provide tasks to help learners to be actively involved with new vocabulary. For example, encourage them to think about what type of word it is (noun, verb, preposition), to look at the text around the word for clues to its meaning, to look at the form of the word (e.g. *-ed* at the end of a word indicates a regular past tense, *-ful* at the end of a word usually indicates an adjective or describing word). The more learners are engaged with the vocabulary, the more likely they are to recall it.
- When working with vocabulary for abstract concepts, give learners concrete examples.
- Compare new concepts with ones that learners already know: link older knowledge with the new.
- One interesting way of developing reading strategies is to blank out the new vocabulary or key words and to see if learners can understand a text provided without it (see Activity 2.9.10).

Section 2.9 provides more ideas for working with vocabulary.

2.6.3 Glossaries

Many teachers provide word lists, which learners collect in a notebook or word file, otherwise known as a glossary#. A Personal Idiom File# (PIF) is a glossary created by the learners. To support learners best, it helps if the whole CLIL team decides on a strategy for the glossary, or PIF, and uses it consistently. Learners should be provided with words and definitions in English for a glossary as well as a clear example of the word or phrase in a context where the meaning of the word is clear. For example, *The **eye wall** of a hurricane is the area around the eye with the fastest, most violent winds*. Learners can also be asked to illustrate terms with drawings or photographs which they find themselves. Furthermore, the more learners are involved in creating their own glossaries, the more likely they are to retain the words they are working with.

Moreover, it is vital that the words do not only remain in the glossary, but that learners use them actively in different tasks. Merely learning words by heart for a test does not help learners to retain vocabulary in the long term, or for the words to remain in the long-term memory#: reading a lot helps much more. It is

therefore important that learners do not only receive lists of bilingual words from the teacher, which are tested and quickly forgotten and which may become tedious for both learners and teachers. It is better if teachers provide tasks or activities which recycle the words and which help learners to retain vocabulary.

Learning vocabulary is discussed further in Chapters 3 and 4. For more information on glossaries see 3.6.7.

2.6.4 Input organisation

How well-organised is the input? Some writers organise their ideas more clearly than others, for example by using 'signal words'[#] such as *first(ly), second(ly), next, finally* or, in spoken language, phrases such as *I have three points to make here* or *Some scientists are in agreement with this theory, others disagree*. Writers may also structure their paragraphs by arguments for and arguments against a certain statement. Texts with clear patterns are easier to follow.

Tips for looking at organisation

When you look for material, be aware that a well-organised text will be easier to process than a rambling one. Provide tasks to help learners understand the function of input: Why was this text written or why was this film made? Who is the audience? Help them become aware of the functions of parts of a text, for example by asking questions such as *What are the arguments for and against? How do you know that?* or *In which parts of the text does the author discuss the causes and effects?* Help learners to recognise and use words which show the organisation of a text. This topic is discussed further in Chapter 3.

2.6.5 Measuring readability

It is possible to determine the 'readability' of a text, or roughly how many words in a reading text are unfamiliar to the readers. As mentioned above, a simple rule of thumb is that no more than 10-15 words, or about 5% of the words on a page should be unfamiliar. For the more scientifically-minded reader, it may be attractive to measure the readability of a written text on the internet. An online readability test can give a good rough indication of the readability of a (digital) text for a native speaker.

Online readability instruments

Two examples of online readability instruments are:

- SMOG: Simple Measurement Of Gobbledygook (www.harrymclaughlin.com/SMOG.htm);
- Readability index calculator (www.standards-schmandards.com/exhibits/rix).

Two texts - an article from the Guardian newspaper and one from a BBC website for children - were checked online using these two instruments:

Send fewer to jail, Straw urges courts

Jack Straw, the justice secretary, last night made an urgent appeal to magistrates to send fewer people to jail as the prison population in England and Wales soared past 82,000 to an all-time high.

The official prison population reached 82,006 yesterday - just 21 places short of the system's official capacity - fuelled by a jump of 2,300 in prisoner numbers since the new year.

In an exclusive interview with the Guardian, Straw said the numbers were already outstripping official forecasts that were only published in December, and added that he could not rule out a further extension to the early release scheme that has seen thousands released 18 days before the end of their sentence. (...)

(Text from *The Guardian online* www.guardian.co.uk/society/2008/feb/22/prisonsandprobation.justice)

Readability results Guardian text 'Send fewer to jail, Straw urges courts'
The SMOG test indicated that this text was high school graduate level. The readability index calculator measurements showed that the text is at grade 16 (that is, about vwo 5 level) and that its readability is 30% (the lower the score, the more difficult the text).

Girl, 16, now has SEVEN children

A 16-year-old South American girl now has SEVEN children after giving birth to her second set of triplets.

The girl had a son when she was 14. She had her first set of triplets - all girls - when she was 15.

Her newest arrivals are all females as well. They were born earlier than expected, but doctors say the babies and their mother are doing well.

The girl, who has been named only as Pamela, comes from the town of Leones in Cordoba, central Argentina.

(Text from Newsround CBBC website:
news.bbc.co.uk/cbbcnews/hi/newsid_7250000/newsid_7258200/7258272.stm)

Readability results Newsround text 'Girl, 16, now has SEVEN children'
The SMOG test indicated that this text was junior high school level. The readability index calculator showed that the text is graded as a first year text and that its readability is 71% - much easier than the Guardian text.

2.6.6 The Common European Framework of Reference for Languages (CEFR)

The Common European Framework of Reference for Languages (CEFR) is a guideline used Europe-wide to describe the achievements of learners of foreign languages. It describes what a learner can do in reading, listening, speaking and writing at each level and is divided into six levels: A1, A2, B1, B2, C1 and C2; A1 is the lowest level and C2 the level of a near-native speaker. The CEFR can also be used to see how understandable input is for learners.

The Cambridge examinations often taken at Dutch CLIL schools are, according to the University of Cambridge ESOL Examinations, at approximately these levels on the CEFR:

Examination	**CEFR**
First Certificate of English (FCE)	Level B2
Cambridge Advanced English (CAE)	Level C1
Cambridge Proficiency of English (CPE)	Level C2

In broad terms, when learners enter a non-bilingual Dutch vwo school in year one, they are at level A1 or A2 and are required to reach level B2 for English by the end of vwo 6. Dutch bilingual schools will probably expect a level of B2 by the end of year 3 and C1 by the end of vwo 6. A copy of the one-page English version of the CEFR can be found in the Appendix. As this chapter deals with lesson input, the most relevant sections for this chapter are listening and reading.

The CEFR 'descriptors'[#] describe the learners' abilities for each level and each of the language skills. These are the CEFR descriptors for reading at level B1 and C1.

B1	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.
C1	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.

How the CEFR can help providing input

There are two ways in which the CEFR can help CLIL teachers provide language input at the appropriate level (i + 1) for their learners. Firstly, teachers can assess their own and their learners' level of English with the CEFR by using the descriptors and estimating their learners' level. For learners it can be an eye-opener to assess themselves, using the descriptors (a useful online tool is the European Language Portfolio, a Dutch and English version can be found at www.europeestaalportfolio.nl), or doing the free Dialang test (www.dialang.org).

Secondly, the level of input teachers provide can be assessed. Teachers at one bilingual school were astonished to discover that learners would need to be at level B2 to understand the language input in their first year course book (written for native speaker learners). The level of their incoming learners was A2. No wonder the learners were having great difficulty understanding and working with the texts provided! Teachers can use the CEFR to assess the level of the input of their materials, by asking themselves the question: Which CEFR level does a learner need in order to understand this written or spoken material?

The following examples present texts at B1 and C1 level, together with an analysis given by Texamen (www.texamen.nl), a private company that combines the CEFR levels and readability criteria to grade texts.

Example 6 B1 text

Fire Making

Many thousands of years ago, people lived only in hot countries. They did not live in cold countries because they could not keep warm. Then they learned how to make clothes. When an animal was killed, they cut off its skin. They wrapped the skins around their bodies. The skins kept them warm.

At first men did not know how to make fire. Sometimes lightning hit a forest and started a fire. The people took some of this fire to make a fire near their homes. A fire was very important for three reasons. It kept them warm. It frightened wild animals. They did not attack when they saw fire. Then another thing was discovered: if you cook food, it tastes much better!

Analysis

The word use of the text is neither specific nor general (*discovered, countries*), but nonetheless concrete (*skin, animal, homes*) and frequent (*frightened*). The language use is neither informal nor formal. At B1, a text may contain expressions and figurative language, such as *to keep warm*. The number of words (123), sentence length (9.46 words per sentence) and paragraph length (6.5 sentences) correspond with the range of B1 given by Texamen**.**

Example 7 C1 text

The Climax of Humanity (excerpt)

Looking beyond the blinking lights and whirring gizmos, though, the new century is shaping up as one of the most amazing periods in human history. Three great transitions set in motion by the Industrial Revolution are reaching their culmination. After several centuries of faster-than-exponential growth, the world's population is stabilising. Judging from current trends, it will plateau at around nine billion people toward the middle of this century. Meanwhile extreme poverty is receding both as a percentage of population and in absolute numbers. If China and India continue to follow in the economic footsteps of Japan and South Korea, by 2050 the average Chinese will be as rich as the average Swiss is today; the average Indian, as rich as today's Israeli.

Analysis

The word use is very specific (*whirring gizmos*), abstract (*transition*) and low frequency (*culmination, climatologists*). The language is formal. It contains several expressions (*judging from*), figurative language (*economic footsteps*) and jargon (*carbon dioxide*). The sentence length (18.18 words per sentence), the word length (5.03 characters per character) and the Lix Measure (46.25) correspond to the range Texamen appoints to C1 texts.

2.6.7 Adapting lesson input

Another way to help learners to understand input is to adapt it. Here we deal with two ways in which teachers can do this, by simplifying the language or by visualising information.

Simplifying language

One way of adapting input is to make the text easier. Here are some suggestions about how to simplify a written text, illustrated with the original and simplified text from Example 8.

Method of simplifying the text	Original text	Simplified text
Replace a difficult title with a short, simple title which reflects the contents of the text	Sources of radiation	Where does radiation come from?
Put the main idea at the start of the text and each paragraph	In 1972 a detailed survey was made of average annual whole-body doses to the U.S.A. population from various sources	Radiation exposure is how much radiation a person receives
Add subtitles for paragraphs	No subtitles	Conclusion
Take unnecessary words or information out	Remember, some people got enough to make up for the vast majority who got none!	--

Divide long, compound sentences into two or more and make short sentences which include only one idea (10-15 words maximum) and a simple sentence structure: verb + subject + high frequency words	Occupational and miscellaneous artificial exposures averaged about 1-2 *mR*/*y* (…) global fallout from nuclear testing made up about 6 *mR*/*y*; medical exposures (X-rays, radiotherapy, *etc*.) were good for nearly 100 *mR*/*y*; and natural background averaged about 120 *mR*/*y*	The survey showed that the average radiation exposure at work and from other various sources about 1-2 *mR*/*y* (milliRöntgen per year). The radiation from the fallout from nuclear testing was about 6 *mR*/*y*. Medical exposure (X-rays, radiotherapy) was nearly 100 *mR*/*y* and natural background radiation was about 120 *mR*/*y*
Change passive tenses into active ones	A detailed survey was made	A survey in the U.S.A. looked at
Change phrasal verbs to simpler ones	Global fallout from nuclear testing made up about 6 *mR*/*y*	The fallout from nuclear testing was about 6 *mR*/*y*
Replace metaphors or idiomatic language with more concrete language	Although this begs the question of 'extraordinary cases'…	This may lead us to ask: what about 'extraordinary cases' …

Table 2.8 Ways of simplyfing a text

A few more advices:
- Add steps or a logical chronology, using bulleted paragraphs or words like *Initially*/ *first, … next*/*later*/ *secondly, …last*/*finally* / *at the end*.
- Use large print or add white space; double space a difficult paragraph.

Example 8 Simplified text

Here is an example of a short original physics text and its simplified version.

1. Original text (adapted from musr.physics.ubc.ca/~jess/hr/skept/RadHaz/node8.html)

Sources of Radiation

In 1972 a detailed survey was made of average annual whole-body doses to the U.S.A. population from various sources. Occupational and miscellaneous artificial exposures averaged about 1-2 *mR*/*y* (remember, some people got enough to make up for the vast majority who got none!); global fallout from nuclear testing made up about 6 *mR*/*y*; medical exposures (X-rays, radiotherapy, *etc*.) were good for nearly 100 *mR*/*y*; and natural background averaged about 120 *mR*/*y*. The numbers have not changed much in the intervening years. One must conclude that for the average person there are only two significant sources of radiation exposure: medical and natural. Although this begs the question of 'extraordinary cases' who receive larger exposures in accidents such as Chernobyl, it still helps to set perspectives for those examples.

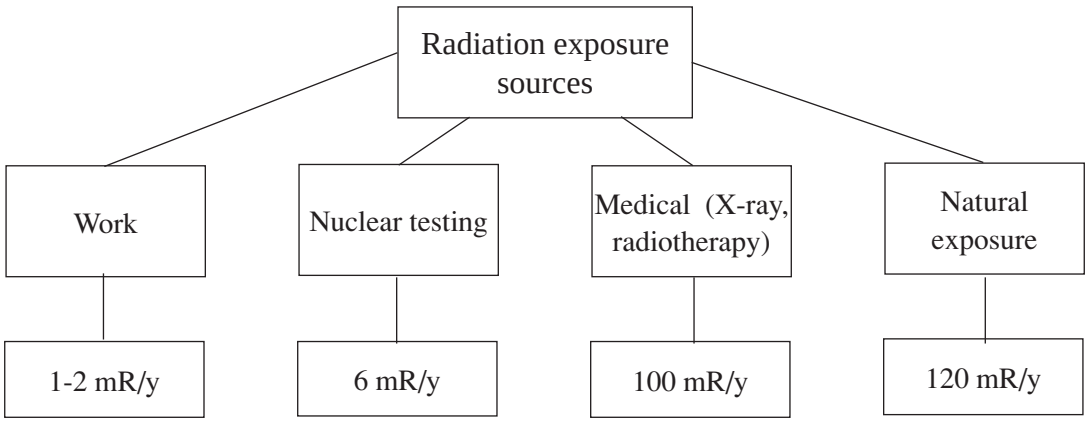
2. Simplified text

Where does radiation come from?

Radiation exposure is how much radiation a person receives.

Survey

In 1972, a survey in the U.S.A. looked at the average amount of radiation that people received in a year from various sources. This was measured in *mR*/*y*, milliRöntgen per year. The survey showed that the average radiation exposure at work and from other various sources about 1-2 *mR*/*y* (milliRöntgen per year); the radiation from the fallout from nuclear testing was about 6 *mR*/*y*; medical exposure (X-rays, radiotherapy) was nearly 100 *mR*/*y* and natural background radiation was about 120 *mR*/*y*. This information is still true today. The survey results are presented below:



Conclusion

We must conclude that for the average person there are only two significant sources of radiation exposure: medical and natural. This may lead us to ask: what about 'extraordinary cases' who receive a lot of radiation exposures, in accidents such as in the nuclear plant at Chernobyl? These cases should be put in the right perspective, and this conclusion helps us to do it.

Visualise the text

Another way of helping learners to understand a text better is making it more visual, adding non-linguistic support to the input, for example with a diagram (see Example 8) or illustrations.

2.7 CONCLUSION

In this chapter, we have discussed how important it is that teachers provide lesson input at the appropriate content and language level for their learners, and that they guide them to understand the lesson input. This input can be provided in different ways, such as using visual, auditory or written media. The CEFR and online readability instruments are useful ways to evaluate lesson input to make sure that learners are likely to understand the various types and different levels of lesson input.

To sum up, when providing lesson input CLIL teachers can:

- offer multimodal and different types of input through various channels: use reading and listening texts, videos, photos, hands-on activities and objects;
- select or adapt input so that the textual and visual input support each other;
- use different kinds of input for different purposes;
- use Cummins' Quadrants to help evaluate material or input to estimate whether it is at the appropriate academic and language level;

- offer comprehensible input;
- help learners recognise, understand and eventually use vocabulary actively;
- help learners to make and refer to glossaries in English;
- divide long pieces of input into shorter pieces;
- support learners in noticing# and understanding language features of different texts;
- choose and use written texts which do not contain more than 10-15 unknown words per page;
- simplify difficult texts for detailed work;
- visualise a text;
- create opportunities for students to receive input outside the classroom, for example via the Internet, television, film, newspapers, personal experiences and social exchanges;
- use the CEFR to evaluate the language level of input; make input easier or more difficult by shifting one level up or down; design tasks with the CEFR in mind;
- formulate language aims as well as content aims for lessons.

2.8 TEACHER DEVELOPMENT

As a follow-up to the ideas in this chapter you could do one or more of the following activities:

- Use the tables in 2.5.2 about different kinds of input, related to content and language. Which kinds of input do you use? Select one you do not use and search for appropriate input for one of your classes to try out.
- Use the CEFR (see Appendix) to assess the level of the course books that you use. Choose three different texts in a course book and assess their level. Or choose three texts from three different course books. Are they all at the same level? If not, can you explain why?
- Look at 2.6.1 and 2.6.2 and try to do the same with a text that you are going to use in class: Which new words will learners need to use actively? Which new words will learners need to understand but not really use? Which words can learners ignore?

2.9 PRACTICAL LESSON IDEAS

How can you provide lesson input? Some practical examples for providing lesson input.

Activity 2.9.1 Finding materials online

Provide varied resources and materials for input
Description Nowadays, many classrooms have Smart Boards or data projectors linked to computers or computer rooms, which is a great chance for the CLIL teacher to provide and use varied online input. Here are some of our favourite resources for varied input.
Examples *Video clips* There are several websites which are useful for finding musical, visual and spoken input. YouTube (www.youtube.com) This well-known site offers short video clips on many subjects. A short search using the words 'great depression' reveals some vivid photographs from the time of the great depression, backed by music from the time ('This land is my land', for example). A search for 'chemical reactions' produces a motivating educational video on alkali videos with chemicals exploding in a bath.

Spoken text
You can download spoken text from the Internet to be used in your classroom.
i-Tunes (www.apple.com/itunes)
The i-Tunes store, for example, has free downloadable podcasts of great speeches in history, such as Martin Luther King's speech 'I have a dream', or J.F. Kennedy's inaugural speech. There are many podcasts on historical, scientific or cultural topics, too.

Educational documentaries
TeachersTV (www.teachers.tv - free registration required)
This site contributes many educational documentaries. A search for mathematics topics revealed a documentary about the revolutionary mathematician Benoît Mandelbrot, maths in cricket and maths in a hotel, as well as some practical tips about starting lessons for maths teachers. Unfortunately, some of the videos cannot be viewed or downloaded outside the UK (due to copyright reasons). Still, there are enough documentaries that are accessible.

Written and spoken input
How stuff works (www.howstuffworks.com)
This site is a mine of information on many school topics, with clearly-written texts backed up with visual material such as photographs and videos.

Online news resources
Many teachers would like to link their work in the classroom to topics in the news. Just about every English-language newspaper has its own webpage. Some interesting ones are:
- CBBC Newsround (news.bbc.co.uk/cbbcnews/default.stm)
- Guardian online (www.guardian.co.uk): The very latest news from the Guardian online newspaper.
- BBC World Service (www.bbc.co.uk/worldservice)
- BBC (www.bbc.co.uk): Listen to the latest news or download podcasts for use in the classroom.
- Kidon Media-Link (www.kidon.com): Nearly 20,000 online newspapers worldwide.
- BBC Learning (www.bbc.co.uk/learning): Type in a keyword to discover video and written resources related to your subject. For example, a search on earthquakes results in an article on the Kobe earthquake in Japan, a science and nature webpage on how earthquakes work, and a CBBC (Children's BBC) page charting recent quakes.

Visuals
Google images (images.google.nl)
Use Google images to find photographs or other visuals for your lessons. The larger the image, the better the quality. A picture with, for example, 400 x 304 pixels will not be as good as one with 600 x 800. You can refine your search further to cartoons, or black and white images only, for example, by using 'advanced search'.

Google Earth (earth.google.com)
"Google Earth lets you fly anywhere on Earth to view satellite imagery, maps, terrain, 3D buildings and even explore galaxies in the Sky. You can explore rich geographical content, save your toured places and share with others".

Lyrics
Lyrics search engines (www.metrolyrics.com) or A-Z Lyrics Universe (www.azlyrics.com).
On these sites you can type in an artist or song title to obtain the lyrics to many popular songs.

Songs for teaching (www.songsforteaching.com). Here you can find songs for different school subjects.

Activity 2.9.2 Graphic organisers

Help learners organise and understand new vocabulary or concepts

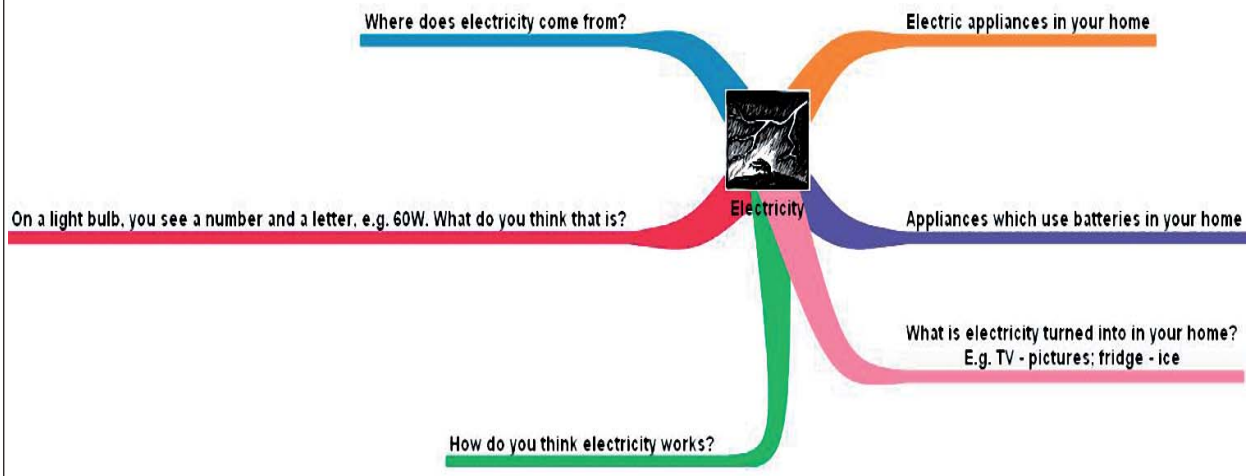
Description

Provide a note-taking structure - or graphic organiser - for learners to complete as they work with the input. For more difficult input, you can provide partially-completed organisers which learners complete further.

Subject example

Technology: electricity

You can use a graphic organiser for learners to brainstorm as an introduction to a topic, such as this mind map related to electricity. Learners complete it with their own ideas.



Activity 2.9.3 Using pictures and asking questions

Support texts with visuals or hands-on activities

Description

Select a visual - a photograph, cartoon or other image - which is strongly related to your topic. Then create a task around the visual, which will introduce your learners to the topic of the lesson and get them talking. You might use a list of questions, a pile of cards with questions, or a mind map for learners to complete. Make sure that all the learners can see the visual. Ask them first to think about it in pairs, and then discuss some ideas together in plenary.

Subject example

Physics: radiation

When showing an image of people wearing a hazmat suit (garment worn for protection against hazardous substances), you could ask the following questions:

What, where and when?

What is the photo of?

Where is the photo taken?

When (time of day, or year) was the photo taken?

Write down two questions you would like to ask about the photo.

Think of a catchy title for the photo.

Who?
Who is in the photo?
What are the people doing in the photo?
What are they wearing/What do they look like?
What is the relationship between the people in the photo?
Who is the photographer?
Why?
Why do you think the photograph was taken?
Who or what event was the photograph taken for?
What is the photographer trying to convey to the viewer?
In-depth
If this photo was the cover for a book, what would the title of the book be?
If it were a CD cover, what kind of music would it be?
What might the title of the CD be?
If the photo was illustrating an article, what would the title be?
What do you think the message of the photo is?

Activity 2.9.4 Interview

Stimulate spoken input

Description
Before you start a topic or provide some input, ask your learners to interview a person or people (in English, preferably, but that is not always possible) in their environment about the topic. For example, they might interview a grandparent or elderly relative or neighbour about their experiences during the war, or an acquaintance about their job or beliefs about a topic in the news.

Subject example

History: World War II
Provide an interview framework like the one below, ensuring you leave enough space for learners to write the answers. Learners can also create their own framework.
Interview framework about the Second World War
First, ask your interviewee if you may ask them some questions about themselves and their experiences during the war. Write the answers to their questions on this form.

My name_____
Name of person I interviewed_____
Date of birth of person I interviewed _____
Date_____

Interview Questions
1. What did you think when the war started?
2. How old were you during the war?
3. Where did you live during the war?
4. What was your house like?
5. What did you do in the war?
6. What was music like during the war?
7. What did your parents do in the war?
8. What was the worst thing that happened to you during the war?
9. How did you feel when the war ended?
10. How have things changed for the better since the war?
11. How have things changed for the worse since the war?
12. (Write your own question here and ask it)
13. (Write your own question here and ask it)

Activity 2.9.5 Hands-on experiments or experiences

Support texts with visuals, hands on activities or experiments
Description Visualise your content with real objects, hands-on experiments or experiences. In this way, learners can reinforce their learning through a non-linguistic channel. Concrete vocabulary can be visualised through objects, and an experiment carried out at the start of a lesson can aid later understanding.
Subject example For some ideas, see: • Hunkins experiments (www.hunkinsexperiments.com) This site describes experiments which you can do at home. • Steve Spangler's Science (www.stevespanglerscience.com/experiments) This site describes experiments according to age range and price.

Activity 2.9.6 Mind the gap

Make a gapped text
Description In advance, select some dozen or so important words from your input which you would like learners to understand and eventually use. Make a gapped (cloze) text of your input and above the text provide the words to fit into the gaps. Ensure the gaps are numbered for easy reference later and that they are not too close together, so that learners can use the context of the text to guess the words. You can make it more difficult by providing extra words which do not fit the text, or easier by providing dictionaries. By doing such a task, the learners are actively engaged with the important concepts of a unit.
Subject example **Technology: how SMS works** **Instructions** Below is an excerpt from a text entitled 'How SMS Works' (adapted from communication.howstuffworks.com/sms.htm). There are 10 numbered gaps in the text. Can you complete the gaps with 10 of these words? SMS text messaging cell phone sending cell phones text message characters short message service handling cells control channel receiving **Introduction to How SMS Works** Just when we're finally used to seeing everybody constantly talking on their 1_____ it suddenly seems like no one is talking at all. Instead, they're typing away on tiny numerical pads, using their 1 _____ to send quick messages. SMS, or 2_____, has replaced talking on the phone for a new "thumb generation" of texters. In this article, we'll find out how text messaging works, explore its uses and learn why it sometimes takes a while for your 2 _____ to get to its recipient. SMS stands for 3_____. Simply put, it is a method of communication that sends text between 1 _____, or from a PC or handheld to a cell phone. The "short" part refers to the maximum size of the text messages: 160 4 _____(letters, numbers or symbols in the Latin alphabet). For other alphabets, such as Chinese, the maximum SMS size is 70 4_____.

But how do 5_____ messages actually get to your phone? [...] Even if you are not talking on your cell phone, your phone is constantly 6_____and 7_____ information. It is talking to its cell phone tower over a pathway called a 8_____. The reason for this chatter is so that the 9 _____ system knows which cell your phone is in, and so that your phone can change 10_____as you move around. Every so often, your phone and the tower will exchange a packet of data that lets both of them know that everything is OK.

Key: 1. cell phones; 2. text message; 3. short message service; 4. characters; 5. SMS; 6. sending; 7. receiving; 8. control channel; 9. cell phone; 10. cells

Activity 2.9.7 Word cards 1

Help learners understand new words through categorising

Description

Before you provide input, copy 20-30 words related to your input on to cards. The words should be related to three or more sub-topics. Make sets of cards for the learners, with one word per card. Give a set of cards to a pair of learners and ask them to categorise the words according to the sub-topics. This will help them (and the teacher) to see which words they can already recognise and understand and which are new.

Subject example

Biology: bones, organs and other parts of the body
Bones: clavicle, skull, scapula, humerus, radius, cranium, spine, femur, patella, sternum
Organs: heart, stomach, kidneys, intestines, skins, lungs, pancreas, kidney, liver, eye
Other parts of the body: Intestine, quadriceps, oesophagus, throat, triceps, windpipe, platelets, gluteus, anus, vein

Variation

Chemistry: divide words into the three categories of liquids, gasses and solids.

Activity 2.9.8 Word cards 2

Help learners to recognise and understand vocabulary

Description

This activity works for word combinations (or collocations) so should be used with input where many collocations are used. Put one half of each collocation on a coloured (pink) card, and the other half on a different-coloured (blue) card. Mix the words up. Give each group of learners the two sets of cards. They then try to find the correct collocations. Once they have done this, they can guess the topic of the lesson they are about to follow.

Subject example **Biology: health**	
PINK CARDS	BLUE CARDS
black	eye
sprained	ankle
allergic	reaction
heart	attack
heart	beat
blood	pressure

Activity 2.9.9 Spot the words

Help learners to notice language

Description
Make a list of verbs, nouns or adjectives. Add six words which are not in the same category. Ask learners to find the words which do not belong to the category.

Subject example
Original idea by Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle.

Biology: endangered animals
An adjective is a word that describes a person, animal, place, thing or idea. Adjectives modify or 'give more information' about nouns, e.g. a *beautiful* dog. Which of the following words are <u>not</u> adjectives? Cross out these non-adjectives and add more adjectives of your own.

spotted	lovable	quick	moist	territorial	ears
furry	vicious	warm-blooded	cute	dry	shiny
long	wild	cold-blooded	adorable	shy	small
striped	tame	heavy	rough	dominant	large
deadly	diurnal	aggressive	scaly	submissive	nocturnal
soft	hairy	wings	patterned	maternal	cat

Activity 2.9.10 Make a gapped text

Help learners develop reading strategies

Description

An interesting way of developing reading strategies is to blank out the new vocabulary or key words and to see if learners can understand a text provided without these words.

Subject example

Science: cloud in a bottle

Cloud in a bottle: How does it work?

Even though we don't see them, water molecules are in the air all around us; it's called water 1._____. When the molecules are 2. _____around in the atmosphere, they don't normally stick together.

Squeezing the sides of the bottle forces the molecules to squeeze together or 3. _____. Releasing the pressure allows the air to 4. _____, and in doing so, the temperature of the air becomes cooler. This cooling process allows the molecules to stick together more easily forming tiny 5. _____ and clouds are nothing more than tiny water 5._____!

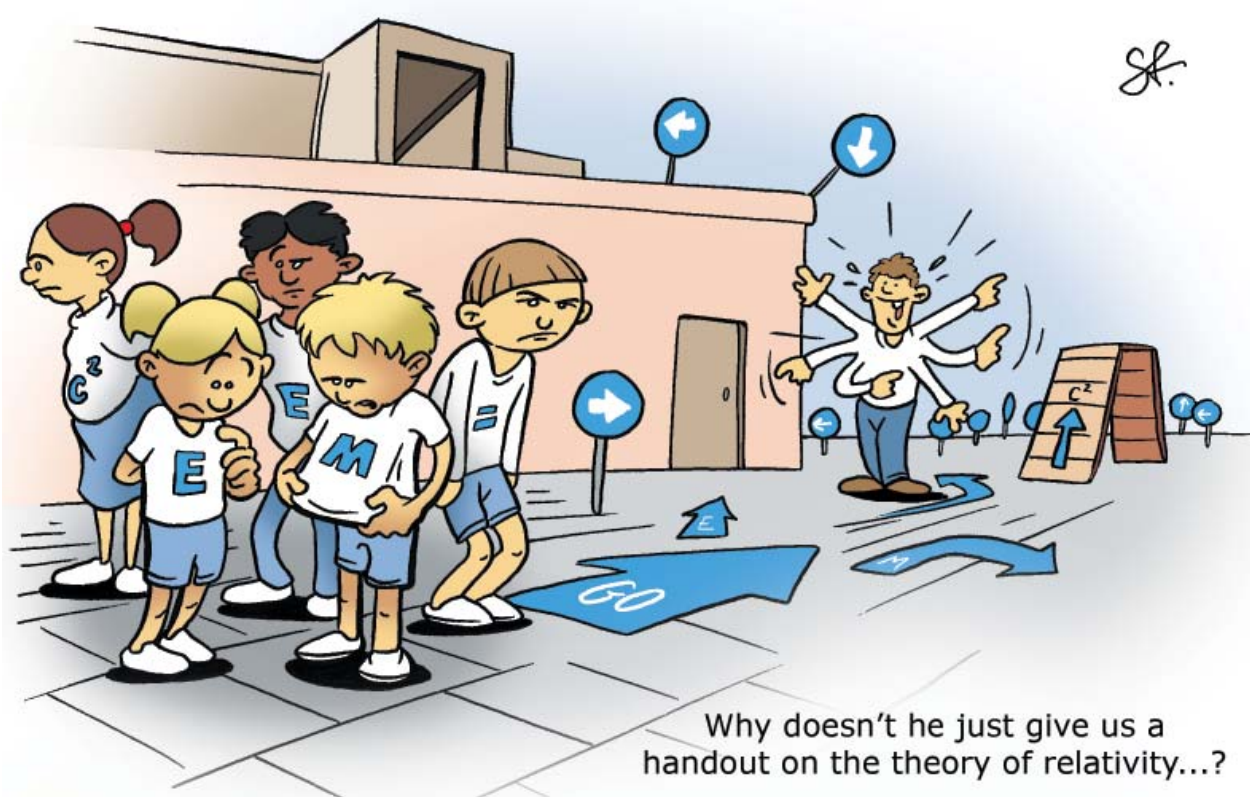
The smoke in the bottle also helps this process. Water particles will group together more easily if there are some solid particles in the air to act as a 6. _____. The invisible particles serve as the 6. _____ and help in the formation of the cloud. Clouds on Earth form when warm air rises and its pressure is reduced. The air 7. _____ and cools, and clouds form as the temperature drops below the 8. _____ point. The invisible particles in the air may be in the form of pollution, smoke, dust or even tiny particles of dirt.

(Adapted from www.stevespanglerscience.com/experiment/00000030).

The blanked-out, unknown words are:

1. vapour
2. bouncing
3. compress
4. expand
5. droplets
6. nucleus
7. expands
8. dew

3 Guiding understanding for CLIL



3.1 SUMMARY

This chapter covers:

- ways of guiding understanding (processing input) to support understanding in CLIL;
- what processing input is;
- why processing input is important for CLIL, in terms of both content and language;
- practical CLIL classroom activities to guide learners in understanding and working with input.

3.2 INTRODUCTION

Texts, formulas, videos, diagrams, graphs, experiments: CLIL teachers guide learners to understand many types of input in English. This chapter - a follow-on from Chapter 2, 'Providing lesson input for CLIL' - deals with guiding understanding - or processing input - in English. Processing input is the action of working actively with input - your basic materials. Some examples of processing input are: a geography teacher asking learners to make a graph out of raw data or data in a text; a history teacher making a handout for learners to identify the causes and effects of an event in a text; a science teacher asking learners to draw conclusions about an experiment they have done. Processing input helps learners to understand it better. Consequently, learners learn, remember and apply input better, in terms of both content and language.

3.3 LEAD-IN

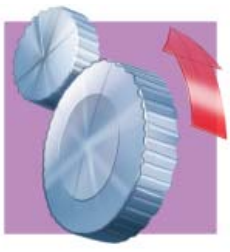
Your own ideas about guiding understanding
Task 4 aims at encouraging readers to think about guiding understanding.

Task 4 Alternative ways of supporting understanding

Here are four different ways from different subject areas where teachers help learners to process input. For each example, think of and write down one possible alternative. In what other ways can teachers help their learners to understand what they are learning? One example is provided. More suggestions for alternatives can be found in the Key to all tasks at the end of the book.

Subject input	Example	Alternative way of supporting understanding
Music: video from YouTube about Beethoven's life.	List of questions about the content and images of the video clip.	A worksheet of an empty timeline which shows the chronology of Beethoven's life.
Economics: population density.	A shaded (coloured in) map about population density in Africa with a list of questions.	
Maths: algebra.	Teacher explanation about algebraic symbols.	
Physical education: areas of fitness.	A text about suppleness, strength and stamina. A list of true and false statements about areas of fitness.	
Chemistry: a video clip about sedimentation and soils.	Red and green cards. Each learner is provided with one red and one green card. After the learners have watched the video, the teacher reads out true and false statements about the contents of the video. If learners agree, they hold the green card up; if they disagree, they hold the red card up.	

Table 3.1 Your experience with guiding understanding



3.4 CASE STUDY

Here is a description of the next part of the history teacher's lesson described in 2.4. The lesson is for first year CLIL learners (12-13 year olds). As we saw in 2.4, the input for her lesson consists of photocopies of illustrations and extracts about the lifestyle and ways of warfare that Romans encountered on arrival in Britain and the Netherlands.

The *content* aims of this part of the lesson, where learners process the input, are that learners can:

- find specific information in a text in order to understand some characteristics of lifestyle and warfare in Britain and the Netherlands in Roman times;
- assess the reliability of source material.

The *language* aims are as follows: at the end of the lesson, learners can:

- write clear notes;
- learn and use words related to lifestyle and warfare;
- argue their own point-of-view about the reliability of the input.

To help them understand this input, I asked the learners to skim all the extracts and illustrations and decide which of these described lifestyle or warfare. I then gave each learner two A4 sheets of card: blue for warfare and yellow for lifestyle. The learners' second task was to cut up the texts and illustrations, and paste all those dealing with LIFESTYLE on the yellow piece of cardboard, and all those relating to WARFARE on the blue one. In their third task, I asked learners to work in pairs and complete a table summarising the information about lifestyle and warfare from their chosen texts. In the next task, I asked them to consider the reliability of the authors of the extracts, by giving them the question *Was the information they described objective or subjective?* I then discussed with them a glossary of important items for explaining the specific jargon used in the texts: *ambush, casualties, deploy troops, missiles, rampart, tribune, cuirasses.*

Figure 3.1 Teacher's comment

Text or illustration	**Lifestyle**	**Warfare**
EXAMPLES: Source 5	-	Cantabri soldiers would commit suicide rather than become slaves
Source 7	Britons didn't farm and couldn't make cheese from milk	-

Table 3.2 Table to note down information about lifestyle and warfare

Why is this CLIL?

The processing of input in this lesson supports learning of content and language in several ways:

The teacher first provides a relatively easy reading task for global understanding (or skimming): an exercise to check comprehension where learners categorise appropriate texts. This requires some basic processing of information. It gives the learners a chance to familiarise themselves with the main ideas in the text and encourages them to read globally, thus ignoring words that they do not know.
Learners then read the material after being given a second, slightly more difficult, sorting task to carry out. This cutting and pasting requires the learners to re-organise the resources, or input, in a physical way and thus helps them to gain a greater overall understanding of these resources. Learners are not yet

required to produce output independently. During this sorting of ideas, they do more processing of the information. Again, they are encouraged to read for general meaning and ignore or guess words that they do not yet know.

Next, the teacher provides a third and more challenging task in which learners work on warfare and lifestyle in more detail by note-taking in a table with specific information from the texts; the learners are now starting to produce a small amount of output in the form of note-taking to complete the table.

Throughout the lesson, different tasks ensure that the new input - information and language - is recycled. Thinking skills are also tapped into in this lesson: learners need to sort out relevant points from their resources in the initial task, re-formulate the information and decide on its reliability.

The next section of this chapter deals with why processing input is important in CLIL and how teachers can help learners to process and understand input.

3.5 BACKGROUND

In this section we discuss some key ideas relating to processing input: its importance for CLIL, vocabulary and memory, and scaffolding# and the zone of proximal development, or ZPD.

3.5.1 Why is processing input important in CLIL?

Why should CLIL teachers support learners to work actively with the input provided? Firstly, if learners are actively involved in thinking about the content and/or the language, they will reach a better understanding of both. If they re-organise or change input into another form, learners will process and comprehend input better. Tasks for guiding understanding might include, for example, changing information from a diagram into a text, or from a text into a picture or role-play. Such tasks require higher thinking skills.

Secondly, if learners are helped to 'scaffold' their learning to understand the main points of lesson input, they will be understood better. This can be done by using graphic organisers# or 'frames' or by effective teacher questioning. An explanation of scaffolding can be found in 3.5.3, and examples of graphic organisers and frames can be found in 3.6.11 and 3.6.12.

Thirdly, the more multimodal - or varied - the way of processing the input is, the more likely more learners will understand it in their own way. For example, if teachers offer tasks with pictures, photographs, diagrams, videos or other visuals, it is likely that a greater number of learners will understand both the content and the language better. After all, each individual takes in information in different ways.

Finally, if tasks are made meaningful and relate to real life - through personalisation# - learners will create more of their own links with what they already know and can do.

Processing input in a second language

In CLIL, learners need to process content through a second language, so actively processing the input is more important and more challenging for them than when they are learning through their first language. The number of associations they have in their first language is much greater than in the second language. When a teacher provides processing activities or tasks, these help the learners create more connections in the brain about the content in English. This helps the learners to remember, and retrieve both the language and the information when they need it.

3.5.2 Vocabulary and memory

One important way in which subject teachers work with language input is through vocabulary - the words or phrases which are needed for understanding. But how do learners store the vocabulary in their memories? Recent neurological research says that knowledge is stored in the brain as a pattern of networks (Moonen, 2008, p. 30). Processing in the brain is needed to add words to these networks. Some of the words learners come across go into their working memory: which words these are depends on things like motivation, learner preferences, mood and openness. Not every learner will put the same items into their working memory# at the same time! The vocabulary in the working memory can then be worked on, or processed, through doing tasks with it. The more processing there is, the more connections are made between new words and words which have already been stored in the memory. In this way, the vocabulary is more likely to enter the long-term memory and join a network of associations in the brain. Therefore, teachers need to work actively with vocabulary in their lessons to help learners use and store vocabulary.

What does this mean for CLIL teachers? They need to help learners to create more and stronger connections in the brain. In other words, teachers need to help learners to recycle the vocabulary. Learners need to use it in different contexts and through different channels - through different tasks and a variety of language skills, for example. In this way, learners make stronger connections in their brains, which helps them to remember the vocabulary and to use it again later.

Consequently, when dealing with new vocabulary, teachers need to do much more than providing lists of definitions of English words in Dutch. This is not enough for learners to store them. Learners need to recognise, store and eventually retrieve and use vocabulary. That is why it is important that learners see or hear that vocabulary in several different contexts and gradually start using the words in new contexts for themselves.

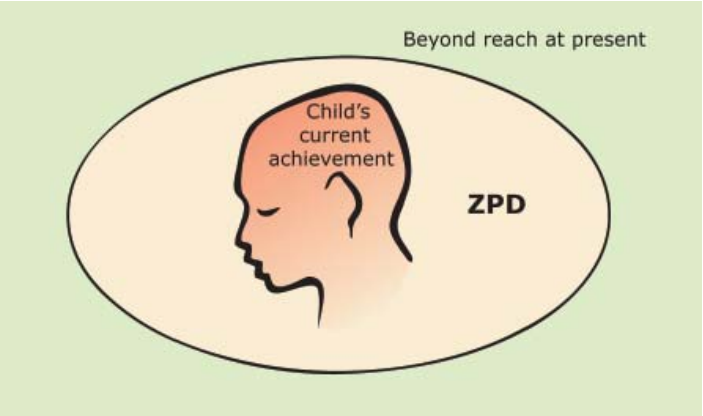
Three types of vocabulary

As we saw in Chapter 2, there are three basic types of vocabulary: general vocabulary, subject terminology and academic words. It is likely that subject teachers will be dealing mainly with subject terminology, which are the words specific to their subject, such as *cone* in mathematics, *inflation* in economics and *ecosystem* in biology. For more information on vocabulary, knowing vocabulary, vocabulary difficulties and some suggestions for working with vocabulary, see 2.6.2.

3.5.3 Scaffolding and the zone of proximal development (ZPD)

A relevant view of learning related to processing input relates to the importance of teacher scaffolding. This is based on the ideas of Wood, Bruner & Ross (1976) and Vygotsky (1978). Builders use temporary scaffolds to support a building during construction, and then - once the building can stand alone - the scaffold is removed. Learners in the classroom can be helped with teacher scaffolding in the same way. Scaffolding in learning is a special kind of help (Gibbons, 2002) that teachers can use to help learners move forward in their learning and understanding.

Vygotsky also says that children can be helped to learn in the areas just beyond those they can reach alone. He called the distance between their original level and new, potential level of development the zone of proximal development[#] or ZPD. Scaffolding is used to help children move into their ZPD.



Sharpe (2001) divides scaffolding into two types, contingent scaffolding[#] and built-in scaffolding[#], which we explain below.

Contingent scaffolding

One sort of scaffolding is 'contingent', or immediate, on-the-spot scaffolding. An example of contingent scaffolding would be a teacher's response to learners' on-the-spot questions in a lesson, where a teacher realises the learners are struggling to understand. The teacher then uses a learning conversation to help learners understand.

Example 9 Contingent scaffolding

A learner has a question about the text 'How recessions work' (see 3.6.2).
Rick: What's unemployment?
Teacher: Employed, does anyone know the word *employed*? (writes on board)
Learners: -
Teacher: You are *employed* if you have a job. Are you employed, Rick?
Rick: Yes.
Teacher: What are you employed as?
Rick: I fill shelves in a supermarket.
Teacher: OK. So, to *employ* means to have a job. What does *un-* mean if it comes before a word?
Learner: Not
Teacher: Yes, the opposite. Like *uncover* or *undo*. What do you think *unemployment* means, then…
(etc.)

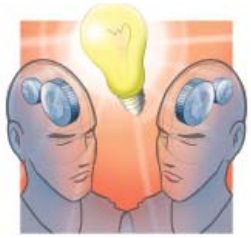
Built-in scaffolding

The other sort of scaffolding is called 'built-in', or planned scaffolding. For example, teachers might plan in advance which questions to ask in a lesson or provide a scaffolding task such as a writing frame[#] (see Example 15 and Example 16 in 3.6.11).

Example 10 Built-in scaffolding

The teacher prepares some true/false statements in advance on the text 'How recessions work' in 3.6.2, Example 11, to check if learners understand the main ideas, for example:
1. In 2008 the economic situation in the world got better. (F)
2. This article is about recessions. (T)
3. …

Teachers can also use scaffolding to support learners' skills development, until they can work independently without the scaffolding. CLIL teachers need to provide scaffolding for both language and content learning.



3.6 APPLICATIONS FOR CLIL

3.6.1 Helping learners with input

Teachers need to provide learners with a great deal of input which is understandable and at the right level. When learners interact and engage with such input, they also learn to process it more effectively. When designing lessons, the first thing teachers could consider is which main ideas or key concepts they want their learners to understand. Using those ideas, they can design tasks that help learners to understand the general ideas. As a next step, teachers can focus on more specific important details and design appropriate tasks for those. This means starting with general understanding tasks related to both content and language, followed by tasks aimed at a more detailed understanding.

Here are some guidelines - Dos and Don'ts - to help learners process and interact with input in the form of listening, viewing and reading. In the following sections, we deal with these ways of helping learners to process input for CLIL.

	DOs ☺	DON'Ts ☹	
Planning	DO decide beforehand what is important for the learners to do with the input, and set both content and language aims: "By the end of this unit, the learners can..."	DON'T prepare your lesson only in terms of a page number or exercise: "We're going to do exercise three on page ninety-seven".	Start of lesson or theme ↑
Warming up	DO carry out a short warm-up# task linked to the topic of the input, to focus learners on the input. For example, you could use a visual (photo, video clip, cartoon or diagram) to introduce the topic, or invite learners to think about what they already know about the topic. More ideas about this can be found in Chapter 1.	DON'T launch into a new topic 'cold' or without any introduction. Learners need to focus when coming from a previous lesson and need to tune in to your subject.	
Using general ideas: the first contact with input	DO provide a task or one or two general questions for learners to answer when they read, watch or listen to input for the very first time. In this way, you guide them to understand the main idea or meaning of the input and give a reason for processing the input. Discuss their answers before you continue. If you want learners to read aloud to practise pronunciation, DO this at a later stage. Only ask learners to read already familiar material aloud. Ask them to read aloud simultaneously in pairs and tell them you are practising pronunciation. Help learners individually with pronunciation or as a class if you notice common problems.	DON'T get learners to read new material aloud one by one. This will not help either their speaking or their reading development. Reading familiar texts aloud can occasionally be useful for pronunciation practice but - if done with unknown texts - actually slows down the reading speed and hinders understanding. Reading silently with a supporting task is more effective for taking in new information. DON'T supply a list of 'difficult' words with a translation in Dutch. This encourages learners to stop every time they meet a word that is unfamiliar. This is a poor reading strategy and gets in the way of global understanding.	

	DO encourage learners to ignore words they do not know the first time they read a text, so that they can try to understand the main points without getting stuck on individual words.		
Using details: further contact with input	DO provide a specific task for learners to answer while they read, watch or listen to input for a second time. Discuss their answers to this task. If they haven't understood the input, ask if it is necessary to listen, view or read again. Provide fresh tasks each time they read, watch or listen to the input. DO encourage learners to create their own questions around input, either by hypothesising before they are exposed to input, or to check understanding.	DON'T encourage learners to stop at every single unknown word and don't do that yourself, either. Rather encourage them to guess the meaning of words from context, so that they learn that they can succeed in comprehending input without understanding or stopping at every word. DON'T give answers to hypotheses yourself, before learners have had time to think about their own explanations.	
Applying information and concluding	DO use the topic or the language of the input as a stimulus for further activities. Help learners at this stage to produce their own spoken or written language. Draw attention to specific aspects of language or the characteristics of texts. DO work to help learners understand and recycle. Ensure that learners know both the meanings of words and their usage. Create new, active tasks to help learners recall and process ideas and vocabulary.	DON'T expect learners to be able to reproduce vocabulary as soon as they meet it; they need to come across vocabulary in several different contexts before they can use it. DON'T give a list of English words with their Dutch translations, either at the start of the lesson or at the end, since this won't help effective vocabulary learning very much.	End of lesson or theme

Table 3.3 Guidelines to help process input

3.6.2 Selecting key words

When looking at material, for example in a course book or online, teachers first need to select vocabulary items that learners need to know and understand in order to be able to process the input in a task or experiment. This is the target vocabulary, or the key words. In CLIL, these are often subject-specific terms or concepts.

It is helpful to distinguish between *receptive* vocabulary, which learners need to recognise and understand, and *productive* vocabulary, which they need to use and communicate with. When performing receptive tasks[#], it is not vital that learners understand every single word. It is more important that they know enough vocabulary to carry out tasks and to understand the input. Some vocabulary can even be ignored, if it is very specific or used only once in a unit and is not essential for understanding.

Example 11 Selecting vocabulary

Here is an example of the start of an authentic text[#] for economics, 'How recessions work' (from money.howstuffworks.com/recession.htm)

It includes new vocabulary, which can be categorised as follows:

- The five **bold** terms are words which the learners will need to use actively, since these words will recur in other texts and tasks in the unit: **recession, economic conditions, stock market, economy and economists.**
- The five underlined terms are words which learners need to understand receptively but which they do not have to use actively: tumbled, rising unemployment, guaranteed, depression, turn around.
- The five terms in *italics* can be ignored, since the text can be understood without them: *in session, Martin Luther King Day, economic stimulus package, news blitz, constitutes*.

How **Recessions** Work
On Jan. 21, 2008, stock prices tumbled around the world. Most analysts pointed to fears surrounding the United States economy and a possible **recession** as the reason for the drop. Ironically, **economic conditions** in the United States were affecting the world economy on a day when its own markets weren't even *in session* -- they were closed for the *Martin Luther King Jr. Day* holiday. Three days later, news outlets were already reporting a new *economic stimulus package*, designed in part to try to prevent a **recession**.

This isn't the first **recession** news in recent memory. On Nov. 26, 2001, the news media announced the United States was officially in a **recession** and had been since March of that year. To most Americans, this wasn't all that surprising: Rising unemployment and a weak **stock market** had been in the news for months.

Both the 2008 market drop and the 2001 *news blitz* raised a lot of questions. Who decides when the economy is in **recession**, and on what grounds? What actually *constitutes* a **recession**, anyway? When a nation's **economy** enters a **recession**, is life guaranteed to get harder for most of its citizens? And how often does a **recession** lead to a depression?

In this article, we'll find out what **recessions** are, see why they occur and examine the criteria **economists** use to identify them. We'll also look at the effects of **recession** as well as explore some of the ways a country can turn the economy around again.

3.6.3 Noticing and awareness activities

Noticing involves helping learners to see explicitly how language works. Awareness activities can help learners to notice. Learners can notice two things: firstly, the meaning (*what* language is used) and secondly, the form (*how* the language is used). For example, if learners come across the sentence from the text in Example 11 *On Jan. 21, 2008, stock prices tumbled around the world*, if they notice the meaning, they realise that *tumbled* means *fell*. If they notice the form, they realise that *tumbled* (ending in *-ed)* is a regular past tense, which is often used in combination with a specific time (*Jan 21, 2008).*

Tasks involving noticing the form and the meaning of language structures help learners to learn a language better because they pay explicit attention to language (Noonan, 2004). Drawing learners' attention to how language is used in a text also helps them to write texts in which language is used in a similar way (Lyster, 2007). This, in turn, leads to learners producing more accurate and more varied language and will help them to explain content ideas more clearly. Here are some examples of tasks a teacher might use to help with noticing:

- Explain and draw attention to a particular form, for example, “If we look at this text, we see a number of imperatives. For instance *measure*, *fill*, *add up*, *empty*, *dissolve*”.
- Recycle a structure frequently and consciously in spoken or written language. For example, as a teacher, use these words yourself, put them into tasks and write them on the board.
- Ask learners to do tasks which highlight or underline a structure, to draw attention to it. For example, “Adjectives are words used to describe nouns. They are words like *small*, *hairy*, *bald* and *long-legged*. There are quite a few adjectives in this text. Use a highlighter pen to highlight all the adjectives in this text”.

Awareness activities involve guiding learners to a better understanding of how language is used. These are most useful when learners can see the immediate relevance of the language, for example, when learners can also use the ‘noticed’ language in a task. Examples of awareness activities are tasks which help learners to discover a grammatical rule, or tasks which ask learners to compare and contrast language patterns in two texts, or in two languages (Lyster, 2007). The following tasks help learners to become aware of language:

- Ask learners to do a task that requires them to be aware of a structure in order to complete it. For example, “Here are some instructions for an experiment. Complete the instructions with the 10 words (imperatives) provided below”.
- Ask learners to change words from one form to another, for example, “How many related words can you make from the word unemployment?” (*employment*, *to employ*, *employable*, *employability*).
- Ask learners to find the differences in style between two texts.
- Ask learners to compare the way something is said or written in English and Dutch.

Practical lesson idea 3.9.7 includes examples of noticing and awareness tasks.

3.6.4 Recycling vocabulary ‘multimodally’

Recycling vocabulary helps learners to understand it; learners cannot usually understand and retain a word when they first come across it. As we saw in 3.5.2, it is important for learners to work with the words they come across, so that they can make connections with the networks in their long-term memory and store these words. Teachers can help learners to work with words to make sure this happens. Before they can use vocabulary, learners need to come across it several times, for example in a text, a discussion, a video or a task in a course book. After a while, learners will start to use the new words in their own work.

Teachers can help learners to learn vocabulary by providing words grouped into themes so that learners see the connections between them. In addition, teachers can help learners to recycle vocabulary in different ways - in other words, *multimodally* (see 2.5.2). For example, besides texts, teachers can use pictures, body language, words written on the board, experiments and models. One learner will remember most effectively through reading, another through seeing a picture, a third through a joke or hearing the word pronounced and a fourth through acting a word out. That is why multimodal input is vital.

Here is an example of how a geography teacher required learners to recycle content and vocabulary multimodally in geography. The learners were asked to write a summary of the journey that a child took from the Cay Islands to the USA and to illustrate it with a labelled map. Here is a part of the original text, written by a pupil at Rijnlands Lyceum Wassenaar and provided by Heidi Krieger.

THE CAY ROUTE

This story is about a small, white boy called Phillip which took place during the Second World War. When Germans became a threat to the island of Curacao, his mother became worried and decided to flee the island and return to Virginia in the U.S.A. His father needed to stay on the Curacao for his work and could not join them. The father was worried because the Germans had U-Boats patrolling in the coast. Mr. Enright wanted his wife to fly back to the U.S.A., however she refused because of her fear for flying. In the end they went by boat. On the second day of the journey the boat was torpedoed. Phillip woke up on a raft with a big, old Negro man called Timothy. [...]

Figure 3.2 Learner's written work

3.6.5 'Poor' and 'rich' vocabulary tasks

The way that teachers set up tasks is also an important factor in helping learners to remember vocabulary. The Multi-feature hypothesis explains that the more mental actions a task involves, the more likely a learner is to retain knowledge (Westhoff, 2009). Westhoff likens the learning process to a pinball machine. By keeping the material to be learned in the pinball machine for as long as possible - or by maximising the number of 'hits' - the more likely a learner is to retain it. This means that it is essential to keep the learners active and offer them a variety of learning opportunities, in the hope that they will retain something when they leave the classroom. Moonen (2008) describes 'rich' learning tasks as tasks involving more mental actions that increase the amount of learning.

Poor vocabulary learning task	**Rich vocabulary learning task**
Memorise these words about metamorphosis English-Dutch and Dutch-English	Use these words about metamorphosis to write a story about a butterfly in exactly 50 words

3.6.6 Personalising

Another way of making vocabulary stick is through creating meaningful tasks for the learners related to the vocabulary they are learning. One way of doing this is by personalising#: learners do a task related to themselves with the words they need to learn. In a personalisation task, learners each have their own, individual response, which helps them to recall and use the words in another context. They are more likely to recall the words if they are engaged with them; in this way, they process the words more deeply and 'anchor' them better in their brains.

Here are some examples of personalising tasks which process vocabulary more thoroughly and which could be used for variation in glossaries:

- Learners make a diagram, drawing, sketch or word map, which links the words together and helps them to remember them.
- Learners put the words on to a drawing or picture, provided by the teacher, and explain to someone else why they have placed them there (see practical lesson idea 3.9.2).
- Learners write the words on a continuum (for instance, from NICE to NASTY) and then explain their reasons for putting the words in that position on the line (see practical lesson idea 3.9.2).
- Learners list the words to be learned in two columns under the words 'black' or 'white', then explain to a partner why they consider each word to be black or white.
- Learners individually write a short text which includes ten words they need to know. Divide the class into pairs, A and B. A's read their texts aloud and the B's write down the 10 words which they think are related to the topic. Then they swap roles.

More meaningful tasks for vocabulary can be found in the practical lesson ideas section of this chapter.

3.6.7 Glossaries and Personal Idiom Files

Glossaries allow learners to record important vocabulary which they need to learn. A glossary is often in the form of a notebook or computer file containing terms for each subject. It is a list of words which learners need to learn and use actively, or only understand. A Personal Idiom File (PIF) is a glossary created by the learners, in which they write down the words that they want to learn. As we have seen in 3.6.6, personalising is one of the ways to help learners to retain new words.

Learners are helped if the entries in their glossary indicate more than a translation or a given definition from the teacher or textbook. Writing down the meaning of the word and the way the word is typically used in English will help them to store the words better. In Example 12, associated words are also included. For each word or phrase in the glossary, the teacher has included the word itself, its meaning, its use in context and other associated words. To help with understanding, the definitions should contain little or no new language. For instance, defining *ultraviolet light* as *solar radiation* does not help with understanding! Teachers can help learners by providing example sentences or asking the learners to create their own examples and then check them.

Example 12 Model glossary entries

Word	**Meaning**	**Use**	**Related words (examples)**
Carbon di-oxide CO_2	A colourless gas with no smell.	When we breathe, we breathe out carbon dioxide.	Carbonised
Acid rain	Rain with a lot of pollution which, when it falls, harms the environment.	Trees are dying in Sweden because of acid rain.	Acidic
Corrosion	A process that eats away materials, such as metals.	The corrosion in the car was so bad that the door dropped off.	Corrode
Fossil fuel	Fuel which is found in the earth's crust.	Coal, oil and natural gas are fossil fuels.	Fossilised
Sulphur dioxide SO_2	A gas that smells like bad eggs.	The sulphur dioxide from the volcano smelt bad.	Sulphuric

Varying the way the glossary is used is also motivating for learners. Other possible variations for glossary entries are:

- Copy the original sentence down and underline or highlight the word to be learned.
- Give learners words or phrases which are associated with your glossary term (known as collocations). For example *blind date, blind window, blind as a bat, blind faith.*
- Help learners to recall words in groups or categories, for example by creating mind maps of words in themes.
- Create a narrative using ten of the words related to a topic. Learners listen to this story and notice the words used.
- During the lesson, if learners do not understand a word while doing a task, they go up to the board and write it in the designated space, for example the left-hand side of the board. At an appropriate moment, the teacher discusses all the words or phrases with the whole class. This activity enables learners to decide for themselves which vocabulary they need to know. (Original idea from Mathijs Hekkelman, Rijnlands Lyceum, Oegstgeest)
- At the end of a lesson, take a few minutes to work on vocabulary. Ask learners to write down examples for two or three words they have worked on in the lesson. In random order, learners are then asked to read out one example, so that as many examples as possible are collected. The examples can then be used for their PIF.

3.6.8 Reading strategies

One way to help learners to process and understand input is to work with them on reading strategies[#]. In this way, they become more independent learners and can ultimately process input themselves in their own way. Below are a number of reading strategies related to processing input. There are some more specific practical ideas related to reading strategies in the practical lesson ideas section.

Reading strategy 1: guessing words

Learners can be encouraged to guess the meaning of words or phrases, by reading the text surrounding a word. Deducing the meaning of a word for themselves is generally considered more effective for word retention than a teacher definition. The harder the learners work to guess the meanings, the better. Teachers should, however, be aware that guessing can lead to misunderstandings, and help pupils to find the right clues. Clues to the meaning of a word are often found in the context. These clues may be found in the surrounding words. The text may provide a definition explaining the word, or it may give examples illustrating it. Connecting words used after the familiar word may indicate a contrast, a comparison or a similarity. If the learner knows the item that the unfamiliar word is compared or contrasted with, this should provide a clue to the meaning of the unfamiliar word.

For example, in the text presented in Example 11, a teacher could probably encourage learners to guess that the word *tumbled* means *went down* in the sentence *On Jan. 21, 2008, stock prices tumbled around the world*. A series of questions can show learners how to approach this. What kind of word is it? Knowing that the word is a verb helps. What other words in the text may help? (in the following sentence, *fear* shows it is something bad and *drop* is another word with the same meaning, it is something that prices do). Here are some kinds of questions you might ask, with the answers for *tumbled*.

Sample questions	**Answers related to *tumbled.***
1. What kind of word is it (Is it a verb/noun/adjective/conjunction)?	Verb.
2. What other words in the text may help you to guess the word?	Fears, drop.
3. Is the word like another one in Dutch or another language which might help you to guess it?	Tuimelen.
4. Look at the form of the word. Is there anything about it which might give a clue? Prefixes at the start of a word or suffixes at the end can help (for example, the prefix *re-* means *again*, *un-* means the opposite, the suffix *-ful* often indicates an adjective).	The ending -ed indicates a regular past tense.
5. Is the word made up of more than one word? For example *egg cup* or *keyhole*. If you know one half of the word, you can perhaps guess the other half.	Not relevant here.
6. Are there linking words (*for example but, therefore, neither… nor)* which help you? For example in the sentence *He is posh but scruffy* you can guess that a *posh* person is not often *scruffy*.	Not relevant here.

Table 3.4 Questions to help guess words

Reading strategy 2: working with word forms

Teachers can also help learners to look at the form of words to help them guess the meaning. For example, words with the prefixes *un-, in-, im-* often mean the opposite of the word without the prefix; words ending in *-tion, -sion, -cion* are generally nouns. Sometimes, similarity to words in Dutch or other languages they know (Latin, Greek, French, German) can help them guess the meaning of a particular word, e.g. *tumble* and *tuimelen*.

Reading strategy 3: predicting

It helps if teachers support learners in predicting what the possible contents of the input might be. For example, before actually starting to work on a text in detail, learners can survey it and look for indicators to make predictions about its contents. By drawing learners' attention to these elements, teachers can help learners to independently make guesses or predictions about the meaning of a text. These help learners to understand the text better. Teachers can create tasks to focus learners' attention on the title, headings or subheadings, pictures, charts, graphs or maps and words in bold or italics. Later, learners can consider the original predictions to see whether they were correct or not.

Reading strategy 4: distinguishing the main ideas from supporting detail: skimming and scanning

Good readers quickly find and understand the main ideas in texts; teachers can support their learners in doing this, too. When working with texts, teachers can decide in advance which main ideas learners need to understand, then create general understanding tasks which focus only on the main points to achieve this.

Skimming[#] and scanning[#] are reading strategies which help learners to read more effectively. Skimming is the skill of reading quickly in order to find out the gist or main ideas of a text. You might use it to decide if a text is interesting and whether you should read it in more detail. Scanning is a reading strategy which is used to get specific information from a piece of text. Sometimes readers need to skim a text; at other times, they need to scan. Often it is not important for learners to know and understand every single concept in a text. They need to learn when to run their eyes over a text noting important information, to understand the gist of a text quickly, when to read rapidly to find specific information and when to read for more detail.

The first sentences of paragraphs in authentic texts often contain the most important information; this is particularly true for web content, where often the most important information can be found in the first paragraph. One example is the online article 'I'm an eco-warrior' (see Figure 3.3, from www.bbc.co.uk/switch/slink/sexlovelife/reallife/eco.shtml). By only reading the first sentences of each of the seven paragraphs in the text, readers can get the general idea of the whole text without even reading it! These seven first sentences can be found in Figure 3.4.

REAL-LIFE STORIES: I'M AN ECO-WARRIOR

Jess' love for the environment has meant she's won a competition, been to No. 10 and even appeared on TV. This is her story...

I'm a 13 year old girl who likes listening to music, going out with my friends and spending quality time with my family. The only thing that makes me a bit different is that I'm really into the environment.

In fact I'm so crazy about the environment I won a competition, and now I'm a Climate Change Champion. This is my story about how I won and why I actually do like hugging trees!

I have always been really interested in the environment and have always enjoyed finding out what was happening in my world and keeping up to date with world issues. So when one of my teachers introduced me to the competition, I was really excited.

This was my opportunity to make a real difference and talk up a subject I am really passionate about. The competition was about finding young people who really cared about the environment and wanted to inspire change, so I decided to make a film.

My documentary was about climate change and its consequences, I worked really hard on it but was absolutely amazed that it got me through to the semi-finals. Here I was interviewed by four climate change experts. I felt like I was on Dragons Den and it was so scary.
"It's not every day you have tea with the Prime Minister"

Winning time
I guess I didn't let my nerves get the better of me because I won my round and was awarded the title of Climate Change Champion for my region. I was ecstatic**.**

Figure 3.3 Eco-warrior text

I'm an eco-warrior (seven first sentences)

l. I'm a 13 year old girl who likes listening to music, going out with my friends and spending quality time with my family.
2. In fact I'm so crazy about the environment I won a competition, and now I'm a Climate Change Champion.
3. I have always been really interested in the environment and have always enjoyed finding out what was happening in my world and keeping up to date with world issues.
4. This was my opportunity to make a real difference and talk up a subject I am really passionate about.
5. My documentary was about climate change and its consequences.
6. "It's not every day you have tea with the Prime Minister".
7. I guess I didn't let my nerves get the better of me because I won my round.

Figure 3.4 Using first sentences

To help general understanding of the text, learners can perform the following scanning task.

Scanning task
Read the text 'I'm an eco-warrior': are these sentences are true or false?

l. Jess won a competition by making a film.
2. Jess is very interested in the environment.
3. Jess' prize was an afternoon with the Prime Minister.

Figure 3.5 Scanning task

3.6.9 Text types and structures

Written text comes in all sorts and sizes: newspaper articles, postcards, e-mails, instructions, advertisements and letters. These are known as text types[#] or genres[#]. Typical text types for science are laboratory reports and descriptions of experiments, and a typical text type for history is a historical article describing causes and effects. When an authentic text (e.g. a magazine article, an e-mail, a letter) is written, it is almost always written for a communicative purpose or a function[#] (persuading,

selling, giving an opinion), and for a specific audience (teenagers, scientists, parents). Good present-day textbooks will contain a mix of authentic texts, so that learners are exposed to many different text types.

Teachers can help CLIL learners to learn about different aspects of texts. Important skills for CLIL learners are the ability to recognise, understand and work with text types (see also Chapter 4). There are several reasons for this:

- There are different types of texts for a variety of audiences which are written for different reasons. Learners can be helped to recognise the text type (e.g. an article, a brochure, a report), the audience (e.g. the management, the general public, my aunt) and the purpose (e.g. to instruct, to explain).
- Recognising the organisation structure of a text will also help understanding. For example, paragraph one is an introduction to the topic, paragraph two is an argument for, paragraph three another argument for, and paragraph four contains two arguments against. This helps learners to understand the overview of the text.
- Being able to recognise text features will also help learners. Similar text types often contain similar language, for example the language of cause and effect, or language used to express opinions. Learners can be helped to recognise these language features, and this helps them to understand the content.

Working with learners to help them to notice types of text, common text structures and language can help them to understand textual input, as well as - perhaps at a later stage in their learning - to create their own texts independently. CLIL teachers can discuss these issues with their learners or create tasks related to the fact that there are different text types and that each text type has a different aim, audience and organisation.

Task 5 Text types and purposes

Below are three examples of written text, each written for a different purpose. Read the texts and match them with one of the eight purposes in the right-hand column. The answers can be found in the Key to all tasks at the end of the book.

Text	Purpose
Text 1 TTO, bilingual education, is an educational method that has been used by a growing number of schools in the Netherlands since the early nineties. It means that half of the curriculum is taught in English, the other lessons are taught in Dutch. *Jacob van Liesveldt* started bilingual lessons in VWO in 1998. Later the school started a bilingual HAVO stream as well. Meanwhile the school is proud to have obtained the TTO Certificate, the official quality mark of the European Platform. (From jl.penta.nl/onderwijs/schoolsoorten/tto1en).	argue persuade inform
Text 2 This story begins with *Once Upon A Time*, because all the best stories do, of course. So, Once Upon A Time, and imagine if you can, a steep-sided valley cluttered with giant, spiky green pine trees and thick, green grass that reaches to the top of your socks so that when you run, you have to bring your knees up high, like running through water. Wildflowers spread their sweet heady perfume along the gentle breezes and bees hum musically to themselves as they cheerily collect flower pollen. (From www.eastoftheweb.com/short-stories).	describe instruct compare
Text 3 The game of bridge has two main parts: the *Bidding* (also called the Auction) and the *Play*. You should learn the play first because it will give you a better sense of what the bidding means. In fact, learning the bidding first is a mistake and can be a turnoff to new players. Bridge is a partnership game requiring four players. Each player sits opposite his partner at a card table (in this age of computers the concept could be a simulation). Bridge is played with a standard deck of 52 playing cards. One of the players deals all of the cards, 13 to each player, in clockwise rotation, beginning with the player to the left of the dealer. (From www.rpbridge.net/1a00.htm).	contrast

Texts can often be recognised by certain text features or language features, as illustrated in Table 3.5. This language gives the reader hints about what is happening in the text. Teachers can show examples of different text types in their subject, they can point out typical text features and they can look out for language relating to different text types.

Text type and aim	**Text features**	**Language commonly used in this type of text**
Description. Aim: describes something or someone.	Facts about a subject, which are elaborated on. Sections of the text often consist first of a main idea or definition, plus an elaboration on different aspects of the topic. Often includes subheadings. Often written in an impersonal style, in the third person#, and in the present tense. Examples: text about mammals, a description of a geographical area or a person.	For example, for instance, specifically, in particular, in addition, moreover, also. Adjectives and adverbs. Language to do with the five senses: sight, hearing, touch, taste and hearing. Comparisons, e.g. similes and metaphors.
Information. Aim: provides facts.	Not much repetition, factual and clear. Examples: theatre brochure describing yearly programme, folder giving information about the life cycle of a head louse.	Modal verbs like can, should, may and might. Times and dates. Present tenses or imperatives.
Cause and effect. Aim: tells what the effects of an event are.	Text contains the result of an event or occurrence and the reasons why it happened. Example: text about effects of World War II on the lives of people in the UK and Germany.	Consequently, therefore, as a result, thereby, leads to, thus, accordingly, in this way.
Narrative. Aim: tells what happened.	Text tells a story, often in the past tense with speech in the present tense, in chronological order. After setting the scene (when, who, where and what), the writer describes a sequence of events. Example: Anne Frank's diary.	First, next, later, after that, afterwards, when, meanwhile, then.
Comparison or contrast. Aim: compares two or more objects.	Texts which compare the differences and similarities of two or more objects, places, events or ideas. Example: text about the symptoms of the common cold and flu.	However, unlike, like, by contrast, yet, in comparison, although, whereas, similar to, different from, on the one hand... on the other hand. Advantages and disadvantages. Comparatives and superlatives.

Procedure. Aim: instructs.	Texts tell the order in which steps in a process or series of events occur, often a set of instructions (with list of materials needed) or steps. Often in present tense and may include imperatives. Example: a description of an experiment, a recipe.	Next, first, last, second, another, then, additionally, then, furthermore, moreover. Imperatives: add, fry, chop, mix, beat.
Arguments for and against. Aim: discusses different points of view and reaches conclusion.	Texts state an issue, then present both sides of an event, topic or idea. A number of different arguments for and against follow in a parallel structure. The arguments are summarised and a recommendation made or conclusion drawn. Example: text about the advantages and disadvantages of vegetarianism or political parties.	On the one hand...on the other hand, for example, for instance, firstly, secondly, lastly, finally, furthermore, in my opinion, to summarise, I believe. Comparatives and superlatives.

Table 3.5 Text types, aims, features and language

For further practice in recognising types and purposes of texts, readers can play a game on the BBC Skillswise site (www.bbc.co.uk/skillswise/words/reading/typesoftext/game.shtml) to help them recognise different text types and to consider why they are written in different ways.

3.6.10 Using the Common European Framework of Reference for Languages (CEFR)

To help learness process input, teachers can also use the Common European Framework of Reference for Languages (CEFR; see Appendix). If teachers have some difficult input, they can look at the *can do* statements on the CEFR (Council of Europe, 2001) and create a task which learners at a lower level can complete. If the input is too easy for learners, teachers can create tasks at a higher level or use a different skill on the CEFR.

A2	B1	B2
I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.

Table 3.6 CEFR Reading levels A2, B1 and B2

Example 13 shows a task at A2 level, related to the text 'Real-life stories: I'm an Eco-Warrior' (see Figure 3.3). Learners would need to be at B1 level to be able to read the text independently. They would also need to be at B1 level in order to do the task suggested in Figure 3.5. The task in Example 13 is an easier task, which helps A2 learners to understand the text.

Example 13 A2 level task

Eco-Warrior
Are these sentences about the text true (T) or false (F)?

1. Jess was on the radio.
2. Jess loves the environment.
3. Jess likes her family.
4. Jess made a film.
5. Jess won a prize.
6. Jess thought she was going to win.
7. Jess had tea with the Prime Minister of England.

KEY 1. F 2. T 3. T 4. T 5. T 6. F 7. T

A more difficult task, challenging B2 learners is this:

Example 14 B2 level task

Eco-Warrior
Below you find a list of words related to feelings. Write down why you think Jess had these feelings. Sometimes you might need to read between the lines.

crazy about	interested in	enjoyment
excited	passionate	amazed
scared	nervous	ecstatic

3.6.11 Scaffolding tools

One useful way of guiding CLIL learners to process input is to provide scaffolding tools#, which learners use to process the material they are working on. These tools provide direction and purpose and focus learners on the material to be learned.

Dodge (http://webquest.org/index.php) describes three different types of scaffolds to aid learners in understanding and processing input. Here is a brief description of each type of Dodge's scaffolding tools:

- Reception scaffolds# help to direct learners' attention to what is important in information sources, and helps them to organise, understand and record what they observe.
- Transformation scaffolds# help learners to change information into another form, and require higher thinking skills.
- Production scaffolds# are helpful tasks where learners produce or create something new, which shows their understanding; these also require a higher level of thinking. These will be dealt with in Chapter 4.

Two of these types are relevant to this chapter: reception scaffolds for understanding and transformation scaffolds for processing.

Reception scaffold

In Example 15 an example of a reception scaffold - a watching frame[#] - is presented. A reception scaffold helps learners to understand information provided. In this watching frame learners decide where in a table to place factual information that they have seen on a video.

Example 15 Reception scaffold: writing frame for art

Henri Rousseau

During a series of lessons on naïve art, an art teacher introduces the artist Henri Rousseau on video. She provides a scaffold - a watching frame - to focus her learners' attention on the important information and language in the video, which the learners will need later on. They first complete the table alone, and then share their information with a partner. The information in the frame - both content and language - will be used to complete a further task to describe another painting by Rousseau, using their completed writing frame as a scaffold.

Instructions

As you watch the video, fill in this table.

	Title of painting	**When painted**	**Where is it now (museum, city)?**	**Main colours used**
Example 1	*The dream*	*1910*	*Museum of Modern Art (MOMA), New York*	*light green, dark green, purple, flesh colour...*
2				

Why is this CLIL?

This watching frame is an interesting example of built-in scaffolding for content and language. By completing the table, learners understand the content better. By providing the table, the teacher organises the important information for the learners and focuses the learners on it. She leads the learners through the important content for this subject. She also helps them to ignore the less important information. These are ways of showing the learners the strategies for filtering out irrelevant information and watching for specific content-related information.

The task also helps learners to notice and to understand *language*: by asking them to notice the relevant language (descriptive adjectives, colours), the teacher provides the learners with examples of words they can use themselves. By asking for dates, the teacher draws attention to how these are pronounced in English.

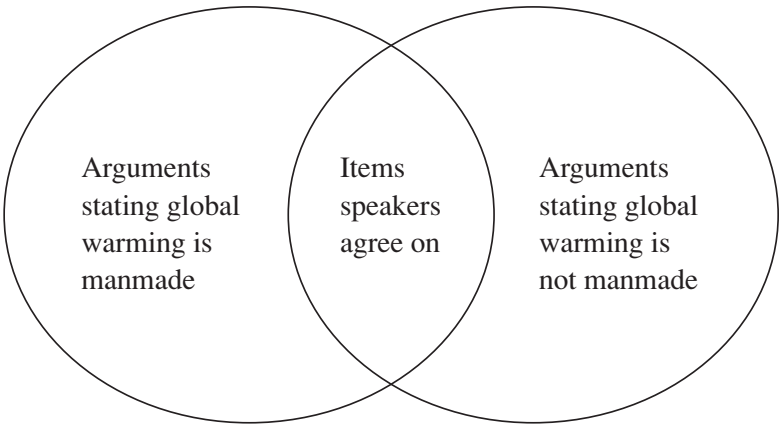
Transformation scaffold

A transformation scaffold is more challenging than a reception scaffold. Whereas a reception scaffold helps learners to process or re-organise information, a transformation scaffold requires learners to work with the information and change it into a different form.

Example 16 Transformation scaffold: writing frame for geography

Global warming

In a geography lesson, the learners watch a television debate about the effect of human activity on global warming, where various speakers state their views. As they watch, the learners take notes in the Venn diagram below - a watching frame - by noting down the arguments presented. In the left-hand circle, they note down the arguments which state that global warming is caused by man; in the right-hand circle, they note the arguments which state that this is not so; and in the overlapping centre of the diagram, they note down items that speakers agree on.



Why is this CLIL?

This watching frame is an example of a transformation scaffold for content and language. In contrast to the art example, learners need to change (or transform) the content in order to complete the Venn diagram. As they note down information, they need to decide and judge where to note down arguments for and against the theme. The thinking skills involved are at a higher level than the reception scaffold in the art example, since the information needs to be changed into a new form.

Furthermore, the task focuses on *language*. Learners need to understand language used for arguing and giving opinions in order to complete the diagram in the right way. This is language such as *in my view*, *at the same time*, *firstly*, *some evidence is*, *that's one thing*, and *an important point is*. These words and phrases indicate when a speaker is giving an opinion. Teachers can help learners to notice, recognise and understand these words or markers, so that it becomes easier for learners to identify the arguments.

3.6.12 Graphic organisers

Graphic organisers, also known as cognitive organisers[#], are examples of scaffolding tools. They are visual representations and organisational tools and they help learners to organise or re-organise input by noting down information. They help learners to understand and process information in texts as well as to become aware of text organisation. The examples of reception and transformation scaffolds or frames presented above are both graphic organisers.

I always have learners write in a graphic organiser before they write an essay. I find it invaluable for helping them sort information into organised paragraphs.

Figure 3.6 Practical idea using graphic organiser

Depending on their purpose, graphic organisers can be used before, during or after listening, reading, viewing, writing or discussing. There are many kinds of organisers, for example for generating ideas, for working with cause and effect, and for comparison and contrast.

3.6.13 Using visuals

Much of the input our learners process is written or spoken text (including teacher talk). Visuals, such as pictures, an experiment, a graph or a three-dimensional model, are non-linguistic input. Some examples are:

pictures	models	plans
diagrams	maps	video material
models	graphs	objects
drawings	storyboards[#]	cartoons
demonstrations	photographs	

Visuals are useful scaffolding tools that can also help learners to understand and work with input and are especially helpful if input is proving difficult to comprehend. The following example illustrates how a religious education teacher used visuals and scaffolding to help learners to understand difficult content (idea provided by Lorna Dunn, Dr. Mollercollege, Waalwijk).

Example 17 Using visuals and scaffolding for religious education

Storyboard and freeze frames[#] used to explain a Sikh ceremony

In a religious education book, one unit covered a Sikh initiation ceremony, the Khalsa. The teacher wanted to use the unit, since it deals with typically British religions and is interesting from a cultural point-of-view. However, the first year class using this book had only been in the bilingual stream for about eight weeks, and the language in the unit was extremely difficult for this class. The teacher decided to help learners understand the unit by simplifying and by adding visual elements to her lessons.

First, the teacher searched on the Internet for a simplified story about the founder of Sikhism. In her first lesson about Sikhism, she read this story out loud to the class, checking understanding as she went. The class was then divided into small groups and each group was given a part of the text in her course book about the ceremony; in other words, the difficult text was split up into smaller chunks. Each of the groups had to create a freeze frame - or dramatic still life - to illustrate their part of their text and the ceremony. All the learners in each group had to appear in the freeze frame and it had to be a clear illustration of their part of the Sikh ceremony. They thus showed their understanding of the text in a physical way. When the learners were in position, the teacher took a digital photograph of each freeze frame.

In her next lesson, the class created a storyboard of the whole Sikh ceremony. A storyboard is used by film directors when making a film; it consists of a number of rough sketches showing how scenes in a film are sequenced. In this case, the storyboard was the series of photographs of the freeze frames. The teacher returned their photograph in A4 format to each group. Their task was to add speech bubbles describing something about the scene and to write a short description of the scene and its place in the ceremony to accompany the photograph. The whole class then put together their complete storyboard.

Why is this CLIL?

This lesson is a good example of visualising content to help learners understand both language and content. The teacher simplifies the content: she finds an easier version of the complicated input and splits up the content into easy-to-digest chunks by reading parts of the story out. She also carefully checks understanding of each part of the text. She simplifies it further by dividing the content between groups,

so that each group does not need to comprehend everything the first time round. Secondly, the teacher uses non-linguistic tasks to support understanding of language and content - the freeze frames and the storyboard. Thirdly, she encourages interaction. Learners have to negotiate in groups on creating their freeze frames, discussing the content in order to create a 'living picture' which summarises their part of the Khalsa ceremony. Fourthly, she uses scaffolding: she provides the digital photographs of the freeze frames in order to create the whole class storyboard. Finally, at the end of the lessons on the Khalsa, Lorna encourages written output, thus recycling the learning of content and language. She designs a short but very focused written assignment (speech bubbles and a short description of the learners' scene), which succinctly shows how much the learners have understood and which is an example of effective built-in scaffolding.

3.6.14 Questions for understanding

Another useful way of providing scaffolding is through effective questions. Much classroom time is spent on formulating and answering questions. Teachers ask questions, for instance, in order to interest, engage and challenge learners, to check for understanding and prior knowledge, to remind them of previous learning, to focus and to analyse. Good questioning challenges the learners' thinking, improves their learning and encourages them to formulate longer responses in English. It also helps the teacher to assess how much they understand.

CLIL lessons where questioning is effective include these characteristics (list based on Department for Education and Skills, 2004a):

- Questions are planned in advance by the teacher.
- Questions are linked to lesson aims.
- Teachers provide adequate 'think time' for learners between asking a question and speaking for a second time.
- Short questions are used to check facts quickly.
- There are more fat questions than skinny questions (see 3.6.15).
- Questions encourage opinions, elaboration and discussion.
- Questioning is sequenced from easier to more challenging.
- Learners create their own questions.
- Learners ask each other questions and give each other feedback.
- Learners feel safe and dare to take risks and make mistakes.
- Questions are personalised.

Questions can also be seen as contingent or built-in scaffolding (see 3.5.3); often teachers will react spontaneously to what is happening in class and use contingent scaffolding. Sometimes teachers can plan questioning strategies which will help a class in advance, and use built-in scaffolding.

3.6.15 Fat and skinny questions

Another way of thinking about questions is to divide them into fat and skinny questions[#]. Skinny questions usually provide facts, are easy and quick to answer in a few words. The control of the conversation remains with the questioner or teacher. On the other hand, fat questions have more than one answer and help learners to think more deeply about input and speak longer. The control of the conversation often passes from the teacher to the learner. Fat questions can be used, for example, to assess learning, to explore attitudes, values, or feelings, to help learners to see a concept from another perspective, to prompt learners to support their arguments or to investigate a thought process, to predict possible outcomes, and to connect and organise information.

Task 6 Fat and skinny questions

Read the following examples of fat and skinny questions. The first three examples have been completed for you. Can you provide examples of fat questions to replace the skinny questions 4 to 6? Once you have thought of your own questions, turn to the Key to all tasks at the end of the book for some possible fat questions.

Skinny questions (lower thinking skills, short answers)	**Fat questions (higher thinking skills, longer answers)**
1. What happened when I added the acid?	1. Can you explain the shape of the graph?
2. What is electricity?	2. How could we use our work on electricity to design a winter lighting system for a greenhouse?
3. What is the greenhouse effect?	3. How might the greenhouse effect affect the lives of your children and grandchildren?
4. Give me ten different words starting with *in-*.	4.
5. Have you read Chapter 8?	5.
6. What did David Livingstone discover?	6.

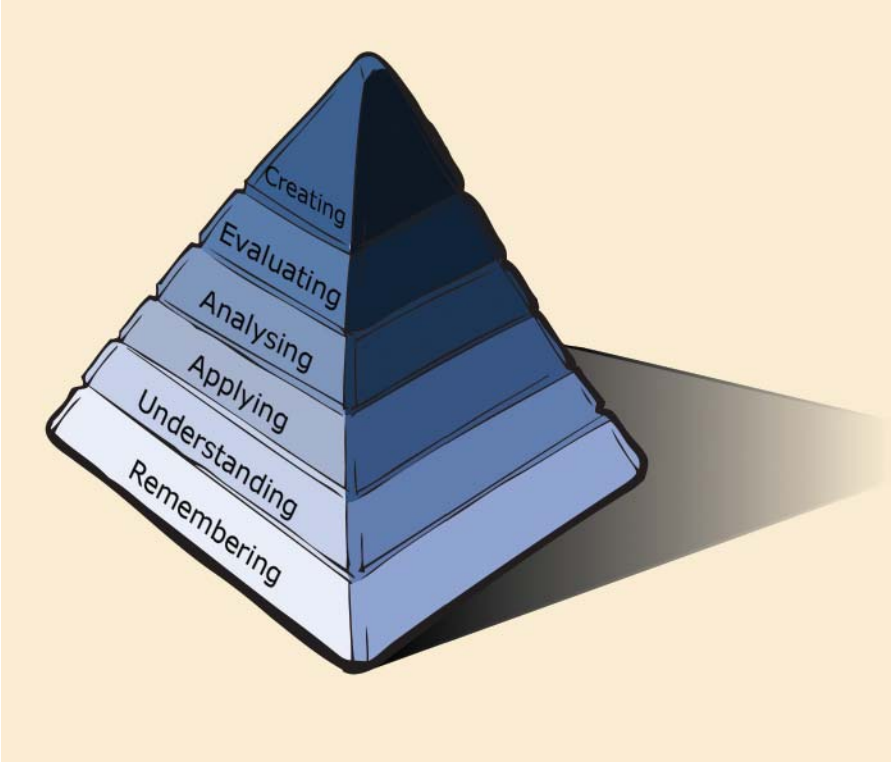
3.6.16 Bloom's taxonomy

Bloom's taxonomy is a useful tool to plan questioning or tasks for learners. The latest version of the taxonomy is divided into six categories: remembering, understanding, applying, analysing, evaluating and creating. Analysis of teachers' questioning in the classroom has shown that 70-80% of classroom

questioning deals with the first two categories: remembering and understanding (Wragg and Brown, 2001). In order to challenge learners more, teachers can use the taxonomy to create more difficult tasks or questions related to the higher level thinking and language skills. The following figure illustrates the six categories.

MORE DIFFICULT

EASIER



Bloom's new taxonomy	**Question**	**Words**
Remembering	Can the learners remember?	Tell, recall, repeat, list.
Understanding	Can learners explain?	Describe, explain, paraphrase.
Applying	Can learners use the information in another situation?	Demonstrate, dramatise, illustrate.
Analysing	Can learners break the information into parts and see relationships?	Compare, contrast, criticise, test.
Evaluating	Can learners justify a position?	Argue, judge, evaluate.
Creating	Can learners create new products?	Construct, create, design.

Table 3.7 Bloom in a nutshell

Table 3.8 provides practical examples of questions and tasks related to Bloom's new taxonomy, which might be used in the classroom to help learners process input. Teachers can use this table to design appropriate tasks for their learners.

Bloom's category	Examples of useful words for asking questions	Examples of tasks and questions
Remembering	tell recall repeat list	• List the events of the story in chronological order. • Name ten parts of the body. • Tell me what Pythagoras' theory is. • Identify five characteristics of a living organism.
Understanding	describe explain paraphrase	• Tell me what you observed during the experiment and explain why that happened. • Describe Mary Queen of Scots' character. • Compare plastics with polymers in this Venn diagram. • Discuss in your groups what happens when a tsunami hits a coast.
Applying	demonstrate dramatise illustrate	• How can you interpret these graphs about AIDS? What do they mean? • How would you construct a new experiment to get the same results? • How would you solve the problem of global warming? • Make a brochure to inform teenagers and give them some advice about sexually transmitted diseases (STDs). Provide illustrations.
Analysing	compare contrast criticise test	• Put these statements into three categories and explain to your partner why you chose the categories. • Analyse and examine your results: what do they say? • What is the relationship between oil production and consumption? • Propose three solutions for the problem of tooth decay in teenagers, inferring ideas from the information you have read about tooth decay.
Evaluating	argue judge evaluate	• Compare and contrast the outcomes of the two experiments on photosynthesis. • Design a questionnaire for our class to evaluate and assess how we worked during the project. • Write an article for a website for young people, recommending some solutions for the problems surrounding integration in the Netherlands. • Select and explain the most important improvements which you can recommend for this experiment.
Creating	construct create design	• How could you create a lighting circuit for a greenhouse which comes on at sunset and goes off at sunrise? • Speculate on what would happen if the earth's temperature rose by five degrees centigrade in the next five years. • Compose eight bars of a melody with the same rhythm as the one we have been studying. • Write a plan for a safety procedure during an earthquake for a school in Bali. • Formulate a proposal to reduce the school's energy costs by 10% within a year.

Table 3.8 Practical examples of questions and tasks according to Bloom

3.6.17 Cummins' Quadrants and guiding understanding

We can also look at processing input in terms of the Cummins' Quadrants (for an introduction to the quadrants, see 2.5.4). Below we suggest ways of guiding understanding according to each quadrant.

ACTIVITIES FOR GUIDING UNDERSTANDING: NEED LESS THINKING

	Quadrant 1	**Quadrant 2**		**B I C S**
	Input supported with lots of visuals and day-to-day language. Biology: metamorphosis *Learners put a set of cards (drawings of metamorphosis of a caterpillar to a butterfly) in the right order.*	Input with little context, cognitively undemanding, day-to-day language. Biology: metamorphosis *Teacher puts pictures of metamorphosis in the right order and the learners copy the pictures and colour them in.*		
A LOT OF CONTEXT	**Quadrant 3**	**Quadrant 4**	**LITTLE CONTEXT**	**C A L P**
	Input supported with a lot of context but cognitively demanding, more abstract language. Biology: metamorphosis *Learners watch a video about the metamorphosis of a caterpillar to a butterfly and use information and words from the video to write a poem about the emerging butterfly.*	Input with very little context, cognitively demanding, more abstract language. Biology: metamorphosis *Learners read a text about the life cycle of an endangered butterfly and the environmental changes which threaten its existence. They then receive this task: the butterflies in a zoo are suddenly dying. Prepare a presentation for the zoo advising on measures to ensure the butterflies' survival.*		

ACTIVITIES FOR GUIDING UNDERSTANDING: NEED DEEPER THINKING

Figure 3.7 Cummins' Quadrants applied to guiding understanding

3.7 CONCLUSION

In this chapter, we have discussed how important it is for teachers to help learners to interact actively with content and language input, so that learners enhance their understanding of these types of input. Teachers can do this by dealing appropriately with vocabulary and helping learners with reading strategies.

Scaffolding is a useful tool to guide understanding, too: teachers can design reception and transformation scaffolds to help learners focus on important aspects of input. Appropriate questioning - both planned and on-the-spot - and raising awareness of text types and features are additional ways of helping learners to understand.

To sum up, when guiding learners to understand input in CLIL, teachers can:

- provide easy tasks during a first reading or viewing, e.g. yes/no questions about facts or questions on parts of the input;
- provide clear tasks to carry out, and give a reason for processing (reading or listening to) the material;
- help learners to engage and work with input, to understand and change its form after a first reading or viewing;
- create more difficult tasks which require more processing of the text;
- teach and recycle vocabulary actively and multimodally;
- help learners to notice and work with the purpose and organisation of different types of texts;
- provide scaffolding tasks and tools to aid understanding;
- relate the topic to learners' real lives: personalise input;
- ensure that glossary work includes definitions and English examples in context;
- work on reading strategies so learners become proficient readers;
- create active reading tasks which include skimming, scanning and guessing;
- get learners to match subtitles with paragraphs;
- use visual support: design tasks which draw attention to aspects of input other than text (accompanying visuals, titles and subtitles, body language, art work, etc.) or to explain or illustrate the content if input is difficult;
- use the CEFR to increase or decrease the level of a task;
- design graphic organisers or frames to support understanding;
- analyse their use of questioning in the classroom and design appropriate questions in advance related to the purpose of their lessons;
- use Bloom's new taxonomy for inspiration in creating tasks;
- use Cummins' Quadrants to adjust the difficulty of tasks.

3.8 TEACHER DEVELOPMENT

As a follow-up to the ideas in this chapter, do one or more of the following activities:

- Read the section on Personalising (see 3.6.6) and design a personalising task related to the material you are working with at the moment.
- Prepare different types of questions related to some material you are going to use which apply different levels of Bloom's new taxonomy.
- Look at a text from your course book and design either (a) a graphic organiser or (b) a reception scaffold or (c) a transformation scaffold to help learners process the input. For examples, see 3.6.11 and 3.6.12.
- Plan a question sequence to help learners think through some material you are working on. For example, you could move from skinny to fat questions, or from the 'lower' level of Bloom's taxonomy to a 'higher' level.

3.9 PRACTICAL LESSON IDEAS

How can you guide understanding? Below are some practical ideas for processing input.

Practical vocabulary ideas

Activity 3.9.1 Odd one out

Decide why a word does not fit in a group
Description Create groups of four or five words or concepts related to a topic you have already covered. Ask the learners to discuss in pairs or groups which one is the odd one out. There should be no easy right answer or obvious word that doesn't fit. The learners should have to think quite hard and argue their point in order to discover their own odd one out.
Subject examples **Economics: money** Fares, fees, price, money Fortune, treasure, wealth, money Lend, hire, lease, borrow Receipt, bill, tip, note **Chemistry: plastics** Styrofoam, polystyrene, PVC, Teflon, Saran Mould, melt, scorch, recycle, bend Inert, raw, brittle, hard, heavy Gum, rubber, plastic, nylon, vinyl

Activity 3.9.2 Word cards

Sort words on a topic into sub-categories
Description Choose 20-30 words related to a topic you are covering that you would like to emphasise or recycle with your class. You should be able to divide these words up into three or four categories. These can be related sub-topics (bones, organs and other parts of body for biology) or other types of sub-topics (colours, shapes, a continuum). Write all the words in a jumble on the board. Learners categorise the words on a hand-out or in their notebooks under your sub-topics.
Subject example **Geography: China** PHYSICAL GEOGRAPHY: steppe, desert, Tien Shan mountains, Himalaya, plateau, Taklimakan desert, Yangtze river, Yellow River, typhoons, bamboo ECONOMY: terrace, commune, irrigation project, silk, rice paddy, water buffalo, heavy industry, special economic zones, mining, yuan CULTURE: Mandarin, Confucianism, one child policy, Han, ethnic minority, Cantonese, Buddhism, Taoism, Cultural Revolution, politburo

Subject example

Economics: banking
We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

Account, bank, statement, borrow, budget, cash, cashier, cheque, credit card, currency, deposit, savings, withdraw, instalments, receipt, refund, income, pay into, save up, take out, broke, hard-up

1. Write each word under the colour you associate it with. For example:

YELLOW	BLUE	RED	GREEN
cash	savings	withdraw	pay into

2. Explain to your partner or group why you have chosen a particular colour for a word.

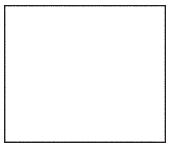
Learners might say things such as "I put *savings* under BLUE because it's the colour of my bank's website", or "I put *withdraw* under red because if you have a negative bank balance you are in the red".

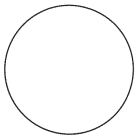
Subject example

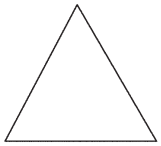
History: the Industrial Revolution
We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

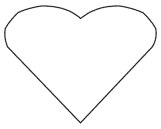
Capital, capitalism, collective bargaining, communism, conservative, enclosure, entrepreneur, union, exploitation, industrialisation, monopoly, obsolete, oligopoly, oppression, proletariat, radical, strike.

1.Write each word under the shape you associate it with. For example:


industrialisation


entrepreneur


oppression


oligopoly

2. Explain to your partner or group why you have chosen a particular shape for a word.

Learners might say things like "I put *industrialisation* under the square because it sounds organised".

Subject example

Biology: five senses
We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better.

colour blind, listen, tongue, bitter, hard of hearing, tickle, glance, stroke eye, glimpse, rub, look at, notice, stare, hear, eyesight, scent, stink, sniff, aroma, nose, inhale, mouth, sweet, deaf, sour, taste buds, feel, ear, massage, blind.

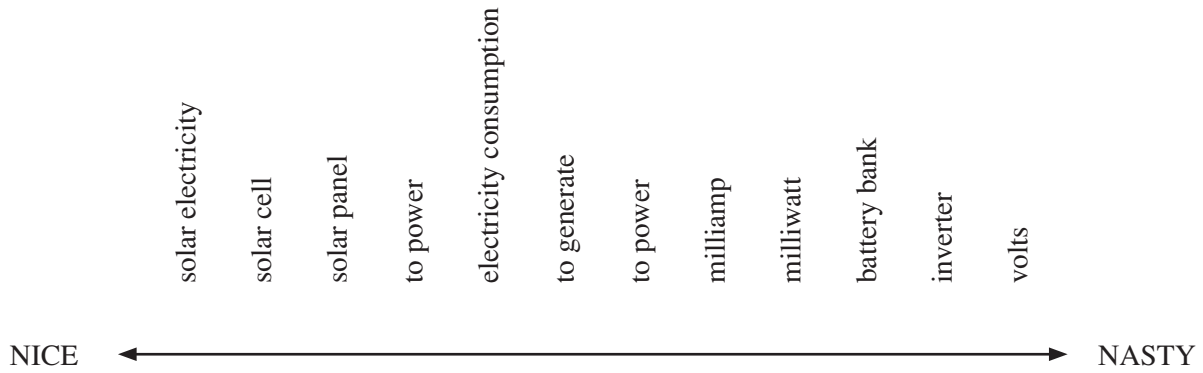
Write each word under the sense you associate it with.

POSSIBLE KEY
HEARING: hear, listen, deaf, hard of hearing, ear
SIGHT: glance, eye, glimpse, look at, notice, stare, colour blind, eyesight, blind
SMELL: scent, stink, sniff, aroma, nose, inhale
TASTE: mouth, tongue, sweet, sour, bitter, taste buds
TOUCH: feel, stroke, tickle, rub, massage

Subject example

Physics: energy
We have come across the words below during our lessons over the past few weeks. This task will help you to remember them better. Write the words on the continuum between NICE and NASTY, according to your own opinion.

solar electricity, volts, milliamp, milliwatt, to generate, to power, battery bank, inverter, electricity consumption, power grid, solar cell, solar panel



Subject example

Biology: blood vessels
Original idea from Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle
This activity is useful for topics where sub-topics have three or four different characteristics. Use it at the end of a topic to revise what learners have learned.

1. Make a table containing your chosen topics and their characteristics. The titles of the topics should be in capital letters, the characteristics in small letters.

2. Copy or print the table you have created on to different pieces of coloured cardboard, one colour for each group of learners. Cut out the cards and shuffle them.

3. Learners form groups of four around a table or group of tables. Each group is given a pile of shuffled cards (of a single colour). Tell them they have 10 minutes to arrange the cards into three logical columns on their table.

4. You circulate, asking critical questions and giving hints about the choices learners have made, but not giving them the right answer.

5. Learners should be encouraged to use English only and to explain to each other why they think a card belongs in a certain column.

6. After 10 minutes, the groups rotate. Each group moves to another table and has another 5 minutes to correct or reorganise the work of another group.

7. After 5 minutes, the groups return to their original table and try to discover the changes the other group made to their work. They reorganise the columns again, depending on whether they agree or disagree with the new order.

8. If learners get stuck, you can scaffold learning by providing a short text about the three topics (in the example below, about veins, arteries and capillaries) to help them to sort the cards.

9. The teacher can discuss the correct answers with the whole class or with individual groups.

10. The columns can be arranged to produce a table of properties (for example, of the three types of blood vessels) that can be copied into notebooks for revision.

Topics and characteristics:
ARTERIES: carry blood away from heart; blood at high pressure; no valves; thick muscular walls; no substances leave or enter vessel; pulse created by heart pumping & contraction of wall muscle; strong walls; carry oxygenated blood (with one exception).
CAPILLARIES: carry blood through tissues and organs; blood at low pressure; no valves;
very thin walls for escape of fluids; exchange of substances with tissues; no pulse; walls delicate and easily broken; carry mix of oxygenated and deoxygenated blood.
VEINS: carry blood towards heart; blood at lowest pressure; valves to stop blood flowing back; thinner walls with less muscle; no substances leave or enter vessel; no pulse; walls flexible & squashed easily so blood pushed further along vessel; carry deoxygenated blood (with one exception).

Activity 3.9.3 Everyday, academic and subject language

Decide which words are more academic and which are more everyday language

Description
Ask learners to organise words and phrases into a table to show the difference between everyday language, subject language and academic language.

Subject example

Biology: homeostasis
Ask the learners to put these words under the right column in a table with the following columns: Everyday words, Academic words, Subject (biology) words.

glucose, keeps, is maintained, sugar, inhibits, stops, rapid, quick, endocrine, hormones, release, blood, thermostat, bloodstream, secrete, pancreas, eating, sugar molecule, blood sugar level, insulin, cell, liver, internal, homeostasis, metabolism, let go, digesting

This is a possible key; others are possible (e.g. blood could be seen as a subject word, too).

EVERYDAY WORDS: blood, eating, keeps, let go, liver, quick, stops, sugar
ACADEMIC WORDS: digesting, is maintained, inhibits, internal, rapid, release, secrete
SUBJECT (BIOLOGY) WORDS: bloodstream, blood sugar level, cell, endocrine, glucose, homeostasis, hormones, pancreas, insulin, sugar molecule, metabolism, thermostat

Follow up
If you like you add a second step to this activity and ask learners to identify synonyms (eating, digesting; release - let go) to emphasise the difference between academic and everyday language.

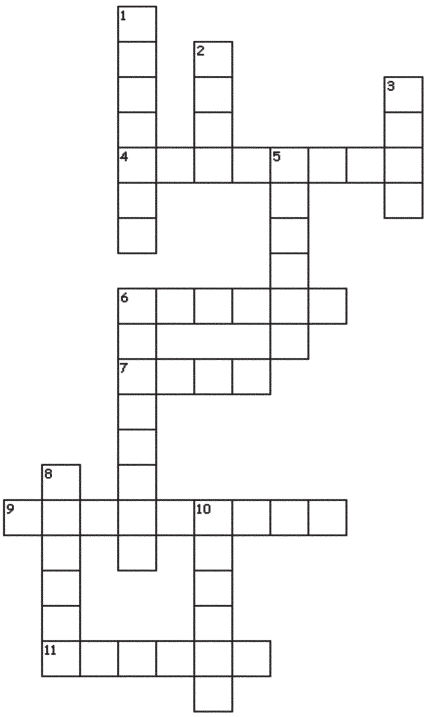
Activity 3.9.4 Crossword

Complete a crossword puzzle with words in lesson material

Description
After a number of lessons around a topic, choose the words which are important for learners to retain and create a crossword with those words. This is easily done online.

Subject examples

Chemistry: the Periodic Table



Across
4. H
6. Cu
7. Pb
9. Mg
11. Ni

Down
1. S
2. Au
3. Zn
5. O
6. Cl
8. C
10. Ag

This crossword revising some elements in the periodic table was made with Puzzlemaker http://puzzlemaker.discoveryeducation.com/code/BuildCrissCross.asp

Variation(s)
You can also create crosswords where the clues are the meanings of the words, or gapped sentences, or pictures.

Activity 3.9.5 Mnemonics

Remind the learners of a series or number of words which they need to remember in sequence. Provide or ask them to invent a mnemonic to help them recall the vocabulary.

Description

Remind the learners of a series or number of words which they need to remember in sequence. Provide or ask them to invent a mnemonic to help them recall the vocabulary.

Subject examples

Chemistry: atoms which pair up

N (Nitrogen), H (Hydrogen), Cl (Chlorine), Br (Bromide), I (Iodine), O (Oxygen), F (Fluoride)
Mnemonic: **N**ever **H**it **Cl**ara's **Br**other **I**mmediately **O**n **F**ridays

(Invented by some learners in Frankje Huisman's Chemistry class, Isendoorn College, Warnsveld)

Biology: classification

Kingdom, phylum, class, order, family, genus, species
Mnemonic: **King Ph**ilip **c**ame **o**ver **f**or **g**reen **sp**aghetti

(Provided by Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle)

Activity 3.9.6 Gapped text with academic words

Complete a text which includes gaps for academic words

Description

The AWL Gapmaker

This online programme creates a gap filling exercise for you, creating gaps using the Academic Word List. You type or paste your text into the box on the site, select the sublist level (1-10) that you want to use and submit your text. The text will be returned as a new web page with words from the Academic Word List, at the levels selected, replaced by a gap. The Gapmaker can be found on www.nottingham.ac.uk/~alzsh3/acvocab/awlgapmaker.htm

Subject example

Technology: smartphones

This gapped text about smartphones was produced in about one minute. Text from How Stuff Works at communication.howstuffworks.com/smartphone.htm

Gap File produced at level 6

Unlike many _____ cell phones, smartphones allow _____ users to install, configure and run applications of their choosing. A smartphone offers the ability to conform the device to your particular way of doing things. Most standard cell-phone software offers only limited choices for re-configuration, forcing you to adapt to the way it's set up. On a standard phone, whether or not you like the built-in calendar application, you are stuck with it except for a few _____ tweaks. If that phone were a smartphone, you could install any compatible calendar application you like.

Missing words: traditional, individual, minor

Activity 3.9.7 Noticing

Helping learners to notice language features in a content text

Description
Use a text which includes a particular language feature. Discuss first with learners why it is used in this particular text. Make a task to ask them to highlight or underline the particular language feature.

Subject example

Physics: lab reports
The language of laboratory reports, which uses a lot of passive forms, is sometimes difficult for CLIL learners. This noticing task guides them to look at the passive tenses in an authentic laboratory report.

Instructions
Laboratory reports are often written in the passive tense (e.g. *The test tube was filled, The liquid was measured out*), to make them more formal and less personal. You can recognise passive-voice expressions because the verb phrase always includes a form of *be*, such as *am*, *is*, *was*, *were*, *are*, or *been*. However, the presence of a form of *be* does not necessarily mean that the sentence is in the passive voice. You can also recognise passive-voice sentences since they often include a 'by the...' phrase after the verb, or suggest one, for example *The man was bitten by the dog*).

Here is a part of a real laboratory report. Underline all the examples of the passive tense in the text. How many are there?
1. six 2. seven 3. eight 4. nine

Procedure
The spring we tested was a coil spring from the rear suspension of a 1968 Volvo sedan (model 142s). It was a left-hand helical compression spring, had open ground ends, and was made of steel. The dimensions of the unloaded spring, the outside diameter, the total number of coils of turns and the wire diameter are listed in Table 1. Using these dimensions, the spring's fully compressed length (solid height) was estimated to be xx cm, or -xx% of its free length. This estimate was based on the following equation [...] where ***NT*** is the total number of coils, ***L0*** its free length and ***d*** is the diameter of the wire. This value was used to specify the maximum compression which was used in the test. Setting this value at xx%, an estimate of the forces that would be generated was also made using the following equation where ***x*** is the deflection of the spring, ***N=L0/NT*** is the number of active coils, ***D*** is the mean coil diameter and ***G*** is the shear modulus for the spring material.

(Key: the right answer is 3. eight).

Activity 3.9.8 Ranking cards

List items related to a topic in order of importance

Description
This activity works well for a revision lesson or at the end of a series of lessons on a topic; the learners need to know something about the topic before you start.

Individual work
Learners or the teacher first write down ideas, concepts or facts about the topic individually; each of these must be written on a different card. Learners then mix up their sets of cards and spread them on the table face down. They then select two cards at random and discuss which is the most important. They put this one on the left. Learners then take a third card and compare it with the card on the right, asking the question *Which of the two is more important?* They place it on the appropriate side (left, if most important and right, if not) and continue until their cards are used up, thus creating a row of cards with the most important idea on the left, and the least important idea on the right.

Pair work
Once both learners have constructed their own lists, ask them to compare the lists and construct a new, combined list using the same procedure.

Subject example

History: the Industrial Revolution
Learners write down one invention (for examples: flying shuttle, spinning jenny, spinning mule, cotton gin) made during the industrial revolution per card.

They then rank them, answering the question *Which of these inventions has had the greatest impact on people's lives and why?*

Activity 3.9.9 Jigsaw reading

Different learners read different information, then exchange the information

Description
This task works well with a text which can be divided into 3-5 sections, each of which containing separate information about the same topic.

1. Divide the class into groups of four learners, ABCD.
2. Copy your text into four sections.
3. Give each individual in the group a copy of a different part of the text. Provide a task related to each section of the text. Learner A gets text A, learner B text B, and so on.
4. Provide a new task which requires the four learners ABCD to communicate about what they have just read.

Subject example

History: the Reformation
Original idea from Yvonne Boelman, Isendoorn College, Warnsveld.
This is an example (based on Walsh, 2004) where learners become experts on one part of the course book unit about the Reformation. The teacher divided the unit into sections and the class into groups. Each group was given different questions to answer or tasks to do:

GROUP 1: pages 30 and 31: ‘Medieval reformers’
Make a list of concerns about the Roman Catholic Church during the Middle Ages.
What made the spreading of new ideas about the Church easier?

GROUP 2: pages 34 and 35: ‘Luther’
Make a list of the events which happened between the time of Pope Leo X and Luther.
Make a list of events which happened between the time of Emperor Charles V and Luther.
Why did the ruler of Saxony support Luther?
Which role did propaganda play in the struggle between the Pope and the Emperor on one side and Luther on the other side?

GROUP 3: pages 36 and 37: ‘The Protestant Reformation: Europe divides’
Look at the map on page 37: To which country did the Netherlands belong?
What was the main religion in the Netherlands?
What can you say about the size of the Netherlands during the 16th century?

GROUP 4: page 36: ‘Protestant Europe’
Who were more attracted to Protestant ideas?
Why were they more attracted to these ideas?
Make a table in which you give information about the two groups of Protestants: Lutherans and Calvinists.

GROUP 5: pages 38-39: ‘The Pope strikes back: The Catholic Reformation’
Why did the Pope call for the Council of Trent?
List the main points from the Council of Trent.
What was the Inquisition?
What was the consequence of the Council of Trent?

After they had answered the questions in groups, they then exchanged information. The groups were re-formed, so that the five new groups each contained one expert on a different section. In the new groups, they had to create a summary of the whole chapter, answering the questions, “Who were the most important people during the Reformation, and what were the most important events?”

Activity 3.9.10 Graphic organisers

Learners organise information on paper

Description

A graphic organiser is a visual representation of information. It can be used to help learners manipulate - understand or transform - information into another form. For example, a tree map can help to categorise information, a bubble diagram to show sub-topics within a main one, a Venn diagram to compare and contrast, a time line to put events in chronological order. You can find many examples of graphic or cognitive organisers on the Internet.

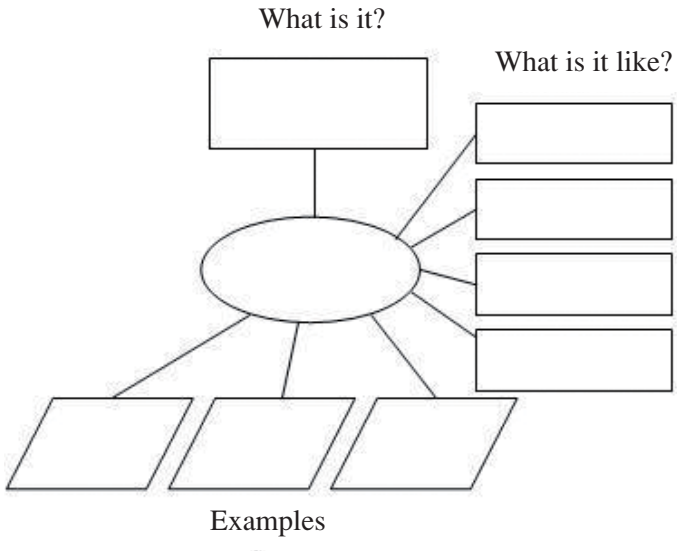
Observation, listening and reading guides are types of graphic organisers: they help learners to organise or change information. There are some examples provided in 3.6.11: a watching frame about Rousseau (art) and one about global warming (geography).

Subject examples

All subjects
Give learners empty or half-completed graphic organisers, and ask them to complete them during reading or listening tasks. Differentiate by giving quicker learners an empty graphic organiser and slower learners a half-completed one.

History; Timeline
Create a timeline using the Teach-nology website www.teach-nology.com/web_tools/materials/timelines and ask learners to complete it.

History: Concept map
Concept maps work well to help understand complex ideas. Write the concept (e.g. Imperialism) in the middle of the concept map and ask the learners to complete the rest.



Activity 3.9.11 Stickers

Play a sticker game related to difficult concepts

Description
This fun activity interests a class in (less exciting) material and is useful for revising difficult concepts which learners need to know.

1. Hand out one page of information about the topic that you want the learners to work with; this could be a text with a drawing or diagram. Ask them to read it quickly in about five minutes.

2. Give out one small white sticker (6 x 3 cm) per learner. They choose and write ONE concept that they feel the class should know on their sticker. Collect the stickers.

3. Stick one label on to each learner's back, without telling them what it is.

4. Learners circulate around the classroom with their material, asking each other YES/NO questions ("Am I an A?" "Am I related to B?" "Am I found in C?") to try to discover what their own label reads. For each question their classmate asks, they write an X on their classmate's label.

5. Once they have discovered their concept, they move the sticker from their back to their front, but keep on answering other learners' questions.

Subject example

Biology: hormones
Original idea from Arthur de Graaff, Isendoorn College, Warnsveld

Materials
1. A list of hormones and their functions can be found on www.emcom.ca/primer/list.shtml

2.An illustration of glands can be found on
training.seer.cancer.gov/module_anatomy/unit6_3_endo_glnds.html

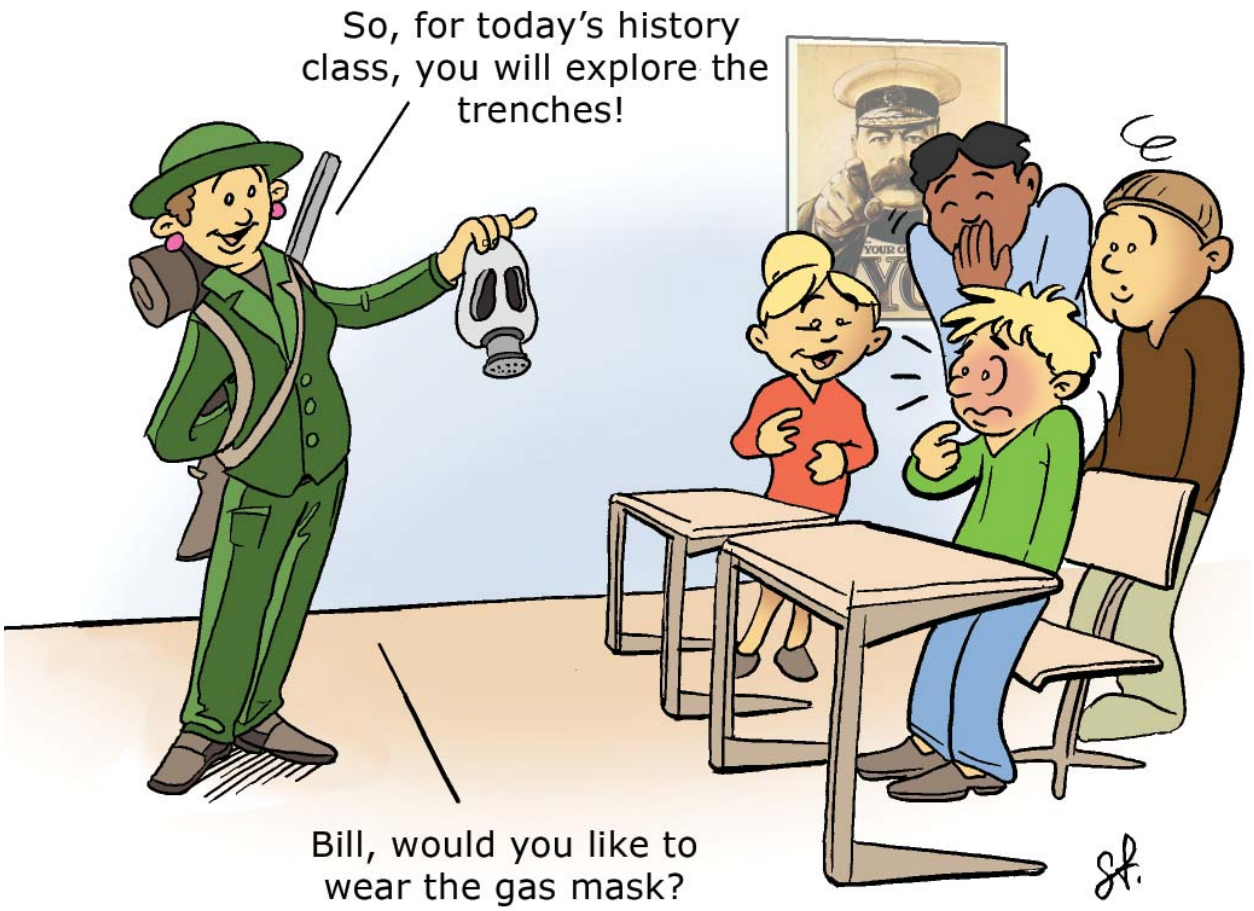
Examples of cards:

PROLACTIN	GH	CORTISOL

Questions learners asked each other:
"Am I a hormone?"
"Am I related to pregnancy?"
"Do I function in the kidney?"

Follow up
A further step can be that the learners stick their labels on the board, after which a few learners create a mind map with all the concepts.

4 Encouraging speaking and writing in CLIL



4.1 SUMMARY

This chapter covers:

- output and its importance in CLIL;
- the challenges for CLIL learners related to output;
- the importance of negotiation and interaction;
- BICS and CALP: the mode continuum[#] from speaking to writing;
- encouraging learners to speak and write English in the CLIL classroom;
- scaffolding spoken and written output;
- practical CLIL classroom activities to encourage spoken and written output.

4.2 INTRODUCTION

Helping learners write well organised or well thought out essays or laboratory reports, or seeing them put energy into a role-play or PowerPoint presentation can be extremely rewarding for the CLIL teacher. At these moments, the learners enthusiastically show their understanding and learning. This chapter is about encouraging output, in other words about getting learners to speak and write. We define output as *the production of language and content in the target language*. Output can be linguistic or non-linguistic, and formal or informal. Examples of linguistic output are a presentation, answers to spoken or written questions, a lab report, an e-mail to an exchange student or a class discussion about what learners did at the weekend: these all involve producing language. Examples of non-linguistic output are a model, a

painting, a sculpture or, in the cartoon above, a freeze frame of a scene in the First World War trenches in Bill's lesson: these forms of output require learners to produce something other than language.

In CLIL, the production of output is vital for learners to process and deepen their understanding of content and their ability to use language effectively. This chapter covers different types of output as well as effective ways for teachers to encourage interaction and output.

4.3 LEAD-IN

What types of output do you ask your learners to produce? What kind of content output do you encourage? What kind of language output do you require? Which non-linguistic output do your learners create?

This task is designed to start you thinking about these issues related to output.

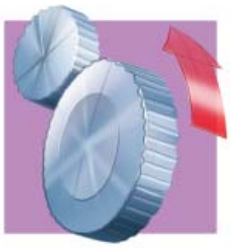
Task 7 Different types of output

1. Make a tabel with six columns. In the left-hand column of this table, write a topic you deal with in your subject in CLIL classes.
2. In the following columns, note down the content aims, language aims, content output, language output and non-linguistic output for the topic.

   Example 1: A history lesson on the Crusades
   Example 2: A maths lesson on multiplication

Topic	**Content aims**	**Language aims**	**Content output**	**Language output**	**Non-Linguistic output**
The Crusades	Learners know key events in the Crusades. Learners understand the causes and consequences of the Crusades.	Learners notice past tenses of irregular verbs (e.g. built, fought). Learners become familiar with words that indicate frequency of events (e.g. *often, usually, always).* Learners recycle subject-specific terminology (e.g. *pilgrimage, atrocities*).	Learners can answer these questions: When were the Crusades? What were the Crusades? Who went on Crusades? What were the causes and consequences of the Crusades?	Learners give a presentation about the Crusades to the King of England, explaining why they need 10,000 more men. Learners write a letter home about a day in the life of a Crusader.	Learners create a painting or picture of the Crusades. Learners design an emblem of specific Crusaders.

Multiplication	Learners can multiply rapidly and accurately.	Learners notice third person singular in simple present tense (e.g. 6 times 5 equals 30). Learners become familiar with the pronunciation of numbers.	Learners roll two dice and multiply the numbers they see.	Learners say the multiplication sum aloud to the rest of the class, a neighbour or group members.	Learners write the numbers of the dice on the board in mathematical symbols e.g. 6 x 5 = 30.



4.4 CASE STUDY

Here is a description of a biology lesson in which the teacher encourages learners to produce spoken as well as non-linguistic output. The lesson is for second year CLIL learners (13-14 year olds). It is a lesson on homeostasis, using the role of the pancreas in regulating glucose in the blood to demonstrate the concept.

At this point in the lesson learners produce spoken output.
The content aims are that learners can demonstrate their understanding of homeostasis.
The language aims are that learners

- can give an oral presentation about the process of homeostasis
- know and use words related to the process of homeostasis.

In the output (speaking) stage of the lesson, I put the learners in groups of four and gave them all a pile of coloured Lego bricks and horses, explaining that the bricks represent food entering the body. The white bricks represent glucose in the food, and the horses the messengers the body sends to different organs in order to maintain the sugar balance. I gave each of the four learners a role: digestive system (stomach), transport system (blood), pancreas or liver. I then asked the learners to use the Lego bricks to demonstrate and explain to each other how the body maintains its blood sugar levels. They first had to practice in their groups, and then present the process to the class.

Learner A: (stomach) I am the digestive system. The food (holds stuck together coloured Lego bricks) enters the stomach, and I break it down into different bits (gives broken up bits of Lego to circulatory system - learner B).

Learner B: (blood) I am the circulatory system. I transport the different bits, including the sugar (white Lego bricks) around the body (gives white bricks to pancreas - learner C).

Learner C: (pancreas) I am the pancreas. I notice that there is a lot of sugar (white Lego bricks) in the blood. I send insulin (a brown Lego horse) to the liver to say that there is a lot of sugar in the blood (gives brown horse to liver- learner D).

Learner D: (liver) I am the liver. The insulin makes me (and the muscles) store the sugar (puts white lego bricks on brown horse).

Learner C: (pancreas) I am the pancreas. I notice that there is very little sugar in the blood. I send glucagen (white horse) to the liver (gives white horse to liver - learner D).

Learner D: (liver) I release some sugar into the blood (takes white Lego bricks from brown horse and gives to circulatory system - learner B).

Figure 4.1 Description of a speaking activity in a biology lesson

Why is this CLIL?

This is a good example of how a CLIL teacher can help learners understand a process using props or real objects. Having learners use the Lego bricks to explain the processes of homeostasis makes the whole process less abstract, because they are actually enacting the process with concrete everyday objects. By physically enacting the process of homeostasis as they talk about it, they will remember the process more easily.

Describing aloud what they are doing will also help them remember the language they need to describe the process. After all, they have to search for the right words as they speak. So, activities which make learners explain what they are doing help them learn both content and language. Moreover, as learners present their model, the learners may notice inconsistencies in what they are saying if they see confusion in their peers' faces. This will help them to self-correct their explanations, either in terms of language, or in terms of content. The teacher may also notice errors in their understanding of homeostasis or their use of language and take the opportunity to give feedback on either content or language.

4.5 BACKGROUND

4.5.1 Types of output

Output can be linguistic or non-linguistic, formal or informal, spoken or written, and individual, pair or group work. Some examples of activities that encourage output are: a geography teacher asking learners to draw a map, a debate in a social studies lesson, a teacher having an informal chat in class about an exchange, a science teacher asking learners to write a lab report, learners creating a warm-up exercise in PE and a history teacher setting learners an essay task.

Figure 4.2 shows some other examples of spoken, written and non-linguistic output. CLIL teachers can use these to encourage learners to produce output in the target language.

Examples of informal and formal spoken output	**Examples of non-linguistic output**	**Examples of written output**
- individual, pair or group presentations - a conversation with friends - a chat with exchange students - a debate - an elevator pitch# - a discussion - a description of a picture - an instruction - an explanation of a problem - a role-play - a radio or television show - a speech - an interview - a film	- a drawing - a graph - a sculpture - a model - a painting - a freeze frame - an emblem - an illustration for a book or cd cover - a map - a game - a picture - a technical design - a diagram - an experiment - a storyboard - a physical exercise - a poster - an animation - a musical composition	- an essay - a lab report - a summary - a poem - a travel brochure - a letter - a leaflet - a (short) story - an analysis of an experiment - a play script - a manual - an e-mail - a questionnaire - a survey - a biography - a website - a magazine - a poster - an extract of a journal - a newspaper - a blog - an article

Figure 4.2 Examples of informal and formal spoken, non-linguistic and written output

4.5.2 Why output is important in CLIL

In order to become effective users of a language, learners need opportunities to try out newly-learned language forms or subject-specific vocabulary. Encouraging learners to produce spoken or written output helps them to use language: to think through ideas, to express ideas, to share knowledge, to give feedback, review ideas, to adapt and refine ideas and to negotiate solutions. Producing output should be an interactive process in which learners are gently pushed to try out, correct and improve what they say. It is inevitable that, when using the target language, learners make mistakes or sometimes fail to make themselves understood. This is all part of healthy language learning.

Having to work at getting their meaning across helps learners both to better understand what they are trying to say better and to improve their language skills. This process is important for learners to become better language learners. Output is also important for content, as asking learners to explain or formulate their ideas helps them to check their understanding. Gaps in their understanding become clear to them and to the teacher when they try to explain things themselves. Language and ideas develop hand in hand: language needs content and content needs language.

The harder learners have to work to articulate something, the more likely it is that the concept will be stored and the more easily learners will be able to retrieve it when they need it. If teachers encourage learners to produce a great deal of output, this will promote both language and content learning.

4.5.3 The types of difficulties CLIL learners experience with output

What types of issues have you come across in trying to encourage your learners to produce output? These quotes illustrate some issues related to producing language output.

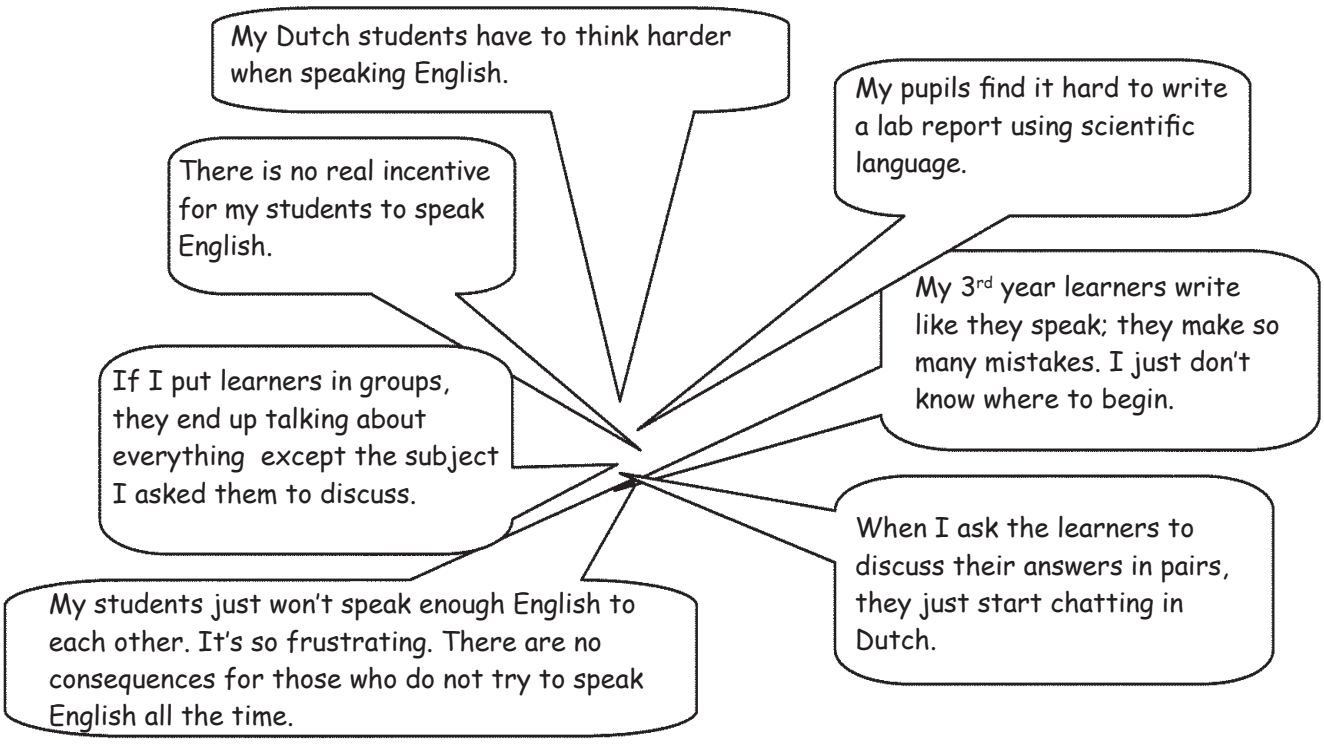


Figure 4.3 Issues related to producing language output in CLIL classrooms

There are many different reasons why learners may not speak English:

- it feels unnatural to them to use English all the time;
- their vocabulary is too limited to complete specific tasks;
- it is easier to say something in their first language;
- teachers allow them to use the first language;
- learners do not actually need to speak English to complete a task;
- learners do not feel skilled or confident enough to speak;
- learners feel embarrassed speaking English with peers;
- learners do not need to talk to each other in order to carry out the task.

These are some reasons why learners find it difficult to write in English:

- learners have no ideas to write about;
- learners have no audience in mind when writing;
- learners write as if speaking, as they are not aware of the aspects of formal language;
- learners do not know how to express their ideas in English;
- learners do not know how to organise their ideas;
- learners are afraid of making language mistakes.

In this chapter, we will look at issues CLIL teachers encounter when encouraging learners to produce spoken and written output and suggest how they can deal with these.

4.5.4 Cummins' Quadrants and encouraging speaking and writing in CLIL

In encouraging learners to produce spoken and written output, teachers often notice that learners seem to be fluent in general conversation but find it difficult to produce more academic language, for example, when they need to write an essay about communism for history or to explain an experiment for physics. In a CLIL context, learners need to master many different kinds of spoken and written output.

Cummins' Quadrants (see 2.5.4 and 3.6.17) can help CLIL teachers to see why learners are having difficulties. They can use the quadrants to identify and develop appropriate tasks for their learners. These tasks range from activities in which learners can use external clues and information to show their understanding, to situations where external clues are absent and they can only rely on their knowledge of language and content to carry out the assignment.

ACTIVITIES FOR ENCOURAGING OUTPUT WHICH NEED LESS THINKING

A LOT OF CONTEXT	**Quadrant 1** Output supported with lots of visuals and day-to-day language. Geography: Climates *Learners write descriptions of different climates under a map showing weather symbols.* *Learners give a PowerPoint presentation with pictures of a continent and describe the climate.*	**Quadrant 2** Output with little context, which can be produced without much effort, using day-to-day language. Geography: Climates *Learners describe different climates in a short text with no illustrations. Readers have to name the country that matches the description.* *Learners give a short presentation about the climate of a country, without any illustrations. Listeners have to guess which country is being described.*	**LITTLE CONTEXT**
	Quadrant 3 Output supported with a lot of context but the activities need deeper thinking and more abstract language. Geography: Climates *Learners compare climate graphs of different countries and present their comparision to the class.* *Learners write a text comparing climate graphs of different countries. Readers choose which country they would most like to live in.*	**Quadrant 4** Output with very little or no context; activities need deeper thinking and abstract language. Geography: Climates *Learners write an essay comparing and contrasting the climate in six European countries.* *Learners participate in a debate about climate change arguing for or against government intervention.*	

BICS

CALP

ACTVITIES FOR ENCOURAGING OUTPUT WHICH NEED DEEPER THINKING

Figure 4.4 Cummins' Quadrants applied to encouraging output

Quadrant 1	Activities that require very little thinking, here-and-now language and allow learners to use visuals for support.	More BICS  More CALP
Quadrant 2	Activities that require very little thinking, still require day-to-day language, but have less context.	
Quadrant 3	Activities that are cognitively demanding. In these tasks visual support or other contexts help learners show understanding and the language is more academic.	
Quadrant 4	Activities that are cognitively demanding. The learner has no visual support or context to help them explain their ideas. The language required to complete these tasks is academically more demanding and more abstract.	

Figure 4.5 Cummins' Quadrants

Task 8 Learning activities to encourage speaking or writing

In the following table, you can find some learning activities that encourage speaking and writing in CLIL. In which of the four quadrants would you place the following activities?

	Activity	**Quadrant**
1	Name and label the parts of a human skeleton	
2	Participate in a debate on nuclear energy	
3	Write short instructions for a simple chemical experiment	
4	Show a picture of a painting and give a short presentation about it	

The key to this task can be found in the Key to all tasks at the end of the book.

4.5.5 The mode continuum

Another way of distinguishing between BICS and CALP is the mode continuum. Gibbons (2002) describes this development from "more spoken-like texts to more written-like texts" and shows that cognitive development and language learning go hand in hand. This is useful for CLIL teachers because it shows how language is used differently in different contexts. The texts in Figure 4.6 (Gibbons, 2002, p. 40) all discuss magnetism in some way, but the type of language used is different.

Text A: (spoken by three 10-year-old learners during an experiment with magnets, using gestures)
This… no, it doesn't go... it doesn't move.. try that…yes, it does, a bit… that won't … won't work, it's not metal … these are the best… going really fast.

Text B: (spoken by one learner about the experiment with magnets, after the event)
We tried a pin… a pencil sharpener, some iron filings and a piece of plastic … the magnet didn't attract the pin.

Text C: (written by the same learner)
Our experiment was to find out what a magnet attracted. We discovered that a magnet attracts some kinds of metal. It attracted the iron filings, but not the pin.

Text D: (taken from a child's encyclopaedia)
A magnet… is able to pick up, or attract, a piece of steel or iron because its magnetic field flows into the magnet, turning it into a temporary magnet. Magnetic attraction occurs only between ferrous materials.

Figure 4.6 The mode continuum

These four extracts clearly illustrate how language gradually changes from spoken to written English. They also clearly show the difference between informal spoken language and more formal written language.

In Text A, the learner uses day-to-day language and many clues that point to the actual object (*this*, *that* and *these*). The first text is a good illustration of BICS and would be placed in Quadrant 1.

In Text B, we can clearly see the language changing: the learner informs fellow classmates about an experiment. There are fewer clues, so the learner needs to use different language to make clear to others what the experiment was all about. It would be placed in Quadrant 2.

Text C is a written text, so there is no face-to-face audience. The writer uses more formal language to describe both the context and the experiment. This text would be placed in Quadrant 3.

Text D has been taken from a child's encyclopaedia and contains more complex sentence structures and subject-specific terminology to describe the experiment (*magnetic field* and *ferrous materials*). Text D is an example of CALP - more academic language - and would be placed in Quadrant 4.

4.5.6 How can teachers guide their learners to produce more CALP?

In the initial years of CLIL, teachers can set up tasks that allow learners to develop BICS, in other words, more informal, day-to-day language and basic vocabulary. During the second and third years of CLIL, they can start challenging learners to produce more academic language, so that their language moves towards CALP. Teachers can do this by providing more challenging tasks which require more formal linguistic and non-linguistic output.

Learners have two needs. Firstly, they need to be able to show what they know about the subject, with or without language. Secondly, they need to be pushed to develop their language skills, and use more complex language to express complex ideas. Teachers need to balance both these needs. They can do so by providing more context or clues or less context or fewer clues, or by making tasks intellectually more or less demanding. Teachers can help learners to show what they know about the subject, for example by providing a list of words or phrases that the learners can use in a task, or by encouraging them to use visuals. They can help learners develop more academic language by making tasks more intellectually demanding. In this way, teachers can guide their learners to move from BICS to CALP.

Quadrant 3 is very important for CLIL learners because this is where language and academic requirements gradually become more demanding. However, in this quadrant learners still need the support of some context to carry out the assignments. Learners can be guided to move from BICS to CALP when they are provided with scaffolds that encourage and help them to speak and write in the target language. This process will be dealt with later in this chapter.

To develop CALP, learners need both higher language proficiency and academic ideas. This is one reason why CLIL has the potential to be a powerful environment for language learning, as it provides an opportunity to develop both of these; language and thinking skills. However, the development of language and thinking skills will not just happen on its own. Teachers need to support learners to meet the language and academic challenge in CLIL. For example, if learners are asked to write a lab report for physics, the CLIL teacher can support learners by showing them how the passive is used in lab reports. This is an example of a teacher giving language scaffolding. In order to perform a cognitively more demanding task effectively, learners are helped best by providing them with academic language. If language support and input is not provided, learners may continue to experience difficulties writing essays and lab reports; they may continue to complete these tasks without the use of appropriate academic and scientific language.

By paying attention to language, teachers also help their learners to perform better at the content level, because paying attention to language helps them to express ideas more carefully. If learners are pushed to use more academic language, their understanding of the subject also deepens, because the development of language and ideas is interdependent both in the learners' first and second language.

4.6 APPLICATIONS FOR CLIL - TEACHING SPEAKING

Encouraging learners to speak in CLIL lessons

In this section, different ways to help learners produce spoken output and to improve output quality will be presented and discussed.

4.6.1 Negotiation of meaning during spoken interaction

Group and pair work can create effective opportunities for learners to use language as learners have more opportunities to speak than in a whole class setting. One way of encouraging output is by setting tasks for which learners really need to communicate with each other in the target language. This process is called negotiation of meaning[#]. By interacting and receiving feedback from others, learners will discover the appropriateness and correctness of their content and language, and will be able to judge whether or not they have been understood.

Example 18 is an illustration of negotiation of meaning for physical education. In this speaking and writing task by Dennie Lodders (Dr. Mollercollege, Waalwijk), learners are asked to write and give oral instructions to fellow learners for warm-up tasks[#]. The learners are really communicating here, since the class has to follow the spoken instructions. If these are not clear, the learners cannot carry out the tasks. By giving the instructions, the language and the content they learn from this activity will be processed at a deeper level as they carry out the activity, since the learners will immediately be able to see the effect of their instructions. It is more than just instruction by peers, because the learners will adjust what they say when they see that their instructions do not produce the result they expected. This means that they are more likely to remember and be able to produce both the information and the language again at a later stage.

Example 18 A warm-up activity for physical education

Prepare a warm-up activity that lasts about 10 minutes. Choose a sport that you enjoy, know a lot about or a sport that you've done in our PE lessons here at school. Don't forget to include the three different types of warm-up (see below for more information). For each type write down a few exercises and mention the length of each activity. You are also allowed to use illustrations.

Do this assignment on the computer. Remember to put your name and class on the paper and be ready to actually give the warm-up instruction to your classmates next week!

Extra information about a warm-up

1. General warm-up
A warm-up always starts with a part to warm up your whole body. Exercises in such a general warm-up are activities such as running, skipping, knee lifts, going sideways, swinging your arms, and rope skipping.

2. Stretching
Stretching is done to lengthen your muscles to prevent injuries. When choosing exercises, you need to decide which muscles are mainly used when you do this sport and how you can stretch them. Each stretching position is usually held for 6-8 seconds and you repeat it a couple of times.

This picture is an example of a stretching exercise for your upper thigh muscle; this exercise could be used as a warm-up exercise for a football player.

3. Specific warm-up
This is the part of the warm-up that is used to get a feeling of the sport that you are going to practise. If softball is the sport you choose, then exercises might include throwing a softball to and fro, pitching (not at full strength), and swinging the bat loosely.

Why is this CLIL?

PE is a subject that does not require a great deal of written output. This PE lesson involves group work with hands-on activities in which the teacher asks learners to use the target language in writing and in speaking. This is an effective CLIL task because learners experience something (non-linguistic output), and speak and write about it (linguistic output). In doing so, they effectively recycle subject-specific language and content.

Learners are asked to use subject-specific vocabulary. In the instructions, the teacher helps the learners by giving examples of subject-specific words such as *stretching, upper thigh muscle* and *swinging the bat loosely*. The teacher also supports a key concept (*stretching*) by means of an illustration. Learners need to use this specific vocabulary to explain their warm-up exercise and they are also allowed to use illustrations in their written task. This provides context, balancing the language and content demands being made on the learner.

The PE teacher builds on the learners' existing knowledge, interests and own experiences. The learners have been given some specific goals, and the task is organised so that the learners need to use the target language in a realistic and meaningful context. Apart from this linguistic aspect, learners also need to think about the key content of a PE lesson.

The teacher provides learners with thinking and preparation time for the warm-up activity. This is time CLIL learners need, before they are required to produce more output (both language and content). They are not only expected to produce and write down three warm-up exercises, but also to teach them to their classmates the following week. When the learners carry out this task, they receive immediate feedback from their peers, which is an example of negotiation of meaning. If they cannot do the exercise, the communication has simply broken down!

This exercise also illustrates the various types of communication PE teachers can set up in their classes. In this activity learners are asked to explain (why, how or what to do), to instruct (how to do), to question (to check for understanding), to describe (what is going on) and analyse (how an activity works).

4.6.2 Information gap activities

Another way of encouraging effective interaction for learning is by using information gap activities#. These are activities in which each learner in a pair or a group has information the other learners do not have (the information gap).The learners then interact with each other in order to share their information and find out what they can from the others, for example to solve a problem or make decisions (Neu & Reeser, 1997).

Information gap activities are useful in CLIL because they give learners a reason to speak to each other, which encourages participation from all learners and thus gives them opportunities to practise their speaking skills (for example, taking turns in conversations, initiating conversations, and giving short and longer answers). They also need to understand each other's ideas correctly to complete the tasks. There are different kinds of information gap activities: factual#, personal# and opinion information gap activities#.

In *factual information gap activities*, learners are asked to exchange facts (see Activity 4.10.7). In *personal information gap activities*, learners are asked to question each other about themselves and their personal lives. For example, in a geography lesson learners can create a questionnaire about their favourite European capital city. They then have to discover their classmates' interests using the questionnaire.

In *opinion information gap activities*, learners need to find out what their fellow classmates think about a certain topic. An example of an opinion information gap task is a pyramid discussion. For example, in a social studies lesson learners are asked individually to put a number of criminal offences in order of severity. In pairs, they discuss their lists and make a new list which both learners agree upon. The same can then be done in groups of four, then eight, and finally the whole class. A pyramid discussion like this works best with simple problem-based discussions or item selection tasks.

4.6.3 Exploratory talk

In CLIL, it is important for teachers to create opportunities for learners to practise content language and to show their understanding of content. Learners also need to try out different ways of thinking and to exchange and contribute different or personal ideas to a discussion. Barnes (1992) distinguishes between presentational talk# and exploratory talk#. In presentational talk, learners mainly focus on language and

the manner in which a speech is delivered and received. In exploratory talk, learners are encouraged to exchange ideas in a critical but constructive way.

When discussing their ideas, learners may agree or disagree with each other. If they simply say yes or no without explaining why, limited language learning and content learning takes place. If they simply add ideas without extending them, learners do not deepen their understanding; however, if learners make their reasoning more explicit, they learn more (Mercer, 2000). So, teachers need to set tasks which encourage learners to explain their reasoning and teach them the language they need to do this. CLIL teachers can encourage exploratory talk by using group or pair work and by teaching their learners how to apply this in the classroom.

Group or pair work creates opportunities for learners to use formal and informal language, to use content language and to think out loud or to think together. It is through discussing new ideas with others that learners can move towards new ways of thinking and content understanding. Example 19 shows a biology task (Bentley, 2007, p.132) that stimulates learners to use content language and also requires deeper thinking**.**

Example 19 Speaking cards for biology

In this task, a group of learners is given a set of cards with subject-specific 'fat' questions they need to discuss in their group, for example:

1. Why is the spine made up of small bones?

2. Why are birds' eggs speckled?

3. A spider isn't an insect. Why not?

4. Where can you see water evaporate?

Learners take turns choosing a card and discuss the question in their group. This activity helps learners to use the subject-specific terminology they have learned, promotes understanding of subject-specific concepts and also encourages the kind of talk Mercer describes; learners need to reason out loud. For information on fat and skinny questions, see section 3.6.15; for effective questioning, see 4.6.5 and 4.6.6.

In encouraging exploratory talk, teachers can guide their learners towards good quality group talk (see practical lesson idea 4.10.8). It is advisable to set up ground rules for effective group talk so that teachers can refer to these rules when learners are engaged in discussions. Dawes and Wegerif (1998) suggest the following ground rules:

- everyone should have a chance to talk;
- each member of the group should be asked:
  - what do you think?
  - why do you think that?
- look at and listen to the person talking;
- show respect for other people's suggestions;
- after talking the group should reach agreement and formulate their arguments.

4.6.4 Effective speaking tasks

Learners are encouraged to produce a great deal of spoken language output when the speaking activities are set up in such a way that "learners talk a lot, participation is even, motivation is high and language is at an acceptable level" (Ur, 1996).
The following suggestions can help make your speaking activities more effective:

1. **Create a safe environment**
   Learners should not be afraid to make mistakes when asked to produce language (and content) output. Create a learner-friendly atmosphere in which all learners can safely participate at their own level. This is best done by having learners speak in pairs or small groups (see practical lesson ideas 4.10.3 and 4.10.6) and helping them to see mistakes as learning opportunities.

2. **Choose the topic carefully**
   Make sure the choice of topic is of interest to learners. The more they are interested in the topic, the better their motivation to speak will be (see practical lesson idea 4.10.5).

3. **Plan and structure interaction well**
   Teachers also need to make sure their learners understand their instructions and the task. It is important to be specific. For example, tell learners exactly what is expected of them, what the product should be, when it needs to be finished and what they will be assessed on (see practical lesson idea 4.10.4). Learners also need preparation for producing spoken output. Just stating *Here's the topic. Now talk* overly challenges the learners and will probably not lead to an effective discussion. In Chapter 1, we stressed the importance of activating prior knowledge. In preparing for a speaking activity, teachers also need to first take time to introduce the topic and to provide content, language and scaffolding as preparation for speaking.

4. **Use a no-hands rule[#] and give learners time to Think, Pair, Share**
   Only asking learners with their hands up to respond leaves the quieter learners out. Instead, give learners time to think of an answer individually ("think") and then to discuss their answers in pairs ("pair"). The teacher then selects who is going to give an answer ("share"). In this way, the teacher creates wait time in which all learners can take time to think; this is particularly important in CLIL, since learners need to think about both content and language. All learners and not only volunteers should be chosen to answer the questions. Allowing more thinking time may also lead to more and longer responses. By having a no-hands rule teachers can avoid the 'talk talk loop' in which they say something without a response from the learners; they again say something and so end up discouraging learner participation and increasing teacher talk.

4.6.5 Effective questioning

In 3.6.15, the difference between fat and skinny questions was explained as a way of helping learners understand input. This section focuses on questioning as a means to stimulate and generate more language and content output.

Skinny questions produce limited output of up to five words. When a physics teacher asks *Is solar energy a good thing?* learners will probably produce a one-word answer: *Yes* or *No*. Fat questions require answers with more than five words and thus will generate more complex language and content output. When the same teacher asks *Why is solar energy a good or bad thing?* learners will need to produce longer stretches of language as well as think at a deeper level.

There is a thin line between asking fat or skinny questions to guide understanding and to encourage output, but there is a difference in emphasis. Fat questions for guiding understanding are open questions about a written or spoken text. They are designed to check and support learners' understanding of the

text. When fat questions are used to encourage spoken output, learners are asked to demonstrate their understanding of content and language creatively in different or new situations. This results in learners processing the information in a new way, so that they can store the information more effectively and are able to retrieve it more easily. In this way, asking fat questions encourages transfer[#], since such questions lead to learners using information and language in new situations and in different contexts.

The way teachers ask questions or listen to learner responses is crucial to the effectiveness of their teaching. How can CLIL teachers put effective questioning into practice? The following task is designed to start you thinking about the types of questions teachers ask in their lessons.

Task 9 Fat or skinny questions?

List the different types of questions you ask in your lessons and/or find in your course book. For each question write down whether this is a fat or skinny question and whether or not this question encourages output (language as well as content). Two examples have been provided.

Subject	**Question**	**Fat or skinny question?**	**What language output is encouraged?**	**What content output is encouraged?**
History	Why did communism in the Soviet Union collapse?	Fat	Spoken or written. Explain a process.	Learners need to demonstrate understanding of the collapse of communism in the Soviet Union.
Biology	What is another word for a living thing?	Skinny	Spoken or written. Give a synonym.	Subject-specific vocabulary.

4.6.6 Suggestions for effective questioning

Here are some suggestions to help CLIL teachers ask more effective questions.

1. Prepare questions that get learners thinking in advance
   A whole class discussion can be fruitful if a teacher prepares questions in advance to take up or extend learners' responses. A teacher can also allocate talking groups to further discuss answers and to encourage learners to produce more language and content output.

2. Start an activity, a task or a lesson with a controversial question
   In social studies, a teacher could put a question related to an important issue in today's lesson on the board at the beginning of the lesson, such as *Capital Punishment: Yes or No? And why (not)?* Learners work in small groups where they can discuss their ideas and come up with a group answer and produce more content and language output.

3. Stimulate higher order thinking skills
   In order to develop higher order thinking skills, compose and ask different kinds and levels of questions (see 3.6.16) and use more fat questions. For example, *What do you think the effect might be of increasing the speed limit?* This stimulates learners both to formulate a variety of answers and to be creative in their language.

4. Ask learners to produce their own questions
   An effective way to involve learners is to ask them to produce their own spoken or written questions

and answers about a specific picture or source. Next, they can discuss their answers with fellow classmates. This activity gives learners the opportunity to produce written output and encourages much deeper thinking.

5. Play devil's advocate
   A useful intervention is to sometimes play devil's advocate in a class discussion, deliberately taking an opposing or contrasting viewpoint in order to spur on the conversation.

Example 20 Creating questions for history

A well-balanced mix of lower and higher order thinking skills questions can be found in a history activity described by Fisher (2002). In this example, a history teacher reads a story to his class about Tudor England. Learners are asked to note down one question about something that they found interesting or puzzling about the story. They are then asked to discuss their questions in pairs and decide whether to put forward both questions to the whole class, or to combine them into a one new question. Questions are collected on the board by the teacher. The class sorts out which are factual and which are philosophical questions. The class can then choose one philosophical question and hold a debate on this one question.

Why is this CLIL?

In this activity, learners are stimulated to produce their own lower and higher order thinking questions. It is a good example of an activity in which learners are encouraged to produce not only language output but also content knowledge. The language output for producing the philosophical questions is more cognitively and linguistically challenging, which develops CALP, and stimulates learners in terms of both content and language.

4.6.7 Tips for teachers on encouraging speaking English at CLIL schools

Despite the fact that CLIL learners are encouraged to speak English all the time, teachers complain: *Learners just won't speak enough English to each other. It's so frustrating!* In this section we offer a number of practical suggestions for CLIL teachers to encourage their learners to use English in their lessons.

School policy

- Make clear to learners, teachers and parents that English is the language of instruction and communication in the CLIL stream. For example, learners who speak English all the time can be given bonus points. Some schools have formulated a policy on this issue. For example, if learners consistently 'forget' to speak English in class, they receive a yellow card. After having been given five yellow cards, they are asked to reconsider whether they want to stay in the bilingual stream. The learner and parents are then invited to school to discuss this with the CLIL coordinator. In this way, there are clear consequences for learners who consistently fail to speak English. Some schools ask learners to talk for one minute in English in front of the class if they use Dutch, or to wear a "silly hat" for the rest of the lesson. Other schools are less strict and include a remark or score on report cards related to the use of English in subject lessons. A single solution that applies across the board does not exist, and the culture and context of the school influences which policy is most appropriate.

Role of teacher

- The teacher is a role model. If the teacher uses English all the time, learners are more likely to do so too. The teacher can ignore or refuse to respond to Dutch (*I really can't understand you*). As with most educational issues, consistency plays a key role.
- The teacher can give rewards for speaking English all the time. Possible rewards for a whole class include:

- No Dutch used for one lesson: listen to favourite song in class.
- No Dutch used for one week: watch favourite video clip in class.
- No Dutch used for one term: watch favourite DVD in class.

- A more negotiating style could involve very explicitly discussing learners' use of English with them: *What stops you? What do you think the problem might be? What shall we do if you don't speak English? What do you need from me to encourage you to speak English? Why don't you want to use English?*

Activating

- Support learners by providing them with useful phrases they can use when speaking. Display these on the wall, or hand them out on cards.
- Give learners thinking and/or planning time before they need to produce language.
- Think about the language that learners need to produce for an activity and select and activity which fits the ability of the learners in your class. For example, contributing to a debate is much more difficult than answering structured questions.
- Have a short chat at the start of the class about a news item or something related to the topic of the lesson. This warms up the class and sets the tone for speaking English for the rest of the lesson.
- Ask some learners to give an example before they start to work on a task.
- Think about the language aims for a CLIL lesson. What should learners be able to do in English at the end of the lesson? Tell the learners what the language aims are.
- Design and incorporate language assignments (plays, short stories) into CLIL lessons.
- Make a glossary or word file and use any newly-introduced vocabulary in the next lesson.
- Be explicit about language expectations when you set a task, for example *use these words, ask only open questions,* and *use the word 'because' five times*.

Group work

- Use pair work often and set learners tasks that include an information gap (see 4.6.2).
- During group work, give some learners a monitoring role to keep groups working in English. Have another learner note some of the mistakes in English and another learner note useful vocabulary or phrases.
- Give them speaking homework. Ask your learners to prepare a one minute talk for the following lesson.
- Record the pair or group work on a mobile or digital voice recorder and analyse this.

Praise and penalties

- Give learners a lot of encouragement and praise when they use English.
- Give learners a 'free' 10 for one of their tests; if they speak Dutch or don't participate, they lose half a point.
- Each time learners speak Dutch, fine them 5 eurocents. At the end of term, buy something nice or donate the money to charity.
- Give an extra mark for good participation or a good contribution in English. Include a mark for English (5-10%) in tests.

Assessment

- Assess learner work on both content and English, so that learners feel credited when they use English (see also Chapter 5).

Projects

- Work with the English teacher on a cross-curricular project[#]; make sure that a substantial part of the mark is for English (see also Chapter 6).

4.6.8 Scaffolding spoken output

In 3.5.3, scaffolding was discussed as a tool to help learners move forward in their learning and understanding. Scaffolding can also be used as a tool to support learners in producing more formal spoken output. A production scaffold is a task where learners produce or create something new to show their understanding. A production scaffold requires higher level thinking than a reception or transformation scaffold. To help learners move smoothly from BICS to CALP and thus become more autonomous learners, teachers can support them by using production scaffolds. These can help learners organise and structure their thoughts and language.

4.6.9 Speaking frames

In the initial years of CLIL, learners may well be too shy at times to express themselves in English, and their vocabulary may still be too limited or their command of specific grammatical structures insufficient. These factors may result in learners sometimes being too afraid to talk or even avoiding using the target language and falling back on speaking their first language. Providing learners with language support can help them to overcome their fear of speaking, since they are supported with specific vocabulary or phrases they can use to help them practise certain sentence patterns.

Example 21 Speaking frames for geography

A geography teacher asks learners to work in pairs. The learners are asked to study a map of Europe and arrange countries on a time line like the one below according to which country will be the first to be affected by a rising sea level.

2010 2030 2040 2050 2060 2070 2080
|_____|_____|_____|_____|_____|_____|

The content aim of this exercise is to show understanding of sea level rise, and the language aim is to learn and to use subject-specific terminology (such as altitude and above/below sea level), to draw attention to words indicating order (first, second, third) and to help learners notice degrees of comparison (more, less, higher and lower).

Learners are given an atlas to do this assignment. They take turns looking at the map and putting a country on the timeline. The teacher also provides the learners with the following substitution tables[#].

Substitution table 1

The country	most least	affected by the rise of the sea level will be	….	because it	is	high low	above below	the sea level

Substitution table 2

…….will be the	first second third fourth fifth	country to	be affected by suffer from see the effects of be flooded because of	the sea level rise

This and other examples of substitution tables to help the less proficient language learners produce spoken output can be found at: www.factworld.info/Ethical_English_Activities.pdf

In activities like this, learners can use many external clues and the task can be done without much thinking. The substitution tables provide learners with ready-to-use chunks of language. These tables are best suited for learners who are still at BICS level and who would not be able to complete this task without the assistance of their teacher or these frames. They help learners to get started in a second language and "reduce the frustration of being unable to participate in classroom tasks that they are capable of doing in their mother tongue" (Gibbons, 2002).

Substitution tables do not guide learners to use new language in a different way. Once learners have passed the silent and survival stage, the teacher can guide learners in becoming more proficient and independent users of the target language. By this stage, the tables should no longer be used, so that learners start to make the effort to find the language they need themselves, instead of relying on the tables.

Example 22 Production scaffolds for history

In a history lesson, learners watch the film *Elizabeth*. Each learner is given a specific role card before they watch the film and is instructed to study one character in the film. While watching, the learners make notes on their character.

Role card 1: You are William Cecil. Tell your classmates why you were Queen Elizabeth's most faithful servant. Tell them you kept tight control over the finances of the Crown. Tell them about your religious convictions.
Role card 2: You are Queen Elizabeth. Tell your classmates why you were declared illegitimate. Tell them why you support the Protestants. Tell them about your foreign policy.
Role card 3: You are Anne Boleyn. Tell your classmates you're Elizabeth's mother. Tell them you were accused of high treason. Tell them about the tragic events in the Tower of London.

After watching, the class holds a balloon debate (see practical lesson idea 4.9.1). In a balloon debate, the characters are together in a hot air balloon which is running out of gas. Only one character can be saved. All the characters must put forward the reasons why they need to be saved. In groups, the learners prepare to take on their role by using the content and language speaking frames[#] below. One member of each group presents the reasons to the class and the class votes for who should be saved.

Frame 1 **Introduction**	**Frame 2:** **First argument**	**Frame 3:** **Next argument**	**Frame 4:** **Conclusion**
First of all... To begin with…. This is how… Having collected all the necessary information…. In order to …	Secondly… Following this.. In addition…	You need to know…. As you….. As a result of….. You will see that …	Finally… Now it is time to…. At the end of….. I have discovered…. I would recommend...

Why is this CLIL?

The role cards provide learners with a great deal of content support that they can use to present their argument. Language support is provided by the speaking frames. The language required in this presentation is more abstract and the activity needs deep thinking. Learners are asked to work in small groups, interact with each other and make sure they understand each other. Asking learners to give a presentation also allows them to show their understanding of this topic.

The speaking frames guide learners in structuring their arguments and at the same time stimulate them to try out newly-learned vocabulary such as *illegitimate* and *high treason*. They also guide learners in producing a more coherent presentation by providing them with useful phrases such as *first of all*, *secondly* and *finally*. The content frame supports learners by providing subject-specific terminology they can use in their presentation (for example *declared illegitimate* and *foreign policy*). The language frame supports learners with vocabulary to indicate the structure of their presentation (for example *introduction, first argument, second argument* and *conclusion*). A variation of this activity is practical lesson idea 4.10.3.

Example 23 Production scaffolds for geography

In geography, learners are expected to use subject-specific terminology and factual and formal explanations when they talk about topics such as global warming, rainforests and climate change. Below is an example of a worksheet provided by a geography teacher to help learners understand the causes and effects of an earthquake (original idea by Annelet Lykles and Menno Ruppert of Herman Wesselink College, Amstelveen).

Instructions
A **cause** is something that makes something else happen. Of two related events, it is the event that happens first. To determine the cause, ask yourself the question *Why did it happen?*

An **effect** is what happens as a result of the cause. Of two related events, it is the one that happens second or last. To determine the effect, ask the question *What happened?*
Exercise 1: Phrases

a) Match the sentences and phrases in column A with the right endings in column B.
b) Mark the cause (red) and the effect (blue) using two different coloured pens.
c) Draw a circle around the different words used to express a cause and effect relationship.

Column A	**Column B**
1. The new trains have more powerful engines.	is due to acid rain.
2. The air rises and cools.	so there isn't enough food for the people.
3. The traffic was very heavy and	This is caused by too many greenhouse gases in the atmosphere.
4. Many species of wildlife are becoming extinct	because the rainforests are being destroyed.
5. This year's crop was destroyed by the bad weather,	They are, therefore, faster.
6. The temperature is rising steadily.	as a consequence the rock erodes at the bottom.
7. The waves bash against the rock and	This causes the water vapour to condense into water droplets.
8. Since the volcano emits so much ash and poisonous gas,	because of the melting ice caps.
9. The sea level is rising	as a result I arrived very late.
10. The fact that the rivers are polluted and trees are dying	people have to be evacuated really quickly.

The graphic organiser in Figure 4.7 is an example of language support to help learners explain the causes and effects of an earthquake and also to encourage them to try out newly-learned vocabulary in a presentation or a debate.

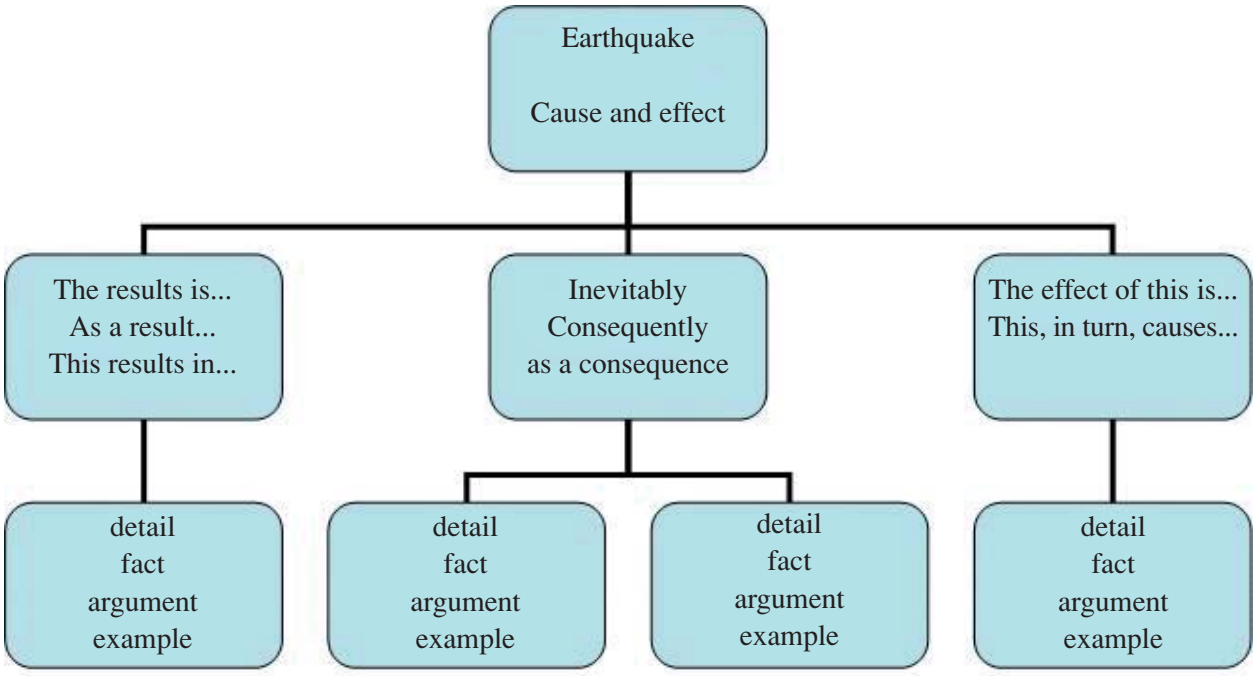


Figure 4.7 Production scaffold: speaking frame for geography

Why is this CLIL?

The type of graphic organiser above is suited to support more advanced CLIL learners. It provides them with phrases they can use to explain a subject-specific topic and it also guides them in the structuring of their explanation. The language support is not as complete as in Example 23. In order to guide learners to become more independent speakers, the language support needs to be gradually removed.

Many CLIL learners take part in junior speaking contests and debates (see practical lesson idea 4.10.1). These are good ways of encouraging CLIL learners to use more academic language (CALP). After all, in a debate, learners need to find original and intelligent arguments to contribute. A debate also has a competitive element, a clear goal and it gives direction and purpose to a discussion. Moreover, in a debate, learners can demonstrate content understanding of a subject-specific topic and display their language proficiency.

Example 24 Speaking frame for agreeing and disagreeing

The following speaking frame (produced by Sissi Hubers of Isendoorn College, Warnsveld) provides learners with useful phrases for asking or giving opinions and agreeing or disagreeing with their opponents in a debate.
Useful phrases to express agreement I think we should buy a car which runs on vegetable oil. I believe (that) smoking should be outlawed. In my opinion... I feel that it's the right thing to do.

Useful phrases to express disagreement
I don't quite agree. I don't see it that way. That's not how I see it. I would disagree with that. I couldn't disagree with you more.
Useful phrases to ask for opinion
What do you think? What's your opinion? What are your ideas? Do you have any thoughts on that? How do you feel about that?

Why is this CLIL?

This speaking frame supplies chunks of language a learner can use or change in order to perform a task. It helps learners to follow the formal procedure of holding a debate, but at the same time allows learners to alter the language chunks for their own specific needs. These phrases guide learners by providing the language they need to perform an activity which is context-reduced and cognitively more demanding.

4.6.10 Differences between speaking and writing for CLIL

In this section, we discuss differences between speaking and writing for CLIL. In general, spoken language is less formal and less structured than written language. In spoken language, vocabulary is more informal, sentences are often incomplete and there is a lot of repetition. In face-to-face communication, learners receive immediate feedback on their ideas or spoken English, and they can change or adapt their ideas or make themselves better understood on the spot. In writing there is usually no immediate feedback. As a rule, written texts are usually much more structured, and writers are required to use complete sentences, more academic vocabulary and subject-specific vocabulary.

In the CLIL classroom, this can be seen in the difference between a presentation and a written report of a scientific investigation. In a presentation learners might say *we've found out that if you smoke too much…* whereas in an essay they should write *the investigation established that…* . In writing, different mental processes are involved: there is more time to think, to reflect and to prepare but also to find synonyms and appropriate language and sentence structures. Learners engaged in writing need different reasoning and higher level thinking skills to produce meaningful written output. Furthermore, when writing for different subjects in CLIL, learners need subject-specific language as well as information about differences in styles of writing. CLIL teachers should keep in mind that learners writing in a second language need more active support than would have been the case for their first language.

Table 4.1 shows some examples of the various kinds of writing learners do in CLIL, based on Department for Education and Skills (2004b):

Subject-specific examples	**Aim**	**Audience**	**Text type**
Geography: Write directions as part of a map-reading exercise.	To instruct	Tourists	Written directions
History: Write about a visit to the Anne Frank Museum.	To recount	Parents, friends, teacher	A report
Biology: Write a brochure for heart patients explaining how the heart works.	To explain	Heart patients, doctors	A brochure

Art & design: Write a brochure about the National Gallery in London.	To inform	Tourists	A brochure
Physical education: Write a flyer why learners should come to school by bike instead of public transport.	To persuade	Learners, teachers	A flyer
Physics: Write a lab report analysing the results of an experiment.	To analyse	Teachers, researchers, scientists	A lab report
Mathematics: Reflect on and draw conclusions after conducting surveys of traffic on a roundabout.	To conclude	Members of the city council, local police	A survey

Table 4.1 Types of writing in CLIL

4.7 APPLICATIONS FOR CLIL - TEACHING WRITING

4.7.1 Methodological approaches

Writing is a process. In real life, we think, draft, compose, shape and rewrite; it helps if this process is reflected in the teaching of writing. CLIL subject teachers play an important role in encouraging their learners to produce different types of written output. Therefore, it is essential that they demonstrate knowledge and understanding of the writing process. Learners need to be taught how to write an essay for history, a lab report for chemistry, an account of a field trip for geography or an analysis of an experiment for science. This is true for writing in the first language, but it is even more important in CLIL, because of the added difficulty of writing in a second language. In most Dutch schools, the English (and Dutch) departments are solely responsible for writing instructions and implementation of the writing process. To stimulate learners to produce written output, it helps when CLIL subject and language teachers work closely together.

Our ideas in this chapter show a combination of two main schools of thought about teaching writing: the process writing approach[#] and the genre approach[#]. A very brief overview of process writing is given by Seow (2002). The genre approach is summarised by Reppen (2002). Chapter 3 describes how teachers can help their learners become aware of different aspects of written texts. It also stresses the importance for learners to be able to identify the audience, text type and purpose of a written text. Learners may have a good subject knowledge and understanding, but lack the ability to write effectively about a particular subject, because they do not understand the reason why they are writing, are unaware of the audience or do not know the type of language they need to use for a particular genre (such as a report or an explanation). An approach to teaching writing which focuses on these aspects is called a genre approach.

Another approach, the process approach, sees writing as a process and stresses the need to help learners understand the stages writers go through when they produce a text. These stages involve generating ideas (brainstorming), organising ideas (structuring), and linking ideas (linking sentences and paragraphs). Learners may experience difficulty at any of these stages. For example, they may lack ideas, may be unable to organise what they want to write about, or may not be able to link the ideas coherently. If learners are given support at each stage of the writing process, they will be able to write more fluently and creatively.

There are some factors which help learners to write more effectively. These are summarised in Table 4.2 (based on Department for Education and Skills, 2004b).

Conventions	**Learners write more effectively if:**
Purpose	- they understand that their writing has a real purpose; - they know why they are doing it; - they know who the audience is; - they know how the written text will be used; - they know what kind of writing is appropriate.
Text level	- they know how to structure their writing; - they write from the general to the specific and detailed; - they support their arguments with appropriate examples; - they manage to link their paragraphs.
Sentence level	- they know which point of view to use (first or third person); - they know which tense to use; - they know when to use active or passive constructions; - they know which sentence structures to use (simple or complex); - they know which connectives to use (such as *whereas* and *although*).
Word level	- they know which particular subject-specific terminology to use; - they manage to vary their general vocabulary.

Table 4.2 Factors which help learners write effectively

Teaching writing involves a number of stages, which we cover below. This section is a guide for teachers about what they can do during these stages. Not every subject teacher will, of course, have the time to cover all these stages each time they teach writing. They may choose to highlight one of these stages, or cooperate with the English teacher to share the teaching of writing.

4.7.2 Discuss text types, aims and audience

In order to write effectively, it is important for learners to recognise, understand and work with different text types, for example, a newspaper article, a poem, a laboratory report or a poster. Different texts have different aims; they may be written to persuade, to inform, to describe or to entertain. Learners should know why they are writing: what are the aims of the text they are creating? It also helps if learners practise writing for different types of audiences than just the teacher, for example for young readers, a jury of a poetry competition, or a pen friend. Different aims and different audiences require different styles of writing (Harmer, 2004).

The two examples in Figure 4.8 and 4.9 (written by learners at the Rijnlands Lyceum, Wassenaar, and provided by Heidi Krieger) clearly illustrate how writing for different aims and audiences affects the writing style.

Text 1

The next day we went to the National Gallery where we had to do our Art assignment. I found this the best museum that I had ever been to. We saw paintings by Michelangelo, Caravaggio and a self portrait by Rembrandt. After the museum we went to Covent Garden for lunch and shopping. We saw great things at the market and in the shops.

Figure 4.8 Written account of a visit to the National Gallery

Text 2
It's a symbolic and anecdotal painting relating to the ancient Roman and Greek mythology. The subject of the painting is the goddess Diana who, as revenge for being disturbed by Actaeon while bathing, changes him into a stag. It's not a clear picture because all creatures are moving fast. The movement makes the painting slightly out of focus. Dark colours and earthy. The paint for the water has a thick surface. The bare breast of Diana is related to Roman & Greek paintings.

Figure 4.9 Description of a painting

These texts show two different writing styles. Text 1 discusses events in order to inform a parent or fellow learners about a trip to London; it could be used as an article in a school magazine. Text 2 describes and analyses a painting in a text for visitors to a museum; it could be used as part of a museum guide. In Table 4.3, the texts are briefly analysed in terms of aim, audience and text type.

Text 1 An account of a visit to the National Gallery in London	Text 2 A description of a specific painting in the museum.
Aim: to recount **Audience:** people the learners know (parents, friends) **Language:** The language used resembles BICS, every-day language. **Text type**: a narrative	**Aim:** to explain **Audience:** museum visitors **Language:** The language resembles CALP. It is more abstract and academic, and includes subject specific terminology. **Text type:** a description in a brochure

Table 4.3 Text features

Asking CLIL learners to write a variety of text types in English will help them to acquire a range of writing styles. It is important to make them acquainted with the typical conventions of different types of text because this will help them to become better and more versatile writers. A useful awareness-raising activity is to show learners a number of short, different examples of text types - or writing genres - and ask them to discuss the differences.

4.7.3 Work with examples

There are different examples or models teachers can provide learners with: good models written by other good learners from the past, models written by themselves, or real models of authentic texts such as newspaper articles, laboratory reports or poems. Teachers can find examples of good texts and discuss them with the learners: what makes this text a clear, well-organised and generally well-written text? In this way, learners become familiar with different text types and are able to use them as models for their own writing. A useful activity is to show learners a good example and a poor example, and to ask them to identify the characteristics of a good piece of writing (Scrivener, 2005).

4.7.4 Look at text features (text deconstruction)

As well as looking at models of complete texts, teachers can discuss the writing conventions and language features of texts with the learners. In a genre approach to writing, this is called the deconstruction stage[#]. Some examples of writing conventions are: the use of title and subtitles within a text, the use of examples, topic sentences, the way ideas are used (one idea per paragraph), the introduction, and the conclusion. Some examples of language features of texts are: the tenses used in a text, the point-of-view (first person or third person), and the connectives used in a text (words such as *but*, *however*, *nevertheless*). Figure 4.10 presents an example of a deconstructed essay (reproduced from Counsell, 1997), illustrating the writing conventions and language features used in the text.

Writing conventions	Essay	Language features
Title invites causal analysis	**Why did the Normans win the Battle of Hastings?**	
Introduction → statement of the issue	The Battle of Hastings **took place** in 1066 when Edward the Confessor died, leaving no heir. Harold Godwinson took his place, but **he had** two rivals, Harald Hadraada, the king of Norway, and William, Duke of Normandy. William eventually won, and this piece of writing explores the reasons why.	← **Third person**
Topic sentences → lead the reader into the paragraph	**William was a very determined and ambitious leader**. He **claimed** that Harold had promised to help him to become king, and so, when Harold **claimed** the throne, he did all he could to conquer England. He **left** Normandy undefended, and **took** 3000 ships with horses and soldiers across the English channel. He must have been very determined to do this, as the channel was very dangerous. His bravery is shown again during the battle, when he took off his helmet and said to his soldiers**, "Look at me well. I am still alive and, by the grace of God, I shall yet prove victor".**	← **Present/past tense** depending on the focus, e.g. present for views, past for events
Use of quotes to support points →		← **Active voice** more common; passive used when identity of agent is not relevant or need not be repeated, e.g. *the castles were strongly fortified*
Use of supporting comment/ detail →	**William also had a strong army, and a good strategy**. For example, he put the archers in the front, then infantry, and behind them the men on horse-back. The Anglo-Saxon Chronicle says, "All the English were on foot. The Normans had foot soldiers, archers and cavalry with horses". This would have been a great advantage. Also he pretended to retreat, and then the English broke the shield wall, so when the Normans turned back, the English were not very well protected.	

	Therefore William chose a good time to invade, before Harold had established his position as king. Harold's bad luck also helped William to win. Harold Godwinson was fighting Harald Hadraada at Stamford Bridge when William invaded in the south. Harold had to march 300 km, having lost many of his best men in the previous battle. If the wind had not changed just then Harold would have had more men, and he would have had more time to set his army up. There is a picture in the Bayeux Tapestry of Harold being killed with an arrow through his eye. When he died, the English were frightened, and deserted.	← **Connectives** often used for contrast/comparison in areas of debate, e.g. *whereas*, *though*, *while*, *unless*, *however*, *equally*, *also*
Summary → conclusion	William won the battle for many reasons. It was a mixture of good leadership, planning and luck. If the wind hadn't changed, or if Harald Hadraada hadn't invaded, I think that Harold could have won, and England would be a different place.	**Connectives** also used to establish cause and effect, e.g. *because, therefore*

Figure 4.10 Example of a deconstructed essay

4.7.5 Help learners generate ideas

Learners need to realise that writing is a process; they seldom sit down and write an essay for history or a lab report for biology without any preparation. Giving learners an essay question to answer or asking them to write a story does not mean that their ideas will spring automatically from their pen. It may well be that their mind goes blank because learners may initially have no idea what to write about or may simply have too many ideas to write about. Before learners start writing, teachers can encourage them to think about what they are going to write. There are several ways to help learners generate ideas to write about. Two important ones are brainstorming# and freewriting#.

A useful way to help learners generate ideas is brainstorming. This technique for activating prior knowledge is especially good for producing a variety of ideas before starting a writing task. This can be done in class with the learners generating ideas and the teacher writing them on the board. All ideas should be accepted at this stage. Maybe the ideas will not all be used, but make sure they do not get lost. Furthermore, graphic organisers such as word webs or Venn diagrams can help learners generate ideas for their writing too. In 1.9 various ways of activating prior knowledge are provided. A variety of graphic organisers can be found on the Internet. See, for example, http://www.sdcoe.k12.ca.us/score/actbank/torganiz.htm

Freewriting is especially helpful when learners have no idea what to write about. Learners are asked to write about the topic non-stop, as quickly as they can, for a certain period of time, without worrying about punctuation, spelling, style or grammar. This technique encourages learners to keep on writing even if they feel they have nothing to say. It allows learners to write things they would not normally write because now they need not worry about the quality of the writing. When they have finished, ask the learners to read their text and to highlight possible ideas they could use for their writing.

4.7.6 Write together (joint construction)

Even if learners understand the aim and audience of a writing task and are familiar with writing conventions, they sometimes still find it difficult to structure their writing. That is why it is sometimes useful to do some writing together as part of the learning process. Shared writing is teacher-led: teachers and learners write a text together (on the board or on a digital whiteboard). This is called joint construction[#].

The teacher works with and discusses suggestions from the class, focusing them on the text to be written. The aim is to guide learners in writing an effective text. In this active process, the teacher and learners say sentences aloud before writing them down, make changes in sentence structure or choice of words, and also discuss and explain why certain words fit the text better than other words. Such demonstrations show learners how and why they make specific choices when writing, and this helps learners to notice many features of writing, such as appropriate vocabulary, effective paragraph structure, and convincing conclusions. A good starting point can be a piece of written work already written by a learner, which the class, together, re-writes to produce a more polished piece.

4.7.7 Guide and support first attempts

It is useful to develop learners' writing skills by starting with short writing assignments before moving on to longer, more formal texts; in other words, moving from BICS to CALP. When teachers give feedback on short writing assignments, a comment or two indicating whether or not the learner is on the right track will hopefully encourage more creative writing and give the learner more confidence.

4.7.8 Scaffold the writing process

In CLIL, production scaffolds can be used to support writing. Providing learners with writing scaffolds or writing frames creates a bridge between the joint construction stage and independent writing. Good CLIL writing scaffolds provide both content and language support (Mehisto, Marsh & Frigols, 2008).

Below are some examples of writing frames. As learners gradually become more proficient in writing, the teacher can reduce the amount of scaffolding.

Example 25 Writing frame for geography

This example shows how a geography teacher supports learners who are writing a paragraph about the differences between urban and rural areas in The Netherlands. The teacher provides ideas (content) about urbanisation in the left-hand column and language support for writing a paragraph (language) in the right-hand column.

Content support	**Language support**
Urban - Amsterdam Rural - Hengelo, Gelderland Differences - population, public transport, demographics, arts facilities, commerce, industry, agriculture	Urban and rural areas in The Netherlands are different in many ways. An example of an urban area in The Netherlands is…… An example of a rural area in The Netherlands is……. Firstly, they are different because…….. Another difference is that…… They are also different in that….. Finally, a further difference is that…….

Example 26 Writing frame for art and design

The following writing frame (Department for Education and Skills, 2002a) shows how an art and design teacher guides and supports learners writing about a painting. The left-hand column provides learners with content support. Learners are encouraged to think about the work of art using a number of guiding questions. The right-hand column provides them with language support: the learners are given a number of useful phrases to help them structure their writing.

Content support	**Language support**
1. Background information. Who made this piece of art? What is it called?	The artist who made this piece is… He lives and works in…
2. What can you see? Describe accurately what you see.	In this painting I can see… The painting looks like...
3. Meaning. What do you think it is about? Does it have a story?	The painting make me think of… I think the artist means to say that... This painting is dynamic…
4. What do you think of it? What do you like or dislike about it? Why? Why did you choose to write about it? What would you like to ask the artist?	I chose to write about this piece because... What I really liked/disliked about this piece was … I would like to ask the artist why s/he...

Example 27 Writing frame for history

This writing frame is a production scaffold (based on Department for Education and Skills, 2002b). It shows how a history teacher guides learners in sorting out information about a writing topic and helps them to distinguish between main ideas and supporting ideas. After completing the writing frame, learners write an essay about Hitler's reasons for annexing Austria.

What were different reasons for Germany annexing Austria? Complete each box.

Personal reasons	Political reasons
Economic reasons	Cultural reasons

Hitler annexed Austria for a number of reasons. Write your reasons out in sentences.
Firstly, there were personal reasons. These were...
Next, there were political reasons. These were…
Then there were economic reasons. These were...
Lastly, there were cultural reasons. These were...
The most important of these reasons is…
I think this because…

Example 28 Writing frame for English

This writing frame (provided by Bob Gembey of Rijnlands Lyceum, Sassenheim) is about the Salem Witches. It is again a production scaffold to help learners structure and write an essay after reading Arthur Miller's play *The Crucible*. Initially, learners receive a great deal of guidance, with suggestions about both content and language; however, later in the writing frame the learners are required to gradually provide more of their own ideas.

The Salem witches

Your assignment is to write an essay that shows**:**
1. that you have knowledge of and understood *The Salem Witchcraft Trials of 1692,* and
2. that you can follow directions on how to write an essay.

After writing your essay, let a classmate review it, then make the final corrections before retyping and submitting it.

Introduction
First paragraph.
For your introduction, copy exactly what follows:

After studying *The Salem Witchcraft Trials of 1692*, I have come to the conclusion that the three people most to blame for the witch hysteria and the subsequent death of innocent people are _____, _____, and _____. Each of these people, in some way, caused harm to blameless people, and I will, in this essay, explain what these people, knowingly or unknowingly, did to contribute to the death of the innocent people hanged as witches in Salem Village in 1692.

Body
Second paragraph.
_____ was most responsible for the Salem Witch hysteria. *FIRST REASON:*_____ __ _____. In addition, he/she *SECOND REASON:* _____ _____.

Third paragraph.
_____was also responsible for the tragedy. *FIRST REASON*: _____ _____. Another reason he/she is to blame is because (*SECOND REASON*)_____

Fourth Paragraph.
Lastly, _____ is responsible for the hanging of innocent people as witches.
*FIRST REASON*_____ _____.
Also, *SECOND REASON*_____

Conclusion
Last paragraph.

In conclusion, there are three people who are most to blame for the hanging of innocent people during the Salem Witchcraft Trials of 1692. These three people were _____, _____, and_____. Each of these three knowingly or unknowingly caused the witch hysteria to grow and contributed to the deaths by hanging of the men and women during the Salem Witch Trials of 1692.

Example 29 Writing frame: connectives

The following writing scaffold (Department for Education and Skills, 2004b) provides only general language support. In order to help learners write more coherent essays, lab reports or analyses, teachers could provide such a list of useful connectives to help learners to combine ideas in coherent sentences.

Adding	**Cause and effect**	**Sequencing**	**Qualifying**
and	because	next	however
too	so	then	although
as well as	therefore	first, second	except
moreover	consequently	meanwhile	as long as
Emphasising	**Illustrating**	**Comparing**	**Contrasting**
above all	for example	equally	whereas
in particular	such as	in the same way	instead of
significantly	for instance	similarly	alternatively
notably	in the case of	likewise	otherwise

4.7.9 Encourage learners to write independently

Learners gradually become more proficient in writing as they progress through the years, and eventually become more independent writers. In order to become independent writers, learners need to be given ample opportunity to practise writing. The teacher's role at this stage has changed to that of consultant, reviewer and final assessor. Chapter 5 presents more information about assessing writing.
Example 30 is an essay writing checklist to encourage learners to work on their own writing independently and provided by Heidi Krieger (Rijnlands Lyceum, Wassenaar).

Example 30 Essay writing checklist

Outline

An outline involves a brief description of what each paragraph is all about. It is often easier to work from the core:

- Quick description of introduction.
- First major point.
- Second major point.
- Quick description of conclusion.

Lay-out

- The title should be written in bold print and centred.
- Your font size should always be 12.
- 1.5 spacing should be used so that the teacher has space for comments.
- Leave a single space between paragraphs.
- Use a left margin only.

Sentence structure
Have you checked the word order of each sentence? The best way to do this is to read your essay aloud, and to think about each sentence one at a time. In an essay all sentences are written in full; there are no exceptions.

Vocabulary
This is not creative writing. You must avoid slang, brackets, abbreviations and the word etc. Swear words are absolutely inappropriate and you should never make personal statements or requests about your work. In other words do not say: I thought I learned a lot from writing this essay. On the other hand, the essay should contain the words you have learned in class that go with the subject you are writing about.

Grammar
Check that your tenses are consistent, necessary prepositions are included, and linking sentences are used to link one paragraph to the next. Again, many errors can be discovered by reading your essay aloud.

Spelling
If you use a computer for your final copy, spelling mistakes are unacceptable, as you can use a spellchecker. If you write your essay by hand, you should have someone proofread your essay. This method also helps you to find mistakes in grammar and sentence structure.

Paragraphing
- Make sure each paragraph contains one main idea only, but one complete idea. In English there are no sub-paragraphs.
- Make sure your paragraphs follow a logical order. Linking sentences help your ideas to flow smoothly from one paragraph to the next.

4.7.10 Encourage peer review
Self- or peer review is a useful tool to transfer control of the writing process to the learner. Encouraging learners to give feedback on their own and others' work can also help them become more independent writers. For example, teachers can divide the class into reading groups, which read and select the best written product. They can discuss in their group why a piece of writing is good. In a short plenary session, groups then present and illustrate their conclusions. The best examples from the class can be displayed in the classroom: this helps learners become proud of their writing.

4.7.11 Give feedback during the writing process
The teacher can give useful feedback during the different stages of the writing process rather than just on the final product. Detailed comments on final products are often wasted because the comments are perceived more as justification for a grade than as a form of support. Comments on work-in-progress can encourage learners to improve the final product. Feedback and error analysis in writing will also be dealt with in Chapter 5.

4.8 CONCLUSION

In this chapter, we have discussed how important it is for teachers to encourage learners to produce many different kinds of written and spoken output. If teachers encourage learners to produce a great deal of output, this will promote both language and content learning. Teachers can do this by setting up speaking tasks that not only enable learners to interact with each other in the target language, but also require learners to adjust their language so that other learners understand them. Teachers can set up writing tasks which help learners become aware of different text types and require them to write for a variety of audiences and aims.

To sum up, when encouraging learners to produce formal and informal spoken and written output in CLIL, teachers can:

- provide learners with plenty of speaking and writing opportunities to try out newly-learned language forms or subject-specific terminology;
- create a safe environment by setting up small speaking groups for learners to use the target language;
- set speaking and writing tasks where learners can use lots of visuals and day-to-day language (in the initial year of CLIL);
- provide learners with tasks that require deep thinking and where external clues are gradually absent (in the later years of CLIL);
- use information gap activities;
- stimulate learners to produce more complex output by asking them fat rather than skinny questions;
- stimulate learners to generate their own questions;
- make clear that English is the language of instruction and communication;
- praise learners when they do use the target language;
- support learners by providing them with speaking frames and production scaffolds;
- set writing tasks with a variety of text types;
- set writing tasks with a variety of audiences;
- demonstrate and go through the different stages of the writing process;
- support learners with writing frames and production scaffolds;
- encourage peer review.

4.9 TEACHER DEVELOPMENT

As a follow-up to the ideas in this chapter, do one or more of the following activities:

1. Observe a colleague or have a colleague observe you teach and write down all the questions the teacher asks for about 10-15 minutes. You can also make an audio recording of yourself. Then analyse the questions you or your colleague has asked, using the following grid.

Questions asked	Fat question	Skinny question	Learner output

2. Read the description about information gap activities in 4.6.2 and design your own information gap activity related to the material you are working with at the moment.
3. Prepare a writing assignment that has a specific purpose or aim, a particular audience and a particular text type.
4. Design a speaking or writing scaffold which you can use in your classroom.

4.10 PRACTICAL LESSON IDEAS

How can you encourage speaking and writing in CLIL? Below are some practical examples.

Activity 4.10.1 Hot air balloon debate

Have a 'balloon debate' to choose who deserves to be saved from a sticky situation

Description

Learners imagine they are in a hot air balloon which is rapidly losing helium and height and will soon crash because it is too heavy. Each passenger has an opportunity to make a speech outlining the reasons why he or she should be allowed to remain in the balloon. The audience decides which of the speakers has presented their case most persuasively and will stay in the balloon.

Explain the situation. Divide the class into a number of teams, each representing one passenger in the rapidly descending balloon. In these groups, the learners prepare to present their case about why they should stay in the hot air balloon. They can write and use short notes to help them remember what to say, but the speech should sound as spontaneous as possible. This preparation stage can also be given as homework.

Once the preparation has been completed, to ensure that everyone in the group works, the teacher randomly appoints the first contestants from each group who will give the speech.

You may want to provide learners with a scaffold, or some questions to help them to prepare their speeches (see 4.6.9. for examples of scaffolds).

You could also give learners some guidelines about the structure of the presentation of their arguments, such as:

- a maximum of three minutes;
- begin with an opening statement;
- illustrate with examples;
- prepare at least three convincing arguments;
- end with a challenging closing statement.

You can also provide some helpful language about giving opinions in a formal speech.

After each group's first speech, the class votes for the two most convincing characters. Learners are not allowed to vote for their own group! The two remaining survivors give a new speech, summing up the crucial reasons, and trying to add new ones, for their continued survival. Finally the class votes for the last remaining survivor.

This link gives a list of websites for debate rules:
www.educationworld.com/a_lesson/lesson/lesson304b.shtml

This link gives a number of examples of hot air balloon debates:
www.kent.ac.uk/careers/interviews/balloonDebate.htm

Subject example

History: The Russian Revolution

Carry out the hot balloon debate with five historical figures related to the Russian Revolution: Tsar Nicolas II, Karl Marx, Lenin, Trotsky and Stalin.

Variation
Chain debate

Preparation
The teacher makes two groups, Group 1 and Group 2. The teacher writes down a controversial statement. Group 1 must agree with the statement and Group 2 disagree. The rest of the class are members of the jury who will eventually decide which learner has used the most convincing arguments in the chain debate and thus wins the debate.

The groups of learners first prepare a number of arguments for (Group 1) or against (Group 2) the statement. They will need the same number of arguments as people in their group, since every learner must contribute one argument during the debate.

The debate
1. One learner has the role of time keeper and ensures that speakers only speak for one minute.
2. Speakers from each group take turns. Speaker A from Group 1 starts off the chain debate and gives one argument only. He or she may only speak for a maximum of one minute.
3. Speaker A from Group 2 now takes the floor, reacts to the first argument and adds one argument from Group 2.
4. Speaker B from Group 1 then reacts to Group 2's statement and adds a second argument from Group 1.
5. The groups keep on contributing arguments until everyone has spoken.
6. The class votes for the winning debater.

Activity 4.10.2 The controversial question

Agree or disagree with a controversial statement

Description
Learners think individually about a controversial question. The learners first spend a couple of minutes thinking for themselves and write down their views. Then the teacher allocates buzz groups that are given five minutes to discuss their view on this question and to come up with an answer and an explanation. After five minutes the teacher asks one learner per group to give an answer.

Subject examples

History: Solving global problems. 'Is the UN an outdated organisation?'
Physical education: Doping is difficult to trace. Should athletes therefore be allowed to use doping?

Activity 4.10.3 Role-play

Learners change input into a role-play

Description
Learners create a role-play after, for example, watching a DVD clip, reading a text, or doing some work.

Subject examples

History: Elizabeth I of England
Original idea by Yvonne Boelman of Isendoorn College, Warnsveld
Show the film *Elizabeth*. As they watch, half of the learners prepare to be Queen Elizabeth I. The other half is given one of these names and prepares to play him or her:
- Duke of Norfolk
- Robert Dudley, Earl of Leicester
- Mary of Guise

- Sir Francis Walsingham
- William Cecil

The question for Elizabeth is: Who can you trust?

In order for Elizabeth (actually, many Elizabeths!) to find out the answer to this question, the learners walk around the classroom. Elizabeth asks questions to as many people as possible in order to find as many allies as she can.

In the follow-up plenary, the class has a new task: the learners who were Elizabeth place the other characters into two groups: allies or enemies. Then the 'Elizabeths' explain their reasons and choices.

Biology: menstruation game
Original idea by André van Raalte of Vechtstede College, Weesp.
Give the learners the task to act out the menstruation cycle. Each learner plays a different part of the body and explains their role. This is a creative way of recycling information (see also 4.4).

Activity 4.10.4 Taboo guessing game

Describe a key word so that other learners guess what it is

Description
Divide the class into teams of three or four. Two groups compete against each other. Each of them has a clue giver and a checker. Team A's clue-giver turns over the first card and holds it in his hand so only he and the checker from Team B can read it. The clue-giver describes the mystery word at the very top of the card without saying any (or any part) of the taboo words or phrases printed below it. No rhyming words can be given. No hand motions or sound effects can be added. If the clue-giver from Team A says one of the taboo words, the checker from Team B will say 'taboo' and a new card is turned over. The group must guess the word within 75 seconds.

Scoring
Each time a team guesses a word correctly within 75 seconds, their team scores a point and a new card is turned over. If the clue-giver says one of the taboo words or runs out of time, the team loses a point.

Subject example

Biology: Species
Original idea from www.nps.gov/archive/indu/education/westbeach/taboo.htm

Mystery word	**den**	**predator**	**mammals**	**habitat**
Taboo words	*bear*	*prey*	*fur*	*food*
	home	*kill*	*hair*	*environment*
	nest	*eat*	*milk*	*home*
	fox	*hunt*	*animals*	*shelter*
	shelter	*animal*	*humans*	*water*

Activity 4.10.5 Elevator pitch

Sell an idea in two minutes

Description
An 'elevator pitch' is a concise, carefully planned, and well-practised description that anyone should be able to understand in the time it would take to ride up an elevator. An elevator pitch could be held in almost any subject.

Learners prepare a short persuasive talk of no more than two minutes about a subject-specific topic or object or process. In this short talk, learners describe the specific features of the topic and convince their fellow classmates of the unique features, benefits or advantages of their choice. Their talk is a kind of commercial, and learners need to make sure their fellow learners will vote for their 'elevating idea'.

Subject example

Art and design: the best painting
Learners choose a piece of art and present an art elevator pitch in which they convince their fellow classmates that the painting they have chosen is the best of its kind. Other learners vote for the best performance and give reasons why they have selected one particular elevator pitch as best.

Variation
An alternative is to ask learners to give short presentations of two to three minutes. To encourage learners to read articles about art on a more regular basis, organise short presentations at the beginning of each class. Ask different learners at the end of each class to find an interesting article on art and to summarise it for the other learners during the next class, including an explanation of why they chose the article. This can lead to interesting discussions about art.

Activity 4.10.6 Government economies

Debate about the abolition of an object, organisation or system

Description
Learners are given some information related to the possibility of abolishing something, for example an organisation, an object, a religion, or even a chemical. They form small groups to discuss arguments for and against abolishing their object or organisation. The outcome of these talks will be discussed in a plenary session.

Subject example

Biology: Human organs
Original idea by André van Raalte of Vechtstede College, Weesp.
Give the learners the following information.

> The government has announced plans to economise on the costs of human bodies. The most striking measure is the plan to abolish at least one entire organ system. However, there is still no consensus among government officials which organ systems should be done away with. According to reliable sources more details will be announced next month.
>
> The different organisations for organ systems have been asked for input and comment. The following seven institutes were approached:
> - the Association of Circulatory Systems (ACS);
> - the Royal Club of Respiratory Systems (RCRS);
> - the Friends of Excretions (FE);

- the Digestive Society (DS);
- the Endocrine System Interest Group (ESIG);
- the Nervous Ones (NO);
- the Propagators of Reproduction (PR).

The above-mentioned interest groups have expressed their concern about the situation, but are not willing to comment at this stage. All agree that talks should be held with each party concerned before opinions can be expressed, and that society should not be rushed into taking such far-reaching measures.

The following procedure has been proposed. Each of the organisations will send representatives to argue their case to keep their particular organ system. The talks which will be held at school. There will be simultaneous meetings, each with one representative of each interest group. The outcomes will be discussed in a plenary session. Hopefully, a government official will be present to witness the possible consequences of their proposed policies.

Activity 4.10.7 Information gap

Ask questions to find the missing information

Description

Give learners different texts about the same topic which contain different information and some gaps where information is missing.
Using their texts, learners prepare questions for each other, aiming to find out the missing information. Then, learners ask and answer each other's questions.

Subject example

History: Egyptian scripts and the Rosetta Stone

(Original text from www.ancientegypt.co.uk/writing/rosetta.html)
Show learners some ancient Egyptian script. Learners first discuss in pairs what they know about ancient Egyptian scripts. If they do not know anything about ancient Egyptian scripts, ask them to write down questions they would like to ask about this topic.

Divide the class into two groups, A and B. Explain that they will receive two texts about the Rosetta Stone but that some information is missing. In pairs they will ask each other questions to try and complete the text about the Rosetta Stone. Give them time to read the text and to prepare questions in order to complete their own gaps. When they have written their questions, tell them to take turns to ask questions and write the answers in the appropriate gap on their worksheet.

Text for learner A
What is the Rosetta Stone?
The Rosetta Stone is a stone with writing on it in two languages (…1+ 2……..), using three scripts (Hieroglyphics, Demotic and Greek). The Rosetta Stone is written in three scripts because when it was written, there were three scripts being used in Egypt. The first was Hieroglyphics, which was the script used for …3……. documents. The second was Demotic, which was the ……4…… of Egypt. The third was Greek, which was the ……5……. at that time. The Rosetta Stone was written in all three scripts so that the priests, government officials and rulers of Egypt could read what it said. The Rosetta Stone was carved in …6….. The Rosetta Stone was found in a small village in the Delta called …7…. in 1799 by French soldiers who were rebuilding a fort in Egypt. It is called the Rosetta Stone because it was discovered in a town called …8…..

Text for learner B

What is the Rosetta Stone?

The Rosetta Stone is a stone with writing on it in two languages (Egyptian and Greek), using three scripts (…1+ 2+ 3…….). The Rosetta Stone is written in three scripts because when it was written, there were three scripts being used in Egypt. The first was …4….., which was the script used for important or religious documents. The second was …5…. , which was the common script of Egypt. The third was …6…, which was the language of the rulers of Egypt at that time. The Rosetta Stone was written in all three scripts so that the priests, government officials and rulers of Egypt could read what it said. The Rosetta Stone was carved in 196 B.C. The Rosetta Stone was found in a small village in the Delta called Rosetta in…7… by …8…. who were rebuilding a fort in Egypt. It is called the Rosetta Stone because it was discovered in a town called Rosetta.

Variation

To check that learners have understood the texts, you can design a task for them based on the information from the two texts. This task should be impossible to complete without the missing information that the other learner has.

Subject example

Geography: Jigsaw puzzle

Jigsaw tasks are tasks where several learners are given parts of the information needed to complete a task. They need to ask each other questions to complete 'the puzzle'. In pairs, learners each receive a partially completed chart giving different information about three countries. Without looking at each other's chart, both learners must request and supply missing information in order to complete all the details about the three countries.

Activity 4.10.8 Talking about talking

Help learners understand and discuss what useful 'exploratory talk' is when doing group work

Description

Have a short discussion with the class in plenary about working in groups and what kind of questioning or feedback helps the group to work together. Introduce the term 'exploratory talk': which is when people work critically but constructively with each other's ideas.

Write some points which the learners make on the board. Next, give each learner a copy of the *Exploratory talk handout* below. Each learner completes the handout individually. Once everyone has finished, hold a small group or class discussion on the results. At the end of the activity, come up with some key points which are important to keep in mind when doing group work.

Subject example

This activity can be used in all subjects.

Exploratory talk

Below you can find some suggestions which might help or hinder your group when you talk to each other. Read the suggestion in the left-hand column. Tick the 'helpful' or 'unhelpful' column first, then note down in the right-hand column what particular effects you believe the contribution might have.

Contributions	Helpful	Unhelpful	Effects
Bringing new ideas into the group			
Saying, “Yes, but...”			
Summarising an idea that a group member has just suggested			
Arguing about an idea			
Asking questions			
Suggesting another idea related to one just mentioned			
Giving your own point of view			
Write your own helpful idea here (in the -ing form):			
Write your own *less* helpful idea here (in the -ing form):			

Practical lesson ideas to encourage writing

Activity 4.10.9 I am a …

Write about a process in the first person
Description Ask learners to write a story in the first person about a process in your subject. They explain what happens in the various stages of this particular system. The learners imagine they are part of an enormous system and that they are going on a journey through that system on their journey. Whether they survive or not, a report must be written for base headquarters. In the report learners describe what happens at every stage of their journey, for example which of their friends they encounter or lose at each stage. Create a handout for them like the one below. Make sure your learners know what to include in the story and how to structure their story, where the story takes place, the challenges the character must face and overcome, and how the character finally reaches their final destination (or not!). They should tell their journey as a narrative, starting at the beginning of the process and finishing at the end.

Subject example

Biology: Digestive system
Original idea by Sally Hill of Van Der Capellen Scholengemeenschap, Zwolle
Imagine you are part of an enormous cheeseburger. Perhaps you are the bread roll, or the melted cheese, the pickles, the onions, the secret sauce, the lettuce or possibly even the beef. Whatever part you choose to be, you are the leader. It is your mission to lead the burger on a dangerous journey. A journey to the bottom of the world. A journey through the digestive system.
It is a journey involving many risks and not all of you will survive. All of you will come under attack and most of you will be destroyed along the way. Many of you will suffer a painful death and be broken down into many thousands of pieces, to be absorbed into the blood of a voracious monster otherwise known as *Homo sapiens*!
Whether you survive or not, a report must be written for base headquarters. In the report you must describe what happens at every stage of your journey. Say which of your friends (food types/nutrients) is destroyed at each stage and who is responsible (yes, watch out for the vicious enzymes and evil acid!). Tell it as a story, starting in the mouth and ending in the anus. At the end, only one of your friends is left over…. let this 'person' take over the story after you have been destroyed.

Variations
Geography: The journey of lava in an exploding volcano.
Biology: The journey of a migratory bird or animal.
Physics: The journey of a carbon atom.
History: The journey of a soldier's tiffin tin (lunch box) in the trenches.

Activity 4.10.10 The story of...

Write about a process in the third person

Description
Ask learners to write and illustrate a 300-word children's story in the third person about an object, describing what happens to the object when it is being transported from one place to another. In their story learners describe specific details of this object, describe its origin and, in detail, describe its journey from departure to arrival. They should give an account of this journey as if it were a children's story, beginning with an introduction (who or what is this object), a middle (the actual journey with all sorts of events, unexpected hazards) and an ending (end of the journey, where the object is now and what has happened to its shape). Provide some scaffolding to help them to plan and write their story.

Subject example

Geography: Erosion and river processes. The story of a pebble.
Original idea by Annelet Lykles and Menno Ruppert of Herman Wesselink College, Amstelveen
1. Plan your story by answering these questions.
   - Decide on a name for your pebble. Think about what sort of pebble you are going to write about. How big is it? What shape is it? What type of rock is it made of?
   - Your pebble has been weathered from the side of a mountain. What mountain range does it come from? What sort of weathering has made your pebble? How does this type of weathering work? How did your pebble get into the river? What river is your pebble in?

- Your pebble is being transported along the whole length of the river. How does the river change as the pebble moves along? Does the river change name? How does the pebble change as it moves along the river? What sorts of things happen to the pebble as it moves along?
- Your pebble is eventually transported to a resting place. Where is it at the end of the story; a delta, the sea? What does your pebble look like now? What is the name of the place where your pebble is?

2. Now plan the plot of your story. Include as many of the new geographical words as you can in your story. Keep your textbook open when you plan and write the story. Make sure you tell the children what these difficult words mean. Plan what sketches, drawings or pictures you would like to use to illustrate your story.

3. Write a rough draft of your story in your notebook and edit it. If you work on the computer, always print out your work and bring it to class. If you do not do so, you will be wasting your class time.

4. Hand in a final copy including the sketches, drawings or pictures.

Variations
Technology: The journey of raw materials across the globe; for example, from cotton plants to jeans, or from coffee plantation to a coffee bar in New York.
History: The journey of a captured flag during war time.
Biology: The journey of a hormone, a red blood cell or an egg cell.

Activity 4.10.11 Dictogloss

Reproduce a short text you have listened to

Description
Learners listen to an audio text about a topic. They eventually need to reconstruct the text in as much detail as possible. In doing so, learners practise listening, writing and speaking, and use vocabulary and grammar to complete the task.

Learners listen to your chosen text, read along at normal speed, and write down key words. Then in groups of three or four, learners work closely together to share, compare and discuss their individual notes and work as a group to try and reconstruct the text in as much detail as they can.

Subject example

History: The Aztecs
1. Using the course book or the Internet, find a short text on the Aztecs of no more than ten sentences.

1. In 1519, Hernan Cortez set foot upon that part of Central America that is today known as Mexico.
2. He expected to find gold, and he did.
3. What he did not expect to find, however, was the great Aztec civilisation.
4. The Aztecs were in many ways more advanced than the Europeans, but nonetheless they were conquered by Cortez and his men.
5. Originating in the plains of Aztlan somewhere in north-western Mexico, according to their own legends, the Aztecs slowly migrated southward.

2. Dictation: Read the text at a speed a little bit slower than native speaker speed. Read the text again at native speaker speed and on the second reading learners individually make very brief notes about the main ideas. Remember that the purpose is to get the main ideas, not every word exactly as it appears in the text, so do not read too slowly.
3. Reconstruction: The learners work in pairs and then fours to compare notes and write a shared version of the text, editing for accurate punctuation, spelling and inclusion of the main ideas.
4. Analysis and correction: The learners compare reconstructions with other groups and with the original. Discuss the differences.

(More information on how to use Dictogloss can be found on http://esolonline.tki.org.nz/)

Activity 4.10.12 Three-picture story

Develop a sketch and describe a process in the third person

Description
Provide learners with a series of basic sketches, representing a process that you have covered in your recent lessons but in which the steps in the process have been left out. Learners add information (colour and details) to each sketch, to show the steps in the process. They also write an accompanying descriptive text for each drawing.

Subject example

Geography: The development of tourism in the Alps
Original idea by Marjolijn Kruijt of the International School of The Hague
The learners are given three pictures of an Alpine valley on A3 paper, entitled:

- The traditional Alpine environment and lifestyle
- Tourism moves in
- Sustainable tourism

Through various forms of input, such as video, images, texts, and worksheets, the learners are given background information about the traditional Alpine environment and lifestyle. After they have been given a significant amount of information, they are told to choose six geographical themes about this topic and to write six information boxes (one for each theme) about this first picture. For example

- Housing
- Jobs
- Number of inhabitants
- Source of income
- Farming habits
- Infrastructure

The learners develop and add more details to the picture. The above is repeated with the other two pictures. However, the learners are given less detail per picture, so that they have to use their imagination a little bit more to be able to fill in the six information boxes. In the second and third pictures, they must also illustrate the various themes they have chosen to develop (e.g, draw roads or an apartment building).

Variations
History: Working conditions for farmers and/ or industrial workers in Europe.
Physical education: Different stages of the high jump.

Activity 4.10.13 What has just happened?

Reconstruct a table with missing information

Description

Ask learners to reconstruct something that is damaged or broken, by doing an experiment. Subsequently, ask them to write a report in which they describe how they carried out this investigation. In this report, learners describe their research method and they give reasons for choosing this method. They describe their investigation in the style of a police report, explaining to the reader in detail the various stages of the investigation, giving a detailed analysis of the research, and drawing a well-argued conclusion.

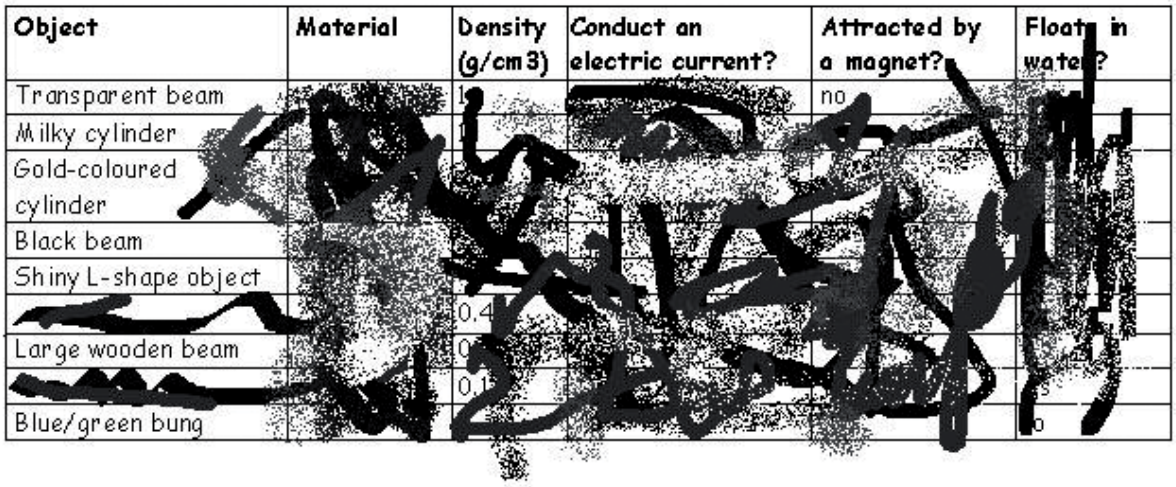
Subject example

Science: Density measurements

Original idea by Jan Flokstra of Van Der Capellen Scholengemeenschap, Zwolle

Learner handout

In the box at the front of the classroom you will find a set of nine different objects used for various scientific experiments. Originally, the box came with a small card which described the composition of the objects. However last year this card became damaged by a learner, and this can't be read any more.



Object	Material	Density (g/cm3)	Conduct an electric current?	Attracted by a magnet?	Floats in water?
Transparent beam		1		no	
Milky cylinder		1			
Gold-coloured cylinder					
Black beam					
Shiny L-shape object					
		0,4			
Large wooden beam		0			
		0,1			
Blue/green bung					o

Fortunately, this year's learners are much more constructive. So much so, that they have even offered their great scientific services to reconstruct the table (haven't you?).

The aim of this exercise is to identify the materials from which the objects have been made and to make a new table to replace the damaged one. To perform the investigation you will need to make density measurements of the objects. Naturally, density measurements can be obtained by measuring an object's volume and mass. You will have to make some choices to do this, such as what equipment to use and what formulae you might need. Choose wisely. After all, your decisions will affect how accurate you can be and how precisely you can identify the materials! Different objects may require different solutions, so don't be afraid to make new choices each time.

Carry out appropriate measurements to find density and record the results in a new table. Describe your methods in your notebook. Perform the other measurements described in the original table to check for floating, magnetism and electric current. Fill in the table.

The data collected by you will not be enough to identify the composition of the objects. To identify this, you will have to compare your values with those from a reliable source. Data from such a source will be displayed in the classroom. How do your values compare with the benchmark? How sure can you be about your identifications?

With your partner, write a report. In it, describe how you carried out the investigation and try to explain, giving valid reasons, the methods you chose. Include a completed results table identifying the objects. You can work on the report together, but you must hand in one report each.
Give yourselves a score (out of 10) indicating how confident you are of the identifications. Explain why you give yourself the score you do!

Activity 4.10.14 Learner-generated questions

Create your own difficult questions and talk about questions

Description

Adapted from a lesson given by Mireille ter Horst of Isendoorn College, Warnsveld

Stage 1

You will need a classroom cleared of chairs; alternatively, go to a gym or hall. Give the learners one coloured card each. Use a page from your course book which is challenging for your class; there should be quite a bit of information on the page. Remind learners of the question words in English such as *what, when, why, how, where,* and *how many*, and remind them how to formulate a question. Tell the class you are going to practise asking difficult questions. Each learner then thinks of a difficult question about the course book page and writes it down on his/her card. Then everybody stands up and circulates, asking and answering the questions. When the learners have run out of energy, ask them to sit down again for the discussion which follows.

Stage 2

Carry out a class discussion about content and language, asking questions like:

- What makes a good question?
- Which question do you think was the best? Why?
- Which questions are more interesting? Why?
- Which questions were easy to answer? Why?
- Which questions were more difficult to answer? Why?
- Which questions were more difficult to formulate in English and why?
- Which question was written in the best English?

You can also give feedback on the language of questions.

Subject example

History: The Holy Roman Empire

What influence did Islam have on the Renaissance?	Why was Christopher Columbus' journey to America in some ways a disaster?
Which country was the greatest power in the Renaissance?	What was the role of the Pope during the Renaissance?

Variations

The teacher collects all the questions and uses a number of them in a test on the material.

Activity 4.10.15 A day in the life of...

Write the story of an event from the point of view of a person who experienced it

Description
Learners write a story in the first person about a special event or day in the life of a particular person from your subject. In this story, learners describe specific details about this person, and what a day in the life of this person could look like. Ask your learners to write a minimum of one page.

Subject example
Original idea by Fred Oosting of Rijnlands Lyceum, Oegstgeest

History: Ancient Greece
Imagine you are living in Athens. Who are you? You can either be a woman, a male citizen or a slave. You are going to write about a day in your life. Perhaps there is a special event you are going to attend. Or you could write your biography: write about your childhood, your parents or what you are doing right now in Athens. When choosing your character, please answer the following questions:
If you are a female citizen: Are you married or not? Do you live in a wealthy or poor household? How does your family earn its money? How do you spend your time each day?
If you are a male citizen: Are you married or not? Are you wealthy or poor? What goes on at the debates in the assembly? Have you served in the army?
If you are a slave: Are you male or female? Are you young or old? Who owns you: a family or are you owned by the state? Where were you born: in Athens or somewhere else in Greece, or in a different country? How did you come to be a slave? What job do you do?

Your story should be a minimum of one page (A4; typed). It will be assessed on the use of English, the historical content, layout and originality.

Variations
Geography: Imagine you are an Indian living in the Brazilian rainforests.
Biology: Imagine you are a human organ.
Physical education: Imagine you are a famous footballer/hockey player.

Activity 4.10.16 Class magazine

Write a magazine about subject-specific issues

Description
Learners compile a complete magazine for their peers about a topic you are covering. It is a class assignment, and each group will be awarded a mark for their contribution. Good organisation is an important part of the assignment, and this will also be taken into account.

Subject example

Biology: Class magazine on drugs and alcohol
Original idea by Sally Hill of Van Der Capellen Scholengemeenschap, Zwolle.
Ask learners to make groups of three. One of these groups will comprise the editing team and this group will co-ordinate the gathering of articles and the end lay-out of the magazine. The editors don't have to write any articles about drugs and alcohol, but they have a number of other responsibilities (see below). If no group comes forward as editors, the teacher will decide.

What does the editing team have to do?
- Keep track of what each group is doing and what topics they have chosen so that no subject appears twice. Make sure that the most important drugs are not left out!
- Collect all articles digitally. Agree on deadlines!

- Send articles back for improvement, if necessary.
- Design a front page.
- Determine the order of the articles.
- Add a table of contents and page numbers.
- Write a short introductory text for the first page of the magazine.
- Keep in contact with the teacher!

What do the other groups have to do?

- Choose a topic and check with the editing team that no-one else has chosen it, e.g. marihuana or smart drugs.
- Look up information about your topic. You can use sources such as the Internet, books, and folders from your biology teacher.
- Divide the tasks within your group.
- Write *at least* three different kinds of contributions to the magazine. These contributions or articles can contain information about the use and dangers of a drug, but bear in mind that there are other forms such as:
  - an interview with an addict, a former addict, or with a social worker;
  - a fact file: Did you know…;
  - a comparison between drugs: types and effects;
  - a cartoon;
  - a problem page;
  - a comparison of drug use and drug-related problems in different countries;
- Provide illustrations to go with the articles.
- Each article *must* mention the name or names of the authors.
- Each article *must* be original text and not copied from the Internet or other sources.

Activity 4.10.17 Encyclopaedia entry

Write an entry for a children's encyclopaedia

Description

Ask learners to design an entry for a children's encyclopaedia about different aspects of a topic you are covering. Look first at Wikipedia online or another encyclopaedia for models. Discuss the difference between a children's and an adult's encyclopaedia.

Subject example

Geography: Population density

Original idea by Annelet Lykles and Menno Ruppert of Herman Wesselink College, Amstelveen.

Learners write an encyclopaedia entry about a country's population density. Provide them with some pointers to help them prepare. For example:

- Which factors have caused this situation?
- Describe the relevant factors which account for the size of the population in your chosen country.
- Mention the physical and the human factors related to population density that we have covered in class and which are covered in the geography book.
- Use whole sentences.

Give a short overview of your country and label the factors (reasons) that influence the population density. Include a fact file about your country.

The end product is an encyclopaedia entry consisting of:
- a **fact file** containing facts about the country's land, people and trade.
- a **map** of a country with labels indicating the factors that influence population density
- a three to four paragraph **text** describing and explaining a country's population density.

Possible source: news.bbc.co.uk/2/hi/africa/country_profiles/3466917.stm

Practical lesson idea to encourage non-linguistic output

Activity 4.10.18 Design a model to be tested in class

Non-linguistic process

Description
Ask learners to make a subject-specific topic design and model, which will also be tested.

Subject examples

Technology: Design a model
Original idea by Mark Steenvoorde of Rijnlands Lyceum, Oegstgeest

In this exercise, learners are civil engineers. They design and make a scale model of a new bridge. The scale model should meet the following requirements:
- The model should bridge a gap of 530 mm.
- It should weigh no more than 70 grams.
- The bridge should not have any supporting pillars that might obstruct passing ships.
- The lowest point of the bridge is 100 mm below the riverbanks.
- The materials you are allowed to use are no longer than 500 mm.
- The strength of the bridge will be tested in class.

Science: Energy
Design a "mousetrap car" that drives as far as possible.

Make a work plan with
- a description of how the mousetrap car works;
- a list of materials needed.

Your scale model should meet the following requirements:
- The route of the mousetrap car is a straight line.
- The floor is hard and level.
- The energy is carried across on a horizontal plane.
- The mousetrap is the only energy source for the power of the vehicle.
- The mousetrap is fixed on to the car.
- The mousetrap may not be changed.

Design process:
- Think of a way to deal with the problem and set up a list of demands.
- Describe the sub-functions and come up with solutions for each sub-problem.
- Formulate a design proposal.
- Make and test the design.
- Demonstrate the design.

Instruction:

- Write a brief instruction manual, which matches the design.

Demonstration:

- You will demonstrate the car, the final product, to your fellow learners, the technical assistant and your teacher in a race.

(Original idea by Jan Flokstra of Van Der Capellen Scholengemeenschap, Zwolle)

Variations

Science: Make an electric circuit.
Chemistry: Make a model of a molecule.
Biology: Build a part of a human skeleton and name the major bones.

5 Assessing learning and giving feedback for CLIL

5.1 SUMMARY

This chapter covers:

- background information on assessment# relevant to CLIL;
- types of feedback on learners' spoken and written English which support CLIL;
- practical examples for feedback and assessment in CLIL.

5.2 INTRODUCTION

Assessment and feedback are central to all learning. The way CLIL teachers assess their learners and give them feedback on their achievements influences how learners learn. It affects how they learn both during lessons and during study outside the classroom, for example when doing homework or preparing for tests. CLIL teachers can use assessment and feedback to encourage learners to work on developing their understanding of the content of the subject. They can also use these tools to encourage learners to pay attention to appropriate and accurate use of language in their subject.

In this chapter, we define assessment quite broadly as the gathering of information about learners' progress. This information can be helpful to teachers, learners and parents and will be most complete if teachers use a range of assessment techniques and assess both content and language. Rubrics#, peer assessment# and self-assessment# can all help teachers and learners by making expectations clearer and by encouraging learners to take an active role in producing work of the expected standard. There are many points in the learning process at which learners can be assessed, for example when they are working on assignments or tasks, or after the completion of their tasks. There are also different ways of assessing learners; we make a distinction between assessment *of* learning# and assessment *for* learning#. This chapter explains and gives examples of both points.

Feedback also plays an important part in learning. CLIL subject teachers are experienced in giving feedback on their learners' performance# relating to key subject concepts. They have had less practice and experience in giving feedback on language use. Second language learners make language mistakes for a variety of reasons and this affects how CLIL teachers deal with them. In the cartoon above, for example, the learners confuse the words *assassinate* and *assess*. One reason they may do this is because they do not hear the difference between the *a* in *assassinate* and the *e* in *assess*. A teacher could explain the differences between the meanings of the words *assassinate* and *assess*, and also the difference between the *a* and *e* sound in English. This chapter shows how teachers can give feedback on content as well as on spoken and written language and introduces effective ways of dealing with language mistakes. We show how teachers can integrate feedback on subject content and language. At the end of the chapter, we give some examples of assessment and feedback activities which put these ideas into practice.

5.3 LEAD-IN

Task 10 Your own ideas about assessment and feedback

The following activities are designed to get you thinking about issues relating to assessment and feedback in CLIL.

Look at the following statements about assessment and feedback. Mark the lines with a cross to show to what extent you agree or disagree with each statement

1. I don't know enough about English to give learners feedback on their language mistakes, so I shouldn't even try.

   Strongly agree————————————————————Strongly disagree

2. English teachers already have enough marking to do. They don't have time to mark everything learners write for the other subjects as well!

   Strongly agree————————————————————Strongly disagree

3. Paper and pencil tests are much easier and quicker to mark than portfolios.

   Strongly agree————————————————————Strongly disagree

4. I just want to give every learner a grade for my subject and that's it. I am not qualified or trained to do anything else.

   Strongly agree————————————————————Strongly disagree

5. Using pictures in tests is childish and as a result the learners won't take the test seriously.

   Strongly agree————————————————————Strongly disagree

6. I just don't see or hear some of the language mistakes my learners make, so I can't correct their English.

   Strongly agree————————————————————Strongly disagree

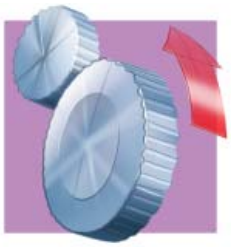
7. Asking learners to assess each other is not fair because the learners may be biased and they don't have enough expertise to identify mistakes and give suitable feedback.

   Strongly agree————————————————————————Strongly disagree

8. If a learner fails a test, it is usually because they didn't prepare for it properly.

   Strongly agree————————————————————————Strongly disagree

Compare your ideas with our comments in the Key to all tasks at the end of this book. They deal with many of the issues raised in this chapter.



5.4 CASE STUDY

Here is a description of how a biology teacher (Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle) assessed her learners using a 'poem poster' presentation. The assessment is for first year CLIL learners (12-13 year olds).

The learners have been working on the topic of classification. The content aims for the lessons are that learners can:

- identify the main characteristics of animals;
- classify them using standard biological classification terms.

The language aims are that learners can:

- use language creatively to write a poem;
- use accurate scientific language to describe animal features.

At the end of the unit, the teacher wants to assess the learners' progress in both the content (classification) and the language.

Example 31 Poem poster instructions for biology

MY FAVOURITE IN/VERTEBRATE ANIMAL

Poem Poster presentations biology in 1A(H)T

- Choose a partner, and get started.
- Together, choose your favourite invertebrate or vertebrate species (Dutch: soort). For instance, if you like worms, you can choose the earthworm.
- 2 groups maximum can choose the same animal.

The assignment:

1. The final product: in pairs you are going to produce a 'Poem Poster Presentation': a poster with a self-made poem about the organism of your choice, complete with illustrations. On the back, you list your sources (websites and reference books you have used).
2. The procedure:
   You have to search for information on the following questions (A-H):
   A. To which group does your animal belong? (which Kingdom - Phylum - Class - Order - Family - Genus -Species)

B. What are the main body features of the animal? Important body features are:
   1. The number of legs and/or wings.
   2. The body parts (like head, thorax, abdomen).
   3. Does the organism possess visible segments (like in the abdomen of a wasp or in the body of an earthworm)?
   4. Does it possess antennae or tentacles?
   5. What about its symmetry? Is the body radially symmetric, bilaterally symmetric, or asymmetric?
   6. How big is the animal?

C. What is its natural habitat (= its natural home)?
D. What does it feed on?
E. How does it reproduce? (by laying eggs, etc.)
F. Does your favourite have any natural enemies?
G. Is it adapted to a cold/hot/ wet etc. environment?
H. Is the animal under threat (= *bedreigde diersoort*)?
I. List the materials used on the back: titles and authors of books, titles and editors of cd-roms, full names of websites.
J. Use the information found to write a POEM that describes your animal. The poem should have about 12 lines in which you describe your animal. Remember: a poem does not have to rhyme. Make correct use of English grammar!! (verb forms, adjectives, adverbs and prepositions)
K. Make drawings or other illustrations of the animal. Complete the poster (A3 format).

Here is an example of one of the posters the learners made, provided by Sally Hill.

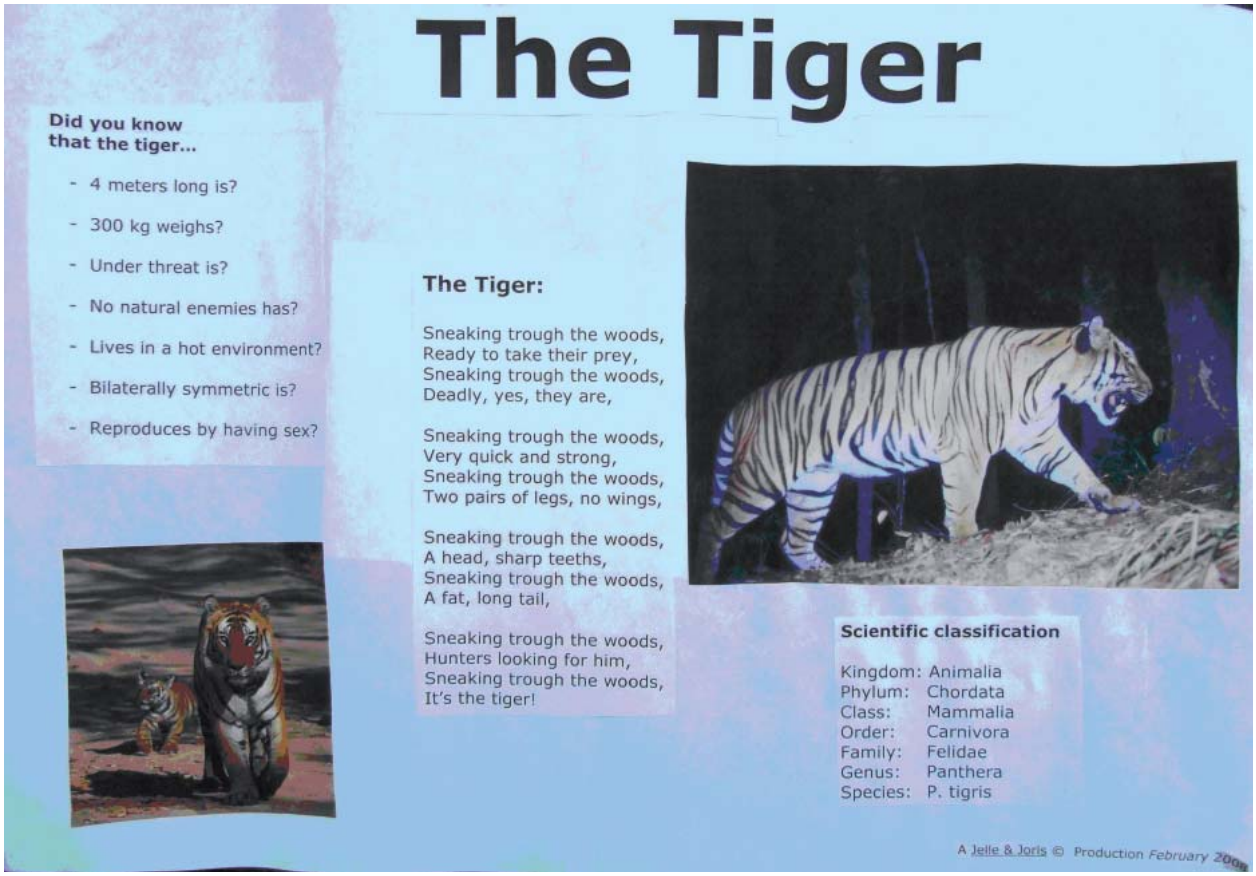


Figure 5.1 Poem poster 'The Tiger' made by a pupil

These are possible assessment criteria the teacher could use, based on the aims of the assignment:

- The poem (content): the information is correct and clear, the classification is given and at least 8 features are included.
- The poem (language): the text is poetic, the grammar is correct, the adjectives are interesting, punctuation is clear.
- Poster layout: the illustrations and text go together; the poster is attractive and inviting
- Cooperation: work has been shared fairly; work has been done in the time given.

Why is this CLIL?

The teacher assesses subject content, language, task achievement and cooperation. The assessment criteria make it clear to the learners what the teacher expects to see in the poster and how she wants the learners to work together. For biology, she wants accurate scientific classification, using the correct terminology. She wants the learners to present their work attractively, to use accurate English, and to be creative in their use of adjectives. Using criteria like these helps both the teacher and the learner by making the required standard of work clear to both. It encourages them to pay attention to subject-specific concepts (classification) and to use language both carefully and creatively. By rewarding this, the teacher encourages the learners to be accurate in subject content and language and to use language meaningfully, both to communicate scientifically and to engage their audience. The assessment and feedback meet the ten assessment for learning criteria (see 5.5.4) in the following ways:

1. The assessment is clearly planned.
2. It focuses on how learners learn both biology and language.
3. It is central to classroom practice.
4. By spending time 'upfront' on designing the assessment, the teacher demonstrates this key skill.
5. The assessment is both sensitive (it leaves room for learners' creativity and imagination) and constructive (the assessment criteria are formulated positively).
6. The assessment fosters learner motivation by allowing learners to use a variety of styles (visual and kinaesthetic) as well as their creativity and imagination.
7. It promotes a shared understanding of the criteria by stating them clearly.
8. It recognises a range of achievements (visual, imaginative, linguistic, and factual).
9. It allows for self-assessment by making the criteria transparent.
10. It provides constructive guidance to learners about what is expected of them, so that when they receive a grade, they can clearly see how the grade was reached.

5.5 BACKGROUND

5.5.1 Assessment

All teachers gather information about their learners' progress, and make judgments about how successful their learners have been in mastering the subject-specific skills and knowledge they want their learners to develop. In this chapter, we assume that both subject and language teachers already know about, and have experience in, assessing learning in their own specialisation. So the focus here is on specific assessment issues in CLIL. We highlight recent thinking about assessment which we feel is particularly relevant to CLIL, and suggest ways of approaching assessment and feedback to enhance the learning of both subject content and language. Assessment is sometimes used as a tool to find out what learners do not know, rather than what they do know. This type of assessment can create fear of failure and provide confirmation to a learner or teacher that a learner is not very bright. When used as the sole tool for promoting learners to a higher level (or demoting them to a lower level), it is primarily a negative tool. We would like to suggest that the aim of assessment in CLIL is also to support the learners' academic and linguistic development, rather than to decide a learner's academic fate.

5.5.2 Why assessment?

Assessment influences the way learners learn. It is one of the most powerful tools that teachers can use to steer their learners' behaviour. For example, if a teacher tests facts, the learners will learn as many facts as they can. If a maths teacher tests the learners' ability to measure accurately by subtracting a mark every time their measurement is inaccurate by more than 1 mm, learners will measure more carefully. If teachers give high marks for answers showing critical thinking, learners will attempt to be more critical in their work. It follows, then, that if a teacher assesses the language that learners use in their assessments, learners will pay more careful attention to their use of language.

Assessment can also be an important source of information about bilingual learners' language learning needs and progress. It can provide information about what kind of language learners need in order to perform well in a subject. It can give teachers insight into how much of this language their learners already know, and what language they will need in order to perform better. This helps teachers to prepare their learners better for future assessments. By looking at the language and content areas their learners have difficulty with, they can think of ways to help learners overcome these difficulties. In addition, they can create assessments that push their learners to perform at a level just beyond their present language ability. In this way, assessment can help teachers support their bilingual learners more effectively. If we see assessment as this kind of resource for teachers, the aim of assessment becomes more than just providing learners with a grade for a report card; instead of expressing progress as a mark out of 10, the aim of assessment is to find out what content and language the learners still need to work on.

5.5.3 The importance of alignment

Alignment[#] means teachers setting up classroom activities that help their learners achieve the lesson aims. If the aims, activities and assessments teachers create for their learners are aligned (i.e. match each other well), the influence of the teacher on the children's learning is at its greatest (Biggs, 2003). If, in addition, the assessment is carried out in a way which helps learners show whether they have learned what teachers wanted them to learn, then aims, activities and assessment are aligned.

A simplified CLIL version of how learning outcomes, learning activities and assessment interconnect (based on Biggs, 2003) looks like this:

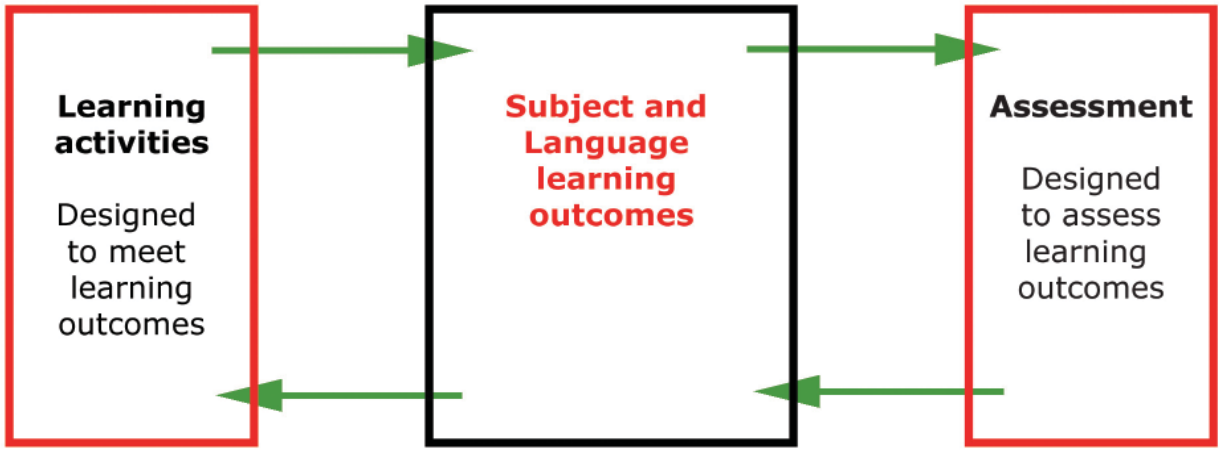


Figure 5.2 Constructive alignment for CLIL

This illustration shows how the subject and language learning outcomes are at the centre of the teaching and learning process. The learning activities which the learners carry out are designed to help the learners achieve these outcomes. The assessment is designed to find out whether the learners have achieved the outcomes. The assessment leads to the formulation of new learning outcomes, based on what the learners have demonstrated they can do.

Picture a classroom in which all the learners are carrying out activities related to a unit in their course book. The activities all encourage interaction and extended, critical answers in English. At the end of the unit, the learners are given a written test requiring short, one word answers about facts. Unfortunately, here the value of the interaction activities is not reflected in the type of assessment. In this case, we say that the activities and assessment are not aligned. Strategic learners will quickly realise that they only need to learn and reproduce facts in order to get good grades. In the worst case scenario, they might stop thinking critically, their participation in class will drop, and they will make sure they can recite bits of information on command. Had the teacher designed an assessment where learners were required to interact and think deeply about the issues involved, the classroom learning activities and the assessment would have been aligned.

Alignment is particularly important in CLIL, because of the dual focus[#] on learning subject content and language. If subject content and language are not both assessed, some of that dual focus is lost. The biology poem poster example at the beginning of the chapter shows how a subject teacher can assess both. The teacher asks for accurate scientific information and classification (a focus on content), and creative use of language in a poem (a focus on language). By doing so, the learners are encouraged to work on both the subject and the language of the subject.

5.5.4 Assessment *of* learning versus assessment *for* learning

We have just seen how the form of assessment influences how learners learn, and how they prepare for tests. This is sometimes called the backwash effect[#]. Understanding the ways in which different types of assessment influence learning has led to a distinction between assessment *of* learning and assessment *for* learning. Other terms often used are summative and formative assessment. One way of expressing the difference between the two is to think of the purpose of the assessment.

Assessment *of* learning provides a summary of what a learner knows. It aims to measure and report learners' progress to themselves and others, such as fellow teachers and parents. An in-class biology test in which learners answer multiple choice questions about classification, or classify a number of animals, tests how much the learners know about classification and whether they can classify animals accurately. In order to pass the test, they will learn the facts in their biology book about classification, and reproduce these in the test.

Assessment *for* learning involves using assessment in the classroom to raise learners' achievement rather than simply measure it. Assessment for learning is based on the idea that pupils will improve most if they understand the aim of their learning, where they are in relation to this aim and how they can achieve the aim or fill the gap in their knowledge or skills. This means setting assessment tasks which clearly show the gaps in their knowledge and skills to both learners and teachers and which create a need to close the gaps.

Assessment for learning is an important concept for CLIL teachers, because their learners are learning both subject content and language at the same time. Of course, any teacher makes careful choices about the most suitable form of assessment; still, CLIL teachers need to make even more informed choices. On the one hand, they need to make sure that the integration of subject and language does not get in the way of their learners' performance in tests of subject-specific skills and knowledge. On the other hand, they need to make sure as much as possible that the means of assessment reinforces the learning of the subject *and* the language. The biology assignment with the poem poster (see Example 31) requires learners to do more than just reproduce facts. They have to gather information from a variety of linguistic sources, expand their written language skills, and combine the information into a new, meaningful whole.

If CLIL teachers have a better understanding of how assessment can support learning, they can develop assessments that encourage learners to develop both subject and language. In this way, they can improve their learners' achievements in both subject and language.

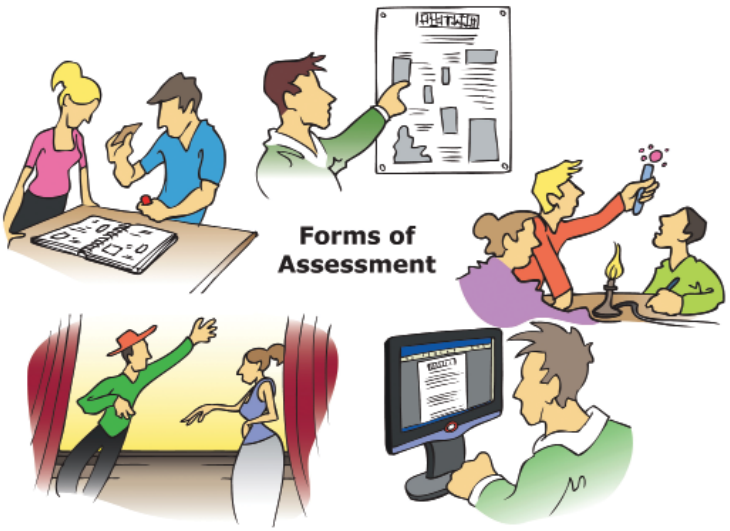
The Assessment Reform Group (2002) suggests ten research-based principles of assessment for learning (AFL) to guide classroom practice:

AFL should:

1. be part of effective planning of teaching and learning;
2. focus on how students learn;
3. be recognised as central to classroom practice;
4. be regarded as a key professional skill for teachers;
5. be sensitive and constructive because any assessment has an emotional impact;
6. take account of the importance of (and foster) learner motivation;
7. promote commitment to learning goals and a shared understanding of the criteria by which they are assessed;
8. recognise the full range of achievements of all learners;
9. develop learners' capacity for self-assessment, so that they can become reflective and self-managing;
10. provide constructive guidance for learners about how to improve.

5.5.5 Forms of assessment

The two approaches to assessment - assessment of learning and assessment for learning - involve different methods of collecting information about the learners' progress. Assessment of learning uses written or spoken tests, consisting of open or closed questions, presentations, essays or reports, completed under exam conditions and resulting in a mark for the learners. Assessment for learning can involve a wider variety of techniques. Examples include:



- informal classroom observations of learners as they perform group work (biology: an experiment, history: a discussion task);
- performance assessment of a role play (history: William of Orange meets Willem Alexander);
- presentation (mathematics: the number of helium balloons required to lift a sixteen-year-old boy off the ground);
- assessment of an authentic product (geography: a brochure for visitors to your town drawing tourists' attention to geographical features);
- situated/contextualised assessment (biology and geography: a written report for a zoo on how to reduce energy costs by introducing more sustainable policies);
- exhibition assessment (any subject: a poster, a portfolio which is exhibited somewhere in the school).

Baker (2006) points out that bilingual learners perform better when a *range* of assessments is used, such as in the illustration above. This allows learners to demonstrate their progress in ways that involve language to a lesser or a greater extent, so that language limitations do not always negatively affect their grades. Using a range of assessments allows the learners to also work with visual support[#] (pictures, objects). This gives them the opportunity to use context or other means to show their understanding in many different ways, which do not always involve language. The idea behind this is to limit, as much as possible, the risk that using a second language negatively interferes with their content performance in assessments.

5.5.6 Assessment for learning: pros, cons and recommendations

There are pros and cons to using assessment for learning for CLIL. The following tables summarise these, and make some recommendations on how to deal with the cons.

Pros	
Real world	• Assessments which are similar to real-world activities are more meaningful and relevant to learners, so more motivating.
Skills practice	• By practising using skills in different contexts, bilingual learners are more likely to transfer skills from one context to another and use a wider range of skills.
Missing subject knowledge	• Learners are more likely to see the gap between their present level of subject knowledge and what they need to know to perform well in real world tasks.
Completeness	• The results of a range of assessment tasks give a more complete picture of a learner's ability in both the subject and the language.
Time spent learning	• Learners spend more time on assessment for learning tasks, which means they spend more time using their subject and language skills.
Missing language	• Learners will notice gaps in their present level of language and the language they need to perform well in the subject.
Fairness	• Some learners will perform better in different types of assessments. A range gives all bilingual learners a chance to succeed and takes multiple intelligences and different learning styles into account.
Use of strategies	• Learners need to use strategies to carry out assessments for learning, for example, language-learning strategies such as using a dictionary, describing a word they do not know.
Less pressure	• Learners with fear of failure may feel less pressured by assessment for learning.
Relevance	• Parents may appreciate linking assessment to the real world.
Efficiency	• Assessments can be re-used more often than traditional pen and paper tests.
Coaching	• The teacher can spend more time coaching learners to produce high quality work, rather than marking unsatisfactory work.

Cons	
Time	• Designing, grading and organising assessments for learning can be time-consuming for the teacher.
Lack of clarity	• Some learners become frustrated when they have to spend a lot of time carrying out an assessment for which the rewards are not clear.
Subjectivity	• Grading may seem subjective to learners and parents.
Avoidance	• Group work assignments may allow individuals to disguise what they do not know or allow them to avoid practising skills in which they feel less competent.
Copying	• Learners may simply cut and paste from the Internet or other sources.
Dislike of group work	• Some learners do not like working in groups.
Lower grades	• Some learners will perform better in traditional tests than in more alternative forms of assessment, so they will dislike them.
Distrust	• Parents, learners and teachers are used to traditional tests and may distrust the more innovative assessment for learning.

Recommendations	
Time	• Design assessments in teams and involve the learners in the design of assessments. This helps teachers make their expectations of learners clearer both to themselves and to their learners. This saves time in the end, as the learners will perform better and need fewer attempts to pass.
Continuity	• File and keep your assessments to re-use them with other groups in the future. Assessments for learning can be re-used more often than tests, as they do not depend on learners not knowing what they are going to be tested on. In this way, the initial time investment can be worth it in the long term.
Team development	• Design assessments as a team. This can be classified as professional development as it helps a team develop a consistent approach to learning and teaching.
Subjectivity	• Use rubrics to assess content and language (see 5.5.8) and use several different people to assess learners using the rubrics.
Avoidance	• Allocate roles and assess individual contributions to group work (see Chapter 6 for more ideas).
Copying	• Design assessment tasks that require learners to use information in such a way that they cannot cut and paste.
Dislike of group work/lower grades	• Use a range of assessments, including individual assessments, so that higher and lower grades can be compensated.

Distrust	• Allow learners some choice in the people they work with. • Make the learning outcomes visible to the learner and ensure that the assessment requires some cognitive effort, and is more than just regurgitating facts. • It often helps to explain the benefits behind assessment for learning to parents.

5.5.7 Why assess language?

Thinking and language are interdependent (see Chapter 4). If the way learners approach assignments is influenced by the way in which teachers assess them, then assessing their language use will encourage them to pay attention to it. This will not only help to improve their use of language, but also their subject knowledge, since language reinforces subject concepts. By encouraging learners to focus on the language they use to express their ideas, subject teachers will help them to understand their subject better. Marking learners' work on their language will help them to improve their language in all subjects, and it will motivate them to focus on using language carefully to express their ideas. It will make them more aware of the importance of language and allow teachers to monitor their learners' language use when communicating their subject knowledge and understanding. It will also give subject teachers information about the language difficulties their learners are having. This will allow them or the language teacher to tailor their teaching to the needs of their learners.

5.5.8 What are rubrics?

When traditional paper and pen tests are supplemented or replaced by the more varied forms of assessment which fall under assessment for learning, the issue of grading arises. One widely used and practical solution is to create a rubric. A rubric is an assessment tool in the form of a matrix, which is used to evaluate a learner's progress based on a range of criteria, rather than one single score. It consists of rows listing characteristics that will be assessed (criteria), and columns indicating the qualities of each characteristic. Each written description in a cell of a rubric is called a descriptor.

Rubrics and descriptors are constructed using two features:

1. measurable criteria (for example, accurate biological classification, punctuation, language, accuracy);
2. descriptors of (usually) four aspects or points to rate the quality of performance (for example, poor, average, good, and excellent; or a scale of 1-4).

Example 32 shows a rubric for the poem poster (see Example 31). Each of the requirements for the poster from the teacher's original assessment criteria are included. We have limited the criteria to a maximum of four, for ease of use. Teachers can choose to put the maximum score in the first column or in the final column. The advantage of putting it in the first column is that the highest grade is the first thing learners read, and so they may be more likely to aim for this than for the lower grades. Showing high expectations in this way can be motivating for learners.

Example 32 Rubric for poster assignment

CRITERIA	DESCRIPTOR			
	4	3	2	1
The poster (content)	The scientific classification is correct and complete, and at least 8 accurate facts are displayed on the poster. All required elements are included.	Most of the scientific classification is correct but not complete; 5-6 accurate facts are displayed on the poster. All or nearly all required elements are included.	Some of the scientific classification is incorrect; 3-4 accurate facts are displayed on the poster. Several required elements are missing.	Little of the scientific classification is correct. Less than 3 accurate facts are displayed on the poster. Many of the required elements are missing.
The poster (layout)	The poster has been creatively and neatly made and invites the reader to have a closer look. The illustrations and text go well together.	The poster is attractive in terms of design, layout and neatness. Illustrations and text are clearly linked.	The poster is acceptably attractive though it may be a bit messy. The link between illustrations and text is not always clear.	The poster is messy or poorly designed. There is no clear link between illustrations and text.
The poem (language)	The language and punctuation on the poster is (almost) error-free. The (6 or more) adjectives bring the animal to life.	There are a few language and/ or punctuation mistakes but they do not hinder understanding. The poem uses 4 or more adjectives which create a good picture of the animal.	The mistakes in language or punctuation prevent the reader from reading fluently. The poem uses at least 3 simple adjectives to describe the animal clearly.	There are many language and/ or punctuation mistakes which make it hard to understand the poster well. The adjectives are not relevant or there are fewer than three.
Team work	The team worked well together and completed the poster in time. Occurring problems were solved quickly.	The team experienced problems working together but managed to solve them on its own or with the help of the teacher. The work was finished in time.	The team experienced problems working together which prevented good team work. The team spent too long on the poster, or, alternatively, should clearly have spent more time.	The poster is the result of two people working separately. The poster was not ready in time, or time was not used effectively.

If we assess the tiger poster (see Figure 5.1) using the criteria in the rubric, we can come to the following conclusion:

- The scientific classification is correct, and there are seven facts. A great deal of information is missing, as there is no information about, for example, habitat, reproduction, feeding and prey. (2 points)
- It is attractive in terms of design, layout and neatness, but the illustrations do not show the features that the poster emphasises. (2 points)

- The poem uses *deadly, quick, strong, sharp, fat* and *long* to describe the tiger and its features. These are effective, and along with *sneaking* evoke the animal well. (4 points)
- The team had some problems but managed to solve them by themselves. (3 points)
- This gives an overall mark of 11/16. Dividing 11 by 16 gives 0.68. This is 68%, or 7 out of 10.

This rubric shows how aims, activities and assessment can be aligned to create a learning environment in which both subject and language skills can be developed and learners can be actively guided by the teacher to produce work of a particular standard.

Here is another real-life example, made by Heidi Krieger, geography teacher at Rijnlands Lyceum, Wassenaar. It was used to assess the Sahara Project described in Chapter 6.

Example 33 Rubric for geography assignment

DESERT PROJECT RUBRIC **NAME:**			**CLASS:**	
CRITERIA / DESCRIPTORS	**EXCELLENT** **9-10 points**	**GOOD** **7-8 points**	**ADEQUATE** **6 points**	**POOR** **1-5 points**
USE OF LANGUAGE	Vocabulary includes many unit words; grammar and spelling are almost perfect; sentence structure and word order are correct English.	Vocabulary includes unit words; grammar and spelling are very good; sentence structure and word order is mostly correct English.	Few unit words included; language is simple; quite a few problems in spelling, grammar, sentence structure and word order.	Vocabulary is very simple; spelling, grammar, sentence structure and word order are not correct English and interfere with the understanding of the content.
LAYOUT AND ATTRACTI-VENESS	Absolutely professional!	A good effort was made to make the project attractive; it is obvious that the layout was well thought through and has creative touches.	Project is reasonably attractive, but little effort was put into layout. Project simply follows order of instructions.	If I received this in the mail it would go into the garbage before I read it.
CONTENT AND RESEARCH	The details of your content were not only correct, but thorough and included extra information; it is obvious all aspects of the project were well researched.	Most of the details of the content are correct; some aspects of the project were well researched; little extra was added to the content however; no evidence of plagiarism.	Some incorrect information included; information not thorough; research appears fairly superficial; no extra information added; some evidence of plagiarism.	Many false statements and facts; information very superficial, no evidence of research; too much of project plagiarised.

IS YOUR EXPEDITION PROPOSAL REALISTIC?	It would be possible to take this trip just as you described it!	A few minor problems with plans, but much of the trip proposal is possible.	Many problems with plans, trip not possible.	Great chance of dehydration, starvation, injury and possibly death! I think I'll stay home.
WORK HABITS	Your work was finished properly and on time, your group shared tasks fairly and you followed directions completely.	A few touches to project left until last minute; task division somewhat unfair; one or two directions missed.	Project late; group did not share tasks fairly or cooperate well; some directions missed.	Project late; one person did most of work; directions not followed.
TOP: TIP:			**GRADE:**	

In this rubric, the language is personalised to the group of learners and, therefore, seems to speak directly to them. This can make a rubric more accessible to learners, although the tone may not suit everyone (for example, whilst some learners may be amused by their work being thrown in the bin, others may not). Plagiarism may also be dealt with differently, as some schools award an automatic grade of 1 if work is plagiarised. This rubric fits well with a traditional Dutch school system, as it uses the 1-10 scale to assess the work.

5.5.9 Why rubrics?

The fact that a range of criteria can be incorporated into a rubric makes it a very useful tool for CLIL teachers, because it can make the assessment of subject and language more visible to everyone involved in the learning process (learners, teachers, colleagues and parents). A rubric can be handed out along with the instructions for an assignment, and in this way it shows learners before they start a task how they are going to be judged. This steers the way they approach the assessment. If they know the criteria by which they will be assessed, this will stimulate them to make sure their work meets the criteria.

Rubrics also support learning in the way that they provide feedback to learners. In order to benefit from feedback, learners need to (Sadler, 1989):

1. understand what is expected of them;
2. compare their level with the expected level of performance;
3. work in an appropriate way on closing the gap between what is expected of them and their current performance.

In other words, rubrics can help learners understand the standard of work expected of them in a number of ways. If their work is assessed using a rubric, learners are able to see how their work compares to the standard expected, and they can see what they need to do to improve their work. Another advantage to using well-designed rubrics is that once they are designed they can reduce the amount of time CLIL teachers need to spend evaluating their learners' assignments.

There are three moments in the assessment process where rubrics can be used: at the start of an assignment to clarify assessment criteria, during an assignment for self-assessment or peer assessment, and at the end of an assignment to award a final grade. For example, if the learners are halfway through an assignment, the teacher can coach the learners with the rubric, by asking them to assess their progress so far.

5.5.10 How to make rubrics

It is of great importance that the subject content and language aims, the activities the learners carry out, and the assessment are all aligned. This is why the best time to start creating a rubric is at the planning stage, when the aims, activities and assessment are being determined. If you look again at the rubric for assessing the biology poster, you can see how the original subject and language aims are reflected in the assessment criteria. From the aims, teachers can select the range with which they want to rate their students' performance, and then create descriptors. There are many websites which provide examples of rubrics or interactive templates which allow teachers to select categories they would like to assess, see for example Rubistar: rubistar.4teachers.org/index.php.

Rubrics can be developed by an individual teacher, by groups of teachers or in cooperation with learners. The advantage of developing rubrics with a group of teachers is that the assessment criteria become clearer as teachers discuss them. This sort of cooperation in a CLIL team helps the CLIL department develop a uniform and transparent approach to learners.

A similar process is involved if rubrics are developed in cooperation with learners. If learners think about what makes a good piece of work, it helps them to consider what is expected of them, and it increases their autonomy. It gives them a greater sense of influence over what is assessed and so can lead them to become more focused and self-directed. It may be time-consuming, but it can be effective.

For step-by-step guidelines on how to make a rubric, see practical lesson idea 5.9.4.

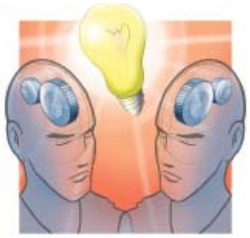
5.5.11 The role of peer and self-assessment in CLIL

Peer assessment involves asking learners to use assessment criteria to assess each other's work. One reason often put forward for using peer assessment is that it saves work for the teacher. Actually, using peer assessment changes the way teachers work, and leads to them spending more time on, for example, defining clear assessment criteria, and less time on marking work that is not to standard. Peer assessment is particularly important in CLIL because it can help the learners to understand what is expected of them. By reading a fellow learner's lab report in biology and deciding what is good about it and what needs more work, learners develop a clearer idea of what makes a good lab report in terms of both subject and language. This will help them to produce higher quality lab reports in the future. By acting as an audience for a piece of written text, learners start to understand how clearly they need to express their ideas for a third person to understand them. This is particularly important in CLIL, because it can help improve both language skills and subject skills. By experiencing the effect of unclear language, spelling mistakes or confused ideas themselves, learners will be encouraged to use language more carefully to put their ideas across.

Peer assessment can also act as a first step towards self-assessment. Once learners have practised checking other people's work, they will be more able to look at their own work with the eye of an outsider. By understanding more clearly what is expected of them, they will gradually become more able to critically assess their own work, as they prepare for assessments. In addition, using peer and self-assessment helps to make learners more independent - as this gives them tools to monitor their own progress.

Peer and self assessment help learners to produce the standard of work that is required of them, by making them more aware of the effect of their spoken and written work on their audience. In addition, the awareness that their work is produced for an audience also motivates them to produce work of a higher standard; seeing their work through the eyes of strangers helps learners to be more critical of what they are producing and they may be less willing to lose face in front of a group of strangers than in front of their teachers or peers. Because peer and self-assessment help learners to produce work of the required standard, they are particularly relevant to CLIL.

If rubrics are also used for peer or self-assessment, this can reinforce the learners' understanding of what is expected of them. By looking at the rubric to assess their own work or their peers' work, learners develop the ability to judge the standard of their own and their peers' work. This can help them to produce work of the required standard.



5.6 APPLICATIONS FOR CLIL

5.6.1 Assessment and the Cummins' Quadrants

After dealing with the general notions and underlying principles of assessment, it is now time to look at assessment in the CLIL situation and consider the specific issues that arise. Baker (2006) shows how a teacher can choose different strategies, for example to teach the concept of height. He points out how a teacher might assess learners' work differently in different situations.

In Table 5.1, different types of assessment are presented in relation to teaching strategies.

	Teaching strategy	**Assessment**	**Comment on the context, thinking required and language demands**
A	Learners use objects to measure height.	Ask a learner to measure the height of a new object.	Lots of context (objects), low cognitive demand, only incidental use of everyday language.
B	A demonstration from the front of the room in which the teacher measures different objects.	Ask a learner to explain what they are doing as they measure a new object.	Lots of context. The learners can use objects to demonstrate what they mean but they have to produce some language to demonstrate understanding of the concept. The conversation is interactive, so prompts from the teacher can support the learners.
C	A teacher presentation about measuring without using objects.	Ask a learner to write an explanation of how they measure height.	Less context: the learner has to produce extended prose without a listener indicating immediately what is not clear in what they say. They have to refer to objects in the text rather than demonstrate what they mean using objects. The cognitive demand is greater as they need to think in more abstract terms, and this makes the assessment more demanding in terms of language.
D	Learners read an encyclopedia description of the development of different forms of measurement (thumbs, pieces of string, sticks, matriculated measuring sticks).	Discuss the concept of height by asking abstract questions such as *How many ways of measuring height can you think of, and which is the best way?*	The context is very reduced: no objects, no pictures, and the concept is complex, involving judgment. The language used to answer the question will involve evaluating, explaining and justifying.

Table 5.1 Teaching strategies and assessment

Each of these teaching strategies, along with the aligned means of assessment, can be positioned on the axes of Cummins' Quadrants (see Figure 5.3) to demonstrate whether it is more or less linguistically demanding for the learner to carry it out. This can be a useful tool for designing assessments.

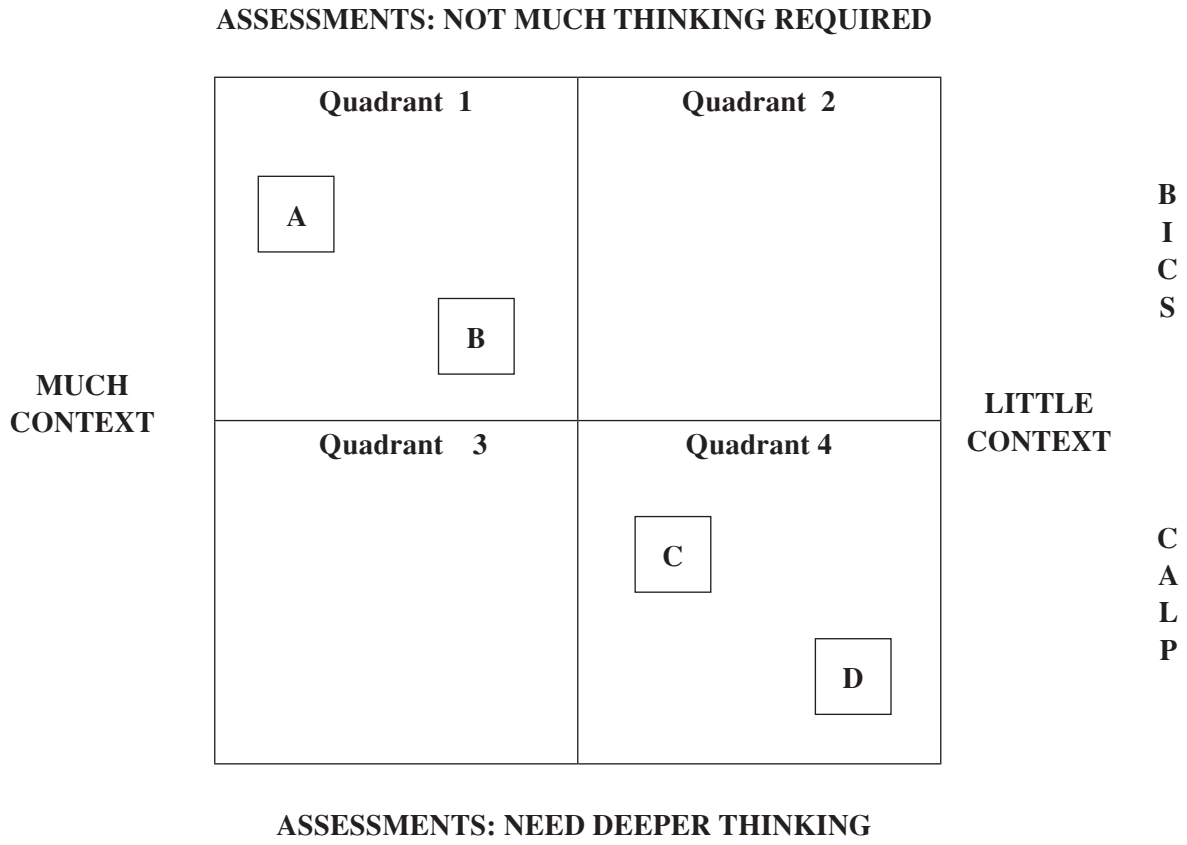


Figure 5.3 Assessments in Cummins' Quadrants

It can be tempting to create assessments for second language learners which require very few language skills and understanding. This keeps learners busy, and prevents them from creating work with many mistakes, but these kinds of assessments do not challenge learners either linguistically or cognitively. Assessments requiring the thinking skills in Quadrant 3 or 4 will help learners to develop CALP.

Example 34 History assessment

Figure 5.4 shows an example of a history assessment designed by Jan de Brauwer, Cals College, Nieuwegein, that allows the learner to demonstrate understanding of the changes that took place between 1350 and 1600 with hardly any use of written language. If the learner held a spoken presentation explaining these two posters, both language and understanding could be assessed.

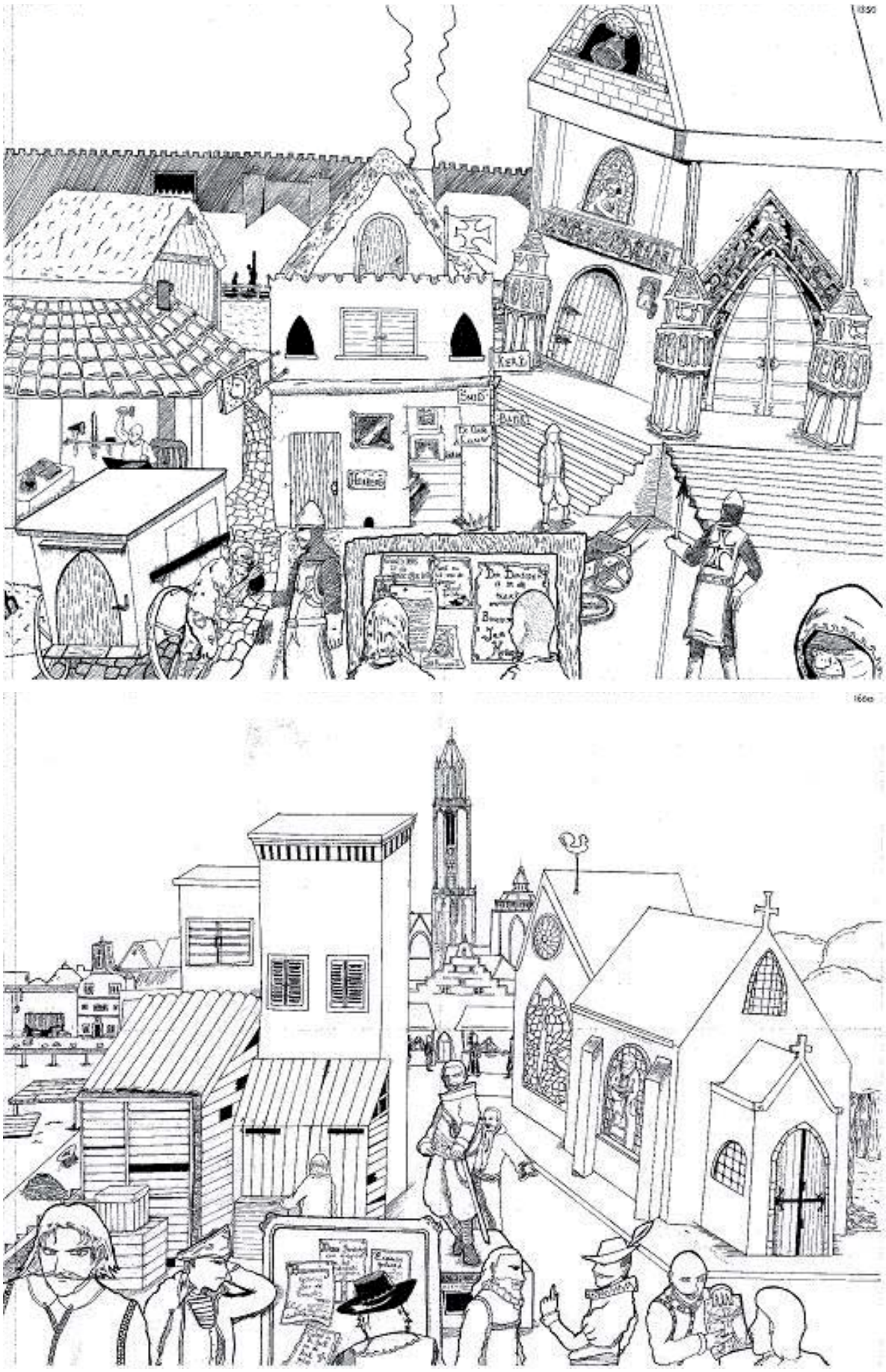


Figure 5.4 Posters by a pupil at Cals College, Nieuwegein showing historical change from 1350 to 1600

Here are the teacher's comments on using this form of assessment.

In this exercise 4 VWO students had to show their understanding of historical change by visualising this change in two drawings. They were given a big piece of A2 paper. On one side they had to write the year 1350. On the other side they had to write the year 1600. They were also given key words and phrases which they had to visualise in their drawings. Words like *guild, reformation, inquisition, development of science, explorations, trading Renaissance, Roman Catholic dominance* etc. They were not told which word matched which year. They also had to write a short explanation in which they explained the features of their drawing. This exercise was one of several exercises which we tried to match with Howard Gardner's multiple intelligence theory. Students had to choose one of the exercises.

In the end one student chose this exercise and came up with the two drawings shown. In the 1350 drawing he uses the bulletin board, the guards (crosses on their clothes) and of course the big Gothic church to show the dominance of the Roman Catholic church. The inquisition is visualised in the detail of the stake in the middle of the drawing. One can see the word *guild* is expressed in the blacksmith and is mentioned on the bulletin board. He has also taken a careful look at the architecture of Medieval cities and Medieval fashion.

In the 1600 drawing one can see reformation in the sober architecture of the church (although he made a little mistake depicting a holy person in the stain glass window and of course the stain glass is still too elaborate), renaissance in the person holding the Vetruvian man drawing, the bulletin board and the statue which stands alone on a socket. Explorations can be seen in the harbour and the bulletin board and trading is visualised with a little market in the background. Science we see in the bulletin board and the man holding the Vetruvian man drawing. Again he took a very careful look at the architecture and fashion of early modern Holland.

This student has great difficulty putting his knowledge into a written answer. This exercise gave him the opportunity to show his knowledge in a different way and I think it paid off.

Figure 5.5 Teacher comments on alternative assessment

Example 35 Geography test

Below are some examples of different questions in a geography test by Heidi Kruger from the Rijnlands Lyceum, Wassenaar, which are cognitively quite demanding, and which provide the learners with more and less context. Question 3 asks learners to show their understanding and knowledge of the development

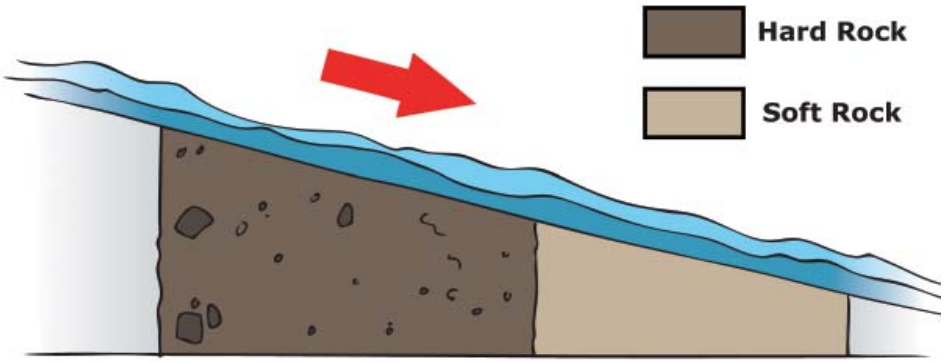
of a waterfall by drawing and labelling a diagram. The language is clearly in a particular context, and by already providing one diagram, the teacher gives a clear example of what is expected. In this test, the learners will be able to show their subject knowledge without having to use a large variety of in language. Question 4 also gives a great deal of context: the meaning of the words is given, and the learners only need to be able to recognise them in a word search. If a learner has limited productive skills[#], but strong receptive skills[#], they can still demonstrate their subject knowledge. Question 5 provides visual support through the diagrams, and the learner is asked to match the words to the diagrams. This allows the learners to show their understanding, but does not require them to produce language. Question 6 is more linguistically challenging, as the learners need to produce language explaining the diagram. Questions 7 and 8 are more open and require learners to produce much more language. These questions have less context than the previous ones.

Question 3

Look at Figure 3: Stage 1 in the development of a waterfall. Draw Stage 2 of this development on your answer sheet. Don't forget to label your diagram:

Figure 3

Stage 1:



Stage 2:

Question 4

Parts of rivers have special names. There are four names for parts of a river in this word search. When you have found them, write the correct word next to each meaning. Use the word search *only* if you need help.

T	R	I	B	U	T	A	R	Y	F	L	B
A	Q	Q	U	V	K	C	I	L	R	E	Q
C	H	B	B	K	B	A	O	P	X	N	J
U	N	Q	V	T	V	O	O	A	N	N	P
Z	Q	K	D	A	D	W	Y	V	H	A	H
X	M	D	R	P	I	Z	R	E	Y	H	D
J	V	X	L	Q	X	I	N	O	Z	C	W
P	R	A	X	J	O	P	U	Y	J	R	M
R	I	E	C	N	E	U	L	F	N	O	C
N	F	G	M	K	I	M	K	D	N	Y	G

a. A smaller river which joins a larger one is called a _____

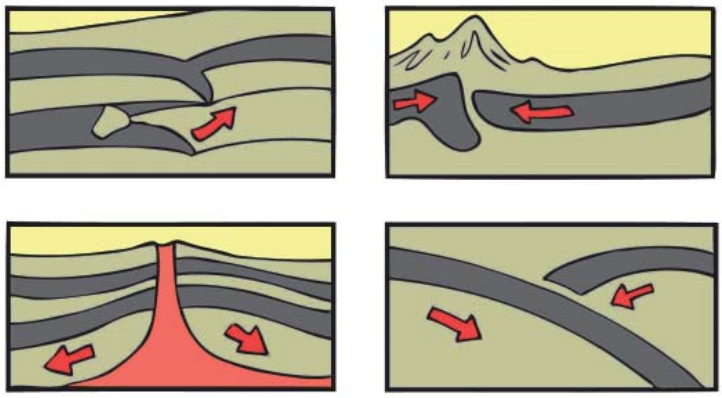
b. The point where the rivers join is called a _____

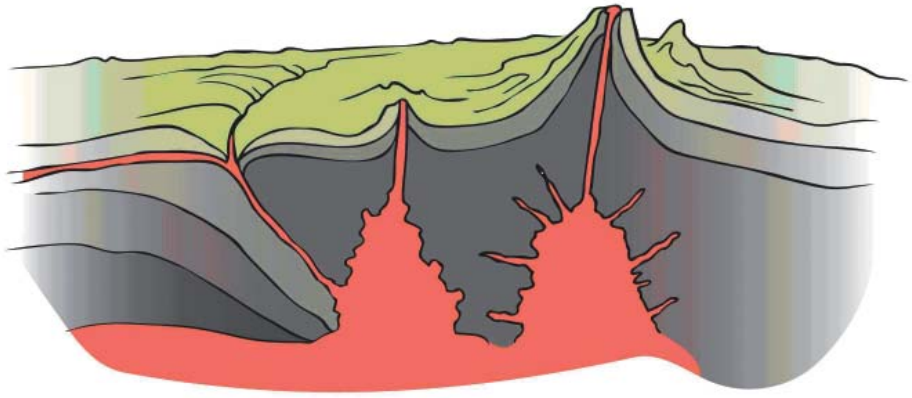
c. The river flows in this: _____

d. The flat land on either side of the river when it gets near the sea. The river might flood onto this land: _____

Question 5

Label the following 4 diagrams with the best possible word.
conservative margin, spreading ridge, subduction zone, collision zone





Question 6

Use the diagram above to help you describe a subduction zone in some detail. In other words, say as much as you can about what it is, and what is happening at this kind of plate boundary.

Question 7

What is the Human Development Index?
What is the major difference between the HDI and GNP?

Question 8
A group of Zambian students were asked what development meant. These were the ideas and indicators they talked about:
FREEDOM, POPULATION GROWTH, EDUCATION, MONEY FOR INVESTMENT, TECHNOLOGY, EQUALITY, CRIME AND PUNISHMENT, HEALTHCARE, NATURAL RESOURCES, TRANSPORT AND INFRASTRUCTURE

1. List two indicators that are difficult to measure.
2. List in order the three indicators that you think are most important to encourage development. Back up your choices in paragraph form.
3. Do you think that mobile phones per capita makes a good indicator of development? Why?

Figure 5.6 shows how a teacher provides extra language support at the beginning of a test to help learners understand instructions in the test.

Name:_____

YEAR THREE GEOGRAPHY
UNIT TEST: DEVELOPMENT
APRIL 2008

Annotate	put on labels
Assess	weigh up the importance
Compare	describe and explain the similarities and differences
Contrast	describe and explain the differences
Define	give the meaning of the word
Describe	what does it look like, state the main characteristics, patterns and exceptions
Discuss	give different points of view
Examine	look closely
Explain	give the reasons why or say what the results mean
Identify	point out and name
Locate	state where a place is
Name	give or list
Outline	note the main features
Quote	copy something word for word from the text and put it in quotation marks
Quote map evidence	use examples directly from the map or graph to back up your point
Select	choose
Suggest	put forward an idea or reason

Figure 5.6 Language support for instruction language

5.6.2 Principles of assessing bilingual learners

CLIL teachers need to consider the assessment of both language and subject. They might ask themselves questions like: *How can I assess my learners' language? How can I simplify assessment so that learners can show their understanding of my subject without the language getting in the way? Can I make oral assessments? How can I use peer assessment? How do I assess written work both for the language level and the subject level?*

Since CLIL lessons involve language acquisition and subject content, the situation is different from subject lessons. It makes sense to say that language and content should be assessed in an integrated way. Here are some principles for assessment that support subject and language learning, based on the Qualifications and Curriculum Authority (2000).

Principles of assessing bilingual learners

The assessment of bilingual learners should follow the same principles of effective assessment of all pupils. It should:

- recognise what pupils can do and reward achievement (a good rubric does this);
- be based on different kinds of evidence;
- be a valid reflection of what has been taught or covered in class;
- be reliable in terms of enabling someone else to repeat the assessment and obtain comparable results;
- be manageable, both in terms of the time needed to complete the task, and in providing results which can be reported or passed on to other teachers.

In addition, teachers assessing pupils learning CLIL should:

- be clear about the purpose of the assessment, distinguishing summative, formative and diagnostic aims;
- be sensitive to the pupil's first or main other language(s) and heritage culture;
- take account of how long the pupil has been learning English;
- assess in ways that are appropriate for the pupil's age;
- focus on language, while being aware of the influence of behaviour, attitude and cultural expectations;
- recognise that pupils may be at different levels of attainment in speaking, listening, reading and writing.

As this demonstrates, a common concern is how to make sure that language is not a barrier for learners to demonstrate subject knowledge or understanding. From a CLIL perspective that embraces assessment for learning, we suggest moving one step further. The concern is not only how to construct assessments that allow learners with limited language skills to do well, but also how to use assessment to steer and foster or ratchet up both subject and language learning, and how to give feedback that will help learners develop knowledge and skills regarding both subject and language. This is why giving feedback is also important. Learners can make many kinds of spoken or written language mistakes. Knowing the kinds of mistakes learners make when using a second language, possible reasons why they make these kinds of mistakes, and effective ways of dealing with mistakes can help a CLIL teacher decide how to deal with language mistakes and give appropriate feedback in their lessons. We deal with these points in the next section.

5.6.3 The kinds of language mistakes learners make

Here are some examples of different kinds of spoken mistakes. An asterisk (*) shows that the sentence is incorrect:

1. In a music lesson: I saw a jazz band last night. *I wasn't all that keen on the singer, but the *sex* was really good.
2. In an economics lesson on mobile phones: **SMS-ing* is cheaper with this company than the others.
3. In a presentation on Shakespeare: *Hamlet *has lots of problems with his mother*.
4. In a history presentation: *The Second World War *has started* in 1939.

These examples show mistakes in pronunciation, vocabulary, style and grammar:

Type of mistake	Mistake	Correction	Comment
Pronunciation	sex	sax	The learner mispronounces 'a' as 'e'.
Vocabulary	SMS-ing	texting	The abbreviation SMS is not always understood by native speakers of English
Style	Hamlet has lots of problems with his mother.	Hamlet has a difficult relationship with his mother.	In a presentation more formal language is needed.
Grammar	has started in 1939	started in 1939	Fixed points in time use the simple past in English.

Table 5.2 Types of mistakes

Some examples of written mistakes are:
1. In a history essay: *The French *Revelation* started in 1879.
2. In a biology lab report: *The soil samples *where* collected from a range of sites.
3. In a music review: *The lyrics in this song *was written* by John Lennon.
4. In a history essay: *Churchill *was a guy who was* the Prime Minister of Britain during the Second World War.

These show vocabulary problems (*revelation* versus *revolution*), spelling problems (*where* versus *were*), grammar problems (they *were* written rather than they *was* written) and style issues (*guy* and *Prime Minister* do not go well together in one sentence).

5.6.4 The reasons for second language mistakes

Learners can make mistakes for different reasons. Bolitho and Tomlinson (2005) suggest learners may make grammar mistakes for these reasons:

Reason for mistake	Example	Correct form	Explanation
L1 interference[#]	*The Second World War has started in 1939.	The Second World War started in 1939.	From: *De tweede wereldoorlog is begonnen in 1939*. Dutch uses the present perfect where English would use the past simple.
False analogy	*Hollandish people	Dutch people	Holland - Dutch does not work like England - English or Spain - Spanish.
Overgeneralisation	*The birds flied in a westerly direction.	The birds flew in a westerly direction.	Past tenses in English are usually formed by adding *-ed*, but in this case the verb fly is irregular and should be flew.
Over-learning	*We wented on a trip to Sweden and boughted some souvenirs.	We went on a trip to Sweden and bought some souvenirs.	The learner has practised adding *-ed* to verbs to form past tenses, so now adds it to irregular verbs, too.

Ignorance	*Erosion is common were rivers flow over rocks.	Erosion is common where rivers flow over rocks.	A learner may not know where and were are spelt and pronounced differently.
Incomplete learning	*Churchill is a guy who was the Prime Minister of Britain during the Second World War.	Churchill was Prime Minister of Britain during the Second World War.	A guy is informal and not appropriate for a presentation or written text.
Interference from other items (in English or another foreign language)	*Miss, how are you going to assassinate us?	Miss, how are you going to assess us?	Assess and assassinate are pronounced differently, but Dutch learners find the difference between 'a' and 'e' difficult to hear and produce, so may confuse both the pronunciation and meaning.

Table 5.3 Reasons for second language mistakes

The type of information a teacher gives learners about a mistake they have made may need to be different, depending on why they made the mistake.

5.6.5 Effective ways of dealing with mistakes

The decision on whether to correct language mistakes depends on:

- how significant the mistake is;
- whether the mistake interferes with understanding;
- whether it is a frequent mistake;
- whether the mistake is made because of L1 interference;
- whether it is something that learners have been focusing on recently.

Lightbown and Spada (2006) suggest that focusing on form and correcting mistakes is effective:

- for frequently made, persistent mistakes (for example, spelling mistakes such as *where* instead of *were*, and *to* instead of *too*);
- for mistakes made as a result of differences between the learners' first language and the second language (for example, The Second World War *has started* versus *started* in 1939, false friends such as *consequently* and *consistently, insulation* and *isolation*);
- for mistakes made in new language structures which learners are beginning to develop (for example, if the learners have been learning the past simple in English, focusing on it in history would help);
- for mistakes focused on in other lessons, (for example, if the difference between spoken and written language or formal and informal language is being dealt with in English and Dutch lessons, focus on it in the subject lessons, too).

Lyster and Ranta (1997) distinguish between six types of feedback on spoken mistakes. These are the following:

1. **Explicit correction** This refers to providing the correct form explicitly. Doing this, the teacher also clearly indicates that what the pupil says is not correct, for example by saying: *Oh, you mean started….* or *You should say the war started not the war has started….*
2. **Recasts** In this case the teacher reformulates all or part of the pupil's utterance, without the error: *The war started in 1939*. This type of feedback is comparatively implicit. The teacher does not actually say that the pupil has said something that is incorrect. Translation in the event that the pupil uses the mother tongue is also is considered to be a recast. (For example, the learner says *isolatie*, and the teacher responds by saying *Indeed, insulation*).

3. **Clarification requests** A clarification request includes phrases such as *Sorry - the sex was really good?!* or a repetition of the error as in *SMS-ing …?* In this way the teacher indicates that the pupil's utterance is inaccurate in some way.
4. **Metalinguistic feedback** This type of feedback contains comments on the form of the pupil's utterance without providing the correct form. The teacher may say something like *You cannot say that in English* or *What tense is used for a specific date in the past?*
5. **Elicitation** Elicitation involves an attempt by the teacher to directly elicit# the correct form from the student. This can be done by strategically pausing to allow the pupil to 'fill in the blank', as in *The Second World War..… in 1939?* or by asking for an example *How do you say that in English?* or by simply asking the pupil to rephrase their own utterance.
6. **Repetition** In this case the teacher repeats the pupil's utterance, without correcting it. Usually the teacher will highlight the error by adjusting intonation and word stress. (*The sex was really good?*)

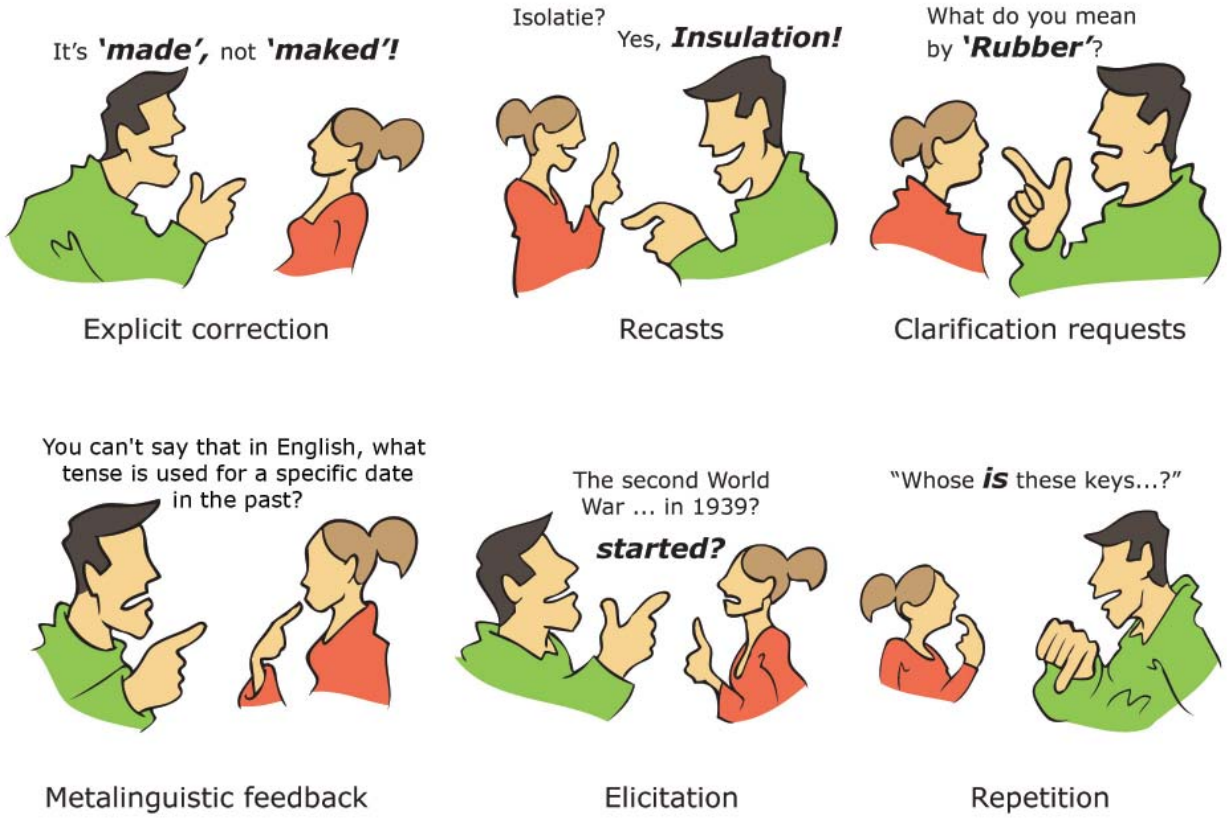


Figure 5.7 Types of feedback

Elicitation and metalinguistic feedback are most likely to lead to a learner producing a correct form, and recasts are least likely to lead to a learner producing a correct form (Lyster and Ranta, 1997). This implies that CLIL teachers who use elicitation and metalinguistic feedback rather than recasts will help their learners to produce more accurate language.

5.6.6 Feedback on speaking

CLIL subject teachers can face problems giving feedback on their learners' language. They may not be able to explain a grammar rule, or may not know or understand why it is that a learner is making a mistake or what learners find difficult about a grammatical item. They may not be aware that a learner is making a mistake, or they may be unsure whether it is a mistake or not. How much feedback a subject teacher gives will vary depending on the subject teacher's own confidence in and knowledge about English. In some cases, subject teachers may want to involve the English teacher; in many cases they will feel confident giving feedback themselves.

If subject teachers want to give feedback on speaking, there are a number of ways of doing this. As they walk around while learners are doing assignments in class, they can note down mistakes learners are making. They can use recordings - audio recordings can be made on mobile phones, digital voice recorders, and audio cassette recorders with an internal or external microphone. Video recordings can be made using mobile phones and (digital) video cameras.

Recordings can be used by learners to watch and give feedback on their own language (self-assessment), or be used for peer feedback or subject teacher or language teacher feedback. They can be used in English classes or in subject classes, depending on the time available.

If learners watch or listen to each other and give feedback, it is useful for a teacher to say what category they want them to pay attention to: pronunciation of key subject words, word stress, grammatical accuracy (for example, use of the past tense), intonation, range of vocabulary, use of new words, or appropriacy (were they too formal or informal?). Different categories can be given to different learners. Using a rubric is helpful.

Here is an example of how language can be assessed in a science speaking task (based on an approach in Gibbons, 2002). In a physics lesson, the learners were asked to work in pairs and solve one of two problems: design either a medieval weapon (a trebuchet which throws stones) or a small car, using the energy contained in a set mousetrap. The learners first solved one problem; they designed either a trebuchet, or a car which ran on the energy from a mousetrap. Next they had to cross-question each other about how they had each solved the different problems. Finally, using the information from the cross-questioning, they tackled the second problem.

In order to assess the language the learners are using, the first step is to identify the language demands being made by this task. This can be done by describing what they need to do, and then the kind of language they will need to do this (grammar, vocabulary). In this case, the learners first need to describe the problem, and then report their solution. When they report the solution, they will need to use the past tense (for the small car, this means using words like *accelerated, travelled, mounted, attached*), and they will need appropriate vocabulary to describe car design (*wheels, axles, traction, steering*) and to give reasons for their solutions (*we tried that because*). The other pair will need to formulate questions (*what happened*, *what did you do then?*) and give advice (*you could*, *did you try*, *perhaps it would be better if*), and react to advice (*that's a good idea*, *we could try that*, *no, that wouldn't work because...*).

This analysis of the task can form the basis of a language assessment sheet like this, completed for an imaginary learner called Maria:

Language	**Maria's language**	**Possible language work**
Describe the problem	Maria did this clearly.	
Report the solution	Made some past tense mistakes (*putted, try).* Vocabulary limited, but did describe words (*the wheels were slipping a lot, so we used rubber to make it better*).	Practise past tenses Vocabulary work
Ask appropriate questions	Asked many WH questions. Some mistakes in questions (*How you did? Why you do that?*).	Practise question formation
Offer advice appropriately	Used *maybe* a lot.	Practise modals: could, should, etc.

Acknowledge advice	No examples	
Other comments	Maria spoke more than she usually does, maybe because she had a lot of ideas about this subject.	

Table 5.4 Language assessment sheet for Maria

These language functions could also be linked to the Common European Framework of Reference and used once or twice a year to assess the learners' level of spoken English in relation to the CEFR. The CEFR can also be useful for helping subject teachers to become aware of the language functions that learners use in their subject.

Language analysis as described above can be done either by the subject teacher individually or in subject teams; the latter option would raise the teachers' awareness of the problems their learners have. Language analysis can also be done individually or in groups by the language teacher to provide information about language work the learners need to practise. Co-operating with language teachers on language analysis tasks like these can be used for both subject teacher and language teacher development.

5.6.7 Feedback on writing

Self-assessment, peer feedback and teacher feedback can also be given on written work. This is a thorny issue for language teachers, as there are different views on the role of feedback on form (language mistakes) in teaching writing. Some people argue that feedback on subject content (what learners are attempting to say) is more effective than feedback on form (spelling, grammar and punctuation mistakes) and more motivating for learners. Other people argue that ignoring mistakes in form reinforces incorrect language and creates sloppy writers with bad spelling habits.

In either case, consistency and transparency are important. If teachers are consistent and transparent about what they expect from their learners, these will be more likely to produce the kind of written work teachers want to see. Learners need to know in advance what the teacher is looking for: 100% accuracy, a particular sort of English, good ideas or a balance of these.

If accuracy is paramount, the teacher has a number of options:

- indicate (underline, highlight) all the mistakes;
- indicate selected mistakes;
- use a correction code# for different kinds of mistakes;
- correct every mistake;
- correct selective mistakes.

Example 36 Corrected writing for geography

Here is an example of a 14-year-old learner's writing for geography (provided by Heidi Krieger of the Rijnlands Lyceum, Wassenaar). It describes satellite images of The Netherlands. A correction code has been used to indicate where the writing needs more work.

☺	Visual image and Infrared Image In this visual image you can see that it was very good weather in the Netherlands on the 17th and 18th of December. There were no clouds over the Netherlands, so there was no rain. This means that there was a high pressure. Now I'm going to describe the clouds:

P, Sp	1. This cloud is very high and very thick. The texture is lompy and there are
☼	shadows on the visual image. This is a Cumulonimbus cloud and these clouds will bring heavy rain, maybe even thunderstorms and often strong winds. This cloud area is a swirl of cloud and is formed like a comma. This means that there is a depression above the Atlantic Ocean.
P, prep Exp	2. This cloud is light grey. This means that the cloud is at a middle-level and on the visual image you can see that the cloud is very bright so thick. The cloud is lumpy and there are shadows on the visual image. Now you can see that it is a Cumulus cloud and Cumulus clouds bring short, heavy showers of rain.
	3. This cloud is grey on the Infrared image, so that means the cloud is low. On the visual image the cloud is
V, Exp	also grey so you know that it is a Stratus cloud. Stratus clouds usually care for a bit of drizzle and overcast.
Prep	4. This cloud is the same cloud as by number 3.
	5. This cloud is also the same.
^	6. This cloud is pretty bright on the Infrared image, so rather high and the cloud is also pretty bright on the
^	visual image, so rather thick. The cloud is lumpy and there are shadows on the visual image. This means that it is a Cumulus cloud.
Exp	So the same as by number 2. This causes short, heavy showers of rain.
	Well done! Rewrite this and add it to your portfolio of written work for geography

Here is the key to the correction code that was used here.

Symbol	**Meaning**	**Instruction to the learner**
Sp	Spelling	Try spelling this again
P	Punctuation	Correct the punctuation
V	Vocabulary	Find a different word for this
Prep	Preposition	Change the preposition
^	Missing word	Put in the missing word
Exp	Expression	Rewrite this, to improve the expression
☺	Good language use	Well-written section - apt and clear
☼	Creative language use	Striking or imaginative writing

Table 5.5 Correction codes

It is a good idea for a school to agree on a correction code, which all teachers use, for all languages (Dutch, English and other Modern Foreign Languages such as French and German).

It can be difficult to decide what language to correct and how. These guidelines may help:

- Correct language that is important for the meaning or purpose of the written assignment (i.e. if it interferes with the effectiveness of the written work, for example, in the geography assignment: *at the middle level*).

- Correct language mistakes that are a result of first language interference (for example, in the above example *care for* comes from the Dutch *zorgen voor*).
- Correct language mistakes that have been practised recently.
- Point out language mistakes and effective use of language that can be generalised and applied in the future to other written assignments.
- Give positive feedback on good use of language.
- Formulate a correction code as an instruction to learners so that they know what action they need to take.
- Explain how you expect learners to respond to your corrections.

Russell Stannard uses screen capture software to record himself giving spoken feedback on his learners' written work. His learners can then download the video of him marking their work, and rewrite their work based on his feedback. You can find an example of this at: http://www.russellstannard.com/king/king.html

The advantage of this is that the video can be watched independently of the teacher, and as many times as the learner wants. This method allows learners to experience a 'live' audience reading their work (see also Chapter 4), which helps them to realise how readers may react to their work, and therefore how carefully and explicitly they need to formulate their ideas in order for an outsider to be able to follow them. This type of videoed feedback also models the kind of language editing that learners can do themselves before handing in their work.

For those who are less digitally minded, this technique can also be done live in class using a whiteboard or smartboard. The only aspect mentioned above that is lost is the chance for the learner to watch and re-watch independently.

5.6.8 Giving feedback on subject content

If subject content is most important, the teacher can discuss the work with the learners as they work. Here is an example (from Hedge 2000, p. 300) of a conversation where the teacher helps the learner work out what they want to say and provides useful concepts and words to help her.

Susanne	My problem here is… I want to say… I want to write about the characters and how they are… how they act …together
Teacher	The way they interact… yes…
Susanne	Interact… yes, that's the plot, isn't it? But also, it's the theme, I think. I'm not sure how I should start…
Teacher	Well, what's the most important thing about the play to you?
Susanne	How he shows the middle class people… they are just super - superficial (Teacher: Yes) … superficial… and they don't care about the working class…
Arianne	(*who is listening in*) The bourgeoisie... they are hypocrites... n'est-ce pas?
Teacher	Yes, we can use the French word… bourgeoisie... Well, why not put that first and then go on to explain how he does this, by presenting a particular family…
Susanne	So, this bit here (*reads*) 'The Birlings are a middle class family...' up to here... yes, I think so... this can follow?
Teacher	Let's look at it (*reads*) 'Priestley shows how they...' you can say 'misuse' here... 'their power.' Yes, that's very clear. You've got a couple of wrong spellings here. I'll underline them quickly and you can look at them later. Don't bother till you've finished…
Susanne	So what about this bit..?

Teacher	What does that say…? I can't read it…
Susanne	(*reads*) 'Stone… a small stone…'
Teacher	Ah, you mean a pebble… Oh, that's very good, we can talk about throwing a pebble into a pool… it describes it very well.
Susanne	You see… what happens… the story… it's how when thrown a st-pebble? pebble in the water … you get waves going out…
Teacher	Yes, ripples … (*demonstrates*) (Susanne: Yes) ripples spreading
Susanne	So the inspector shows the family how …

Figure 5.8 Feedback on the writing process

The teacher can also react to the information and ideas the learner expresses and ignore language mistakes. This is possible as long as the language mistakes do not interfere with the message that the learner is trying to get across. Here is an example of subject content feedback on an extract from a history assignment. This feedback was given with the comment function of a word processor. Of course, it can also be handwritten on a learner's work. The next example was taken from work by a 15-year-old CLIL learner and was provided by Heidi Krieger of the Rijnlands Lyceum, Wassenaar.

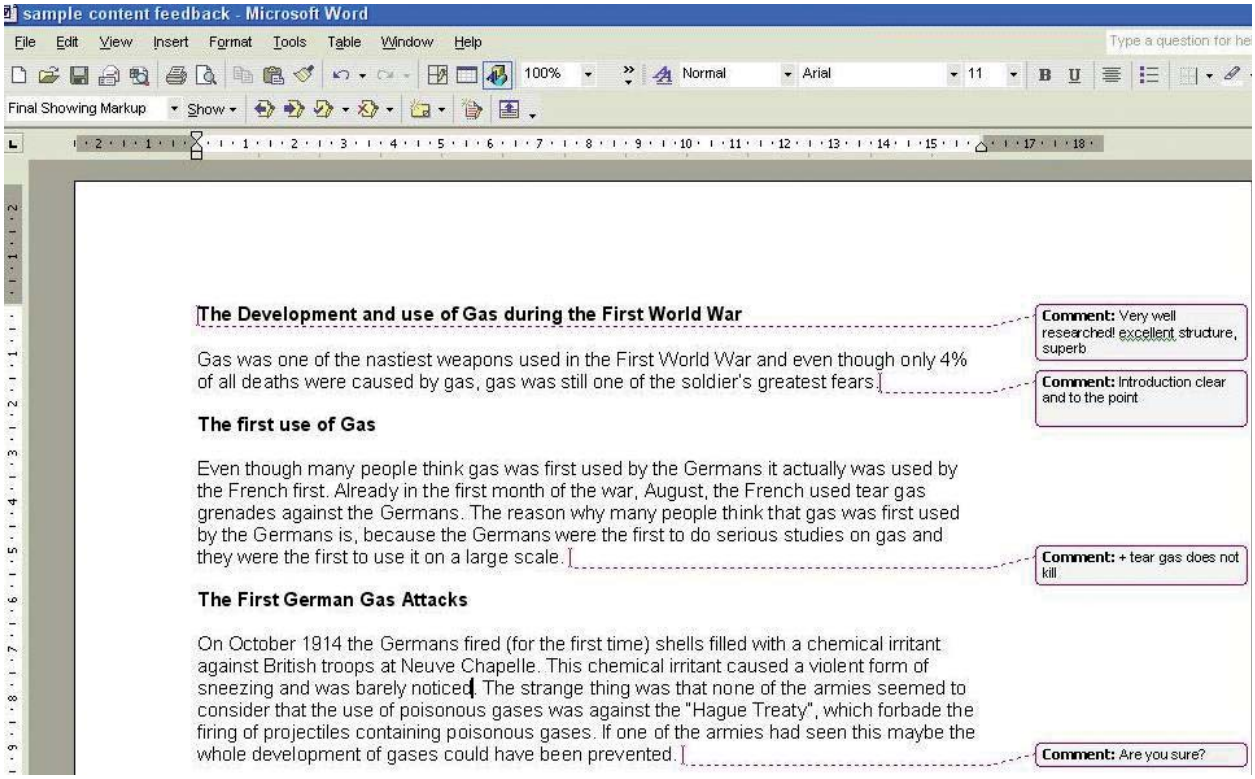


Figure 5.9 Content feedback using comments in Word

This type of feedback on written work can also be given as suggested above, by putting a piece of writing on a smartboard or computer and digital projector. In that way, it is possible to draw the whole class's attention to points that you want to give feedback on.

5.6.9 Giving feedback on content and language

Gibbons (2002) suggests a number of questions teachers can ask themselves while they assess a learner's written work. These are different from the previous suggestions, as they take a top down approach to assessing writing. The questions first relate to the overall meaning and organisation of the writing and its effectiveness in getting the message across. After this, the questions relate to sentence connections,

sentence construction and accuracy of spelling and punctuation. The assumption underlying this approach is that if only spelling is corrected, a learner's writing skills will not improve. Learners also need to learn how to organise and structure a text for an audience. Here is an analysis of the learner's geography text on visual and infrared images (see Example 36 in 5.6.7) using the questions Gibbons suggests (2002, p. 73):

General	**Comments on learner's written work**	**Suggestions for language work**
Is the overall meaning clear? Are the main ideas developed? Does the writing reflect the writer's other classroom language experiences (e.g. what they have read or talked about)? What is your overall impression compared to other things the learner has written?	Meaning is clear and all elements of image analysis are present.	Work on creating appropriate subtitles.
Text Type		
What kind of text is this? Is this appropriate for the writer's purpose? Has the writer written this type of text before?	This is a descriptive text explaining cause and effect. The learner manages to explain cloud structures and their effect, but the text is still clearly that of a learner.	Work on characteristics of texts explaining cause and effect, using authentic examples as models.
Overall organisation		
Is the overall structural organisation appropriate to the text type? Are any stages missing?	The structure is clear, and well organised.	
Cohesion		
Are the ideas linked with the appropriate connectives for this text type? Is there an appropriate variety of these connectives? Are pronouns used correctly (e.g. *this* and *it*)? Do pronouns have a clear referent (e.g. is it clear what *this* refers to)?	The learner uses the connectives *so, this means, and, also, this causes*. She uses *Now I'm going to* and *Now you can see* which is spoken rather than written language. Good use of *this, that it, there*. All pronouns have clear referents.	More variety in connectives of cause and effect. Written links for sequencing. Differences between spoken and written language.
Vocabulary		
Is appropriate vocabulary used? Is there semantic variety (e.g. does the writer use a range of words to describe clouds)?	The learner uses *high, thick, lumpy, swirl, light grey, short, heavy, low, pretty bright, light rain, showers*: plenty of variety, but some L1 interference (e.g. *cares for* from *zorgen voor*).	Literal translation and dictionary work - how to choose synonyms.

Sentence grammar	Comments on learner's written work	Suggestions for language work
Is this accurate (e.g. correct use of tenses, word order)?	Some sentence structure problems.	Work on writing full sentences.
Spelling		
Is this accurate? If the writer does not produce the correct spelling, what is already known about the possible spelling (e.g. different possible ways of spelling vowel sounds or consonants)? What knowledge about the spelling of this word is still lacking?	*Lompy* suggests the learner may not hear the difference between /^/ as in *shut* and /σ/ as in *shot*, in English.	Listening and pronunciation training; ways of spelling different sounds.

Table 5.6 Language analysis

This kind of analysis of a learner's written work provides the subject and language teacher with a detailed picture of the learner's strengths and weaknesses in writing for the subject. Based on this, they can plan work to help all their learners write more effective subject texts. It is also possible to look at learners' written work in class using these questions. This will help learners to think about the effect of their texts on an audience, and help them develop the language they need to talk about their writing.

The analysis can be made by language teachers individually or as a department, using several texts, and can be used as input for the English lessons. The subject teacher can also choose to analyse a typical learner text with a language teacher in order to develop their own awareness of language used in their subject.

The questions above can also be used by the language teacher to develop a class profile and prioritise language work. Although this type of analysis is time consuming, the more teachers make use of it, the faster they become at it. There is also a high return on the time you invest, as it feeds into the teaching of both subject content and language.

5.7 CONCLUSION

In this chapter, we have shown why assessment and feedback are important in CLIL, and explained how they can be used by subject teachers to maximise the learning of both subject and language. We have emphasised the importance of assessing and giving feedback on language both for the learning of the subject and for language learning.

To sum up, these are the key points from this chapter:

- Asses language and give feedback on language to encourage learners to pay attention to language.
- Align activities, aims and assessment to maximise the teacher's influence on the learning of both content and language.
- Use assessment *for* learning to help learners to perform better in both the subject and language.
- Bilingual learners perform better when a range of different types of assessments are used.
- Asses language so that learners express their content ideas more carefully, which means they learn the subject matter more thoroughly.
- Asses language to help learners improve their language use in all subjects.

- Assess language to monitor learners' progress in language.
- Assess language to obtain information about the types of difficulties learners are having with language.
- Use assessment rubrics to help make subject and language assessment criteria transparent.
- Do a peer and self-assessment to help learners become aware of what is expected of them.
- Provide visual and language support in assessments for learners with limited language. This helps learners demonstrate what they know, irrespective of their language ability.
- Correct certain types of spoken and written language mistakes.

There are some key principles for assessing language. When teachers assess language, they can:

- Make the marking criteria explicit.
- Mark selectively related to the language marking criteria.
- Refer to the criteria when they mark, mentioning both effective use of language and giving specific advice on what learners need to improve.
- Encourage learners to check their work themselves, using the marking criteria.
- Be consistent with other subject and language teachers within the team, so that parents, pupils and colleagues understand how language is being assessed.
- Give feedback as soon as possible, both while learners are completing assignments in class, and soon after they have finished the assignment.

5.8 TEACHER DEVELOPMENT

As a follow-up to the ideas in this chapter you could do one or more of the following activities:

1. List the types of assessment that you use in your subject. Classify them in the Cummins Quadrants. If one quadrant is over-represented, design some new assessments which will create more balance in the range of assessments you use.
2. Collect three pieces of written work from your learners at the end of each year (three samples from first years, three from second years, and three from third years). Work with a teacher of English to make an overview of the types of language problems learners have in your subject. Use the form in this chapter based on Gibbons (2002) (see Table 5.6).
3. Record a learner carrying out a presentation in your subject and watch or listen to the recording together with a teacher of English. Formulate feedback on the learner's subject skills and language skills. Compare and discuss your comments with your colleague, and jointly design assessment criteria for use in future years.
4. Collect three examples of learners' spoken or written work for your subject. Decide with a colleague what type of feedback would be most effective for the learners. Look back at section 5.6 for inspiration.

5.9 PRACTICAL LESSON IDEAS

How can you assess learners and give feedback? Some practical ideas for assessing and giving feedback.

Practical lesson ideas for assessment

Activity 5.9.1 Name and assess the content and language used in activities

Describe and assess speaking and/or writing aims related to assessments in your subject

Description

When you set an assessment, tell the learners both the subject focus and the language focus of the activity. Explain the language focus for speaking or writing and tell the learners you will assess both the content and how they use language to achieve the speaking or writing task.

Subject example

Geography: Globalisation

Show learners how the assessment, content and language aims are linked by putting them on the board when you set the assignment:

Assessment	Geography focus	Language focus
How does globalisation affect people at a local level, and what happens if the economic chain is broken? Write a report for a local newspaper, or record a programme for local radio.	Identify effects of globalisation on factory workers and explore the impact of a break in the chain on individuals and the industry.	Write using a report genre, or devise a radio report and tape in groups of two or three.

Variation

Geography: scale and geographical analysis

Through the activities in this lesson you will be able to understand, use and correctly spell words relating to:

- scale, e.g. *catchment area, local, regional, national, international*;
- geographical analysis, e.g. *link, survey, perception, stereotype*.

Speaking and listening - the activities will enable you to:

- ask questions to gain clarification and further information, e.g. *why, how, what*, *when*;
- answer questions using relevant evidence or reasons.

Writing - the activities will enable you to:

- develop ideas and lines of thinking into continuous writing (250 words minimum).

(Based on www.standards.dfes.gov.uk/schemes2/secondary_geography/geo01/234660).

Activity 5.9.2 Task with language and subject assessment criteria.

Assess in a task instead of a test and provide explicit marking criteria for both subject and language

Description

Use a checklist to design an assessment task, rather than a pencil and paper or digital test. Include language and subject assessment criteria when you give the checklist to learners.

Checklist:

1. What kind of written or spoken product could I use to assess the content of this topic? (see 4.5.1 for examples of written and spoken products)
2. Who would be an appropriate, English-speaking audience for the product?
3. What content will I assess in the product?
4. What language will I assess in the product?
5. Should the assessment be individual, pair or group work?
6. How will I assess pair or group work?
7. How will I encourage a fair division of work in the group?

Subject example

Biology: Classification

Original idea by Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle. These answers are based on the poster in Example 31.

1. What kind of written or spoken product could I use to assess the content of this topic? *A poster*.
2. Who would be an appropriate, English-speaking audience for the product? *A primary school publisher in England who wants posters for classrooms*.
3. What content will I assess in the product? *Biological classification, main body features, habitat, feeding, reproduction, prey, adaptation to environment, threats*.
4. What language will I assess in the product? *The use of adjectives*.
5. Should the assessment be individual, pair or group work? *Pair work*.
6. How will I assess pair or group work? *By assessing task division*.
7. How will I encourage fair division of work in the group? *By including it in the assessment criteria*.

Activity 5.9.3 Assessment questions

Learners answer questions about their assessment before submitting it

Description

Write your assessment criteria in the form of yes/no questions to your learners. Give them the questions at the same time as you give the task, so that they think more actively about what they have to do. The questions will vary according to the task you set. Here are some example questions which learners can answer to check they have completed a task properly, based on the geography example below.

1. Is your message clear to the audience? (Does it persuade/argue/complain/narrate effectively?)
2. Does your work give a detailed explanation of...?
3. Does your work cover all of the points required by the teacher?
4. Have you used an appropriate style for your audience?
5. Does your work suggest...?
6. Are your arguments convincing?
7. Do you give appropriate evidence to support your main points?
8. Is the presentation or layout clear?
9. Is it clear that all the members of the group participated equally?
10. Have you involved the audience by asking questions? Are the questions relevant?
11. Are you able to answer questions about the topic from your audience?
12. Does your work make an effective visual impact on the reader?

Subject example

Geography: Redevelopment of the rainforest
Assessment task: decision-making exercise

The problem
A large area of land in the Brazilian rainforest is in need of redevelopment. There is, however, disagreement about which method of redevelopment would be most appropriate.

Your role
Your group are representatives of the Kayapo Indians, the Government, or the WWF.

Your task
1. Produce a poster which will **explain** how you think the rainforest should be developed and which will **persuade** the landowners that this is what they should do. *Remember that you have been asked to present the viewpoint of a particular group*.
   In your poster you need to include:
   (a) an explanation of why the natural forest environment is under threat;
   (b) possible alternative solutions;
   (c) detail about the method which you are suggesting and why this would be the best solution;
   (d) pictures and written information.
2. Make a group presentation explaining your ideas. *Every member of your group is expected to contribute to this presentation*. After you have given your presentation, other pupils will have the opportunity to ask questions. You will be expected to provide answers to these questions.

Assessment criteria in the form of questions
Your work will be assessed according to the following questions:
1. Does the poster make an effective visual impact on the reader?
2. What viewpoint does it take? Is the message clear?
3. Does it give a detailed explanation of why the forest environment is under threat?
4. Does it offer a range of solutions?
5. Do you provide appropriate evidence to persuade the reader or listener that your solution is a good one? Is your argument convincing?
6. Is the presentation clear? Do all members of the group participate?
7. What sort of questions do you ask and how well do you answer the questions asked of your group?

(Adapted from
www.standards.dfes.gov.uk/secondary/keystage3/downloads/lit_xc2_023501mod11mark.pdf)

Activity 5.9.4 Rubrics

Making assessment criteria transparent

Description
You will need a copy of an assignment or project for your learners on paper and an empty rubric (see Example 32 and 33).

1. Discuss the assignment or project. Work with a colleague or colleagues (subject and language teachers) or learners, to clarify subject and language aims.

2. Brainstorm together to produce a first version of the assessment criteria. Accept all ideas at this stage. For example, here are some brainstormed criteria for a history presentation to a German commandant on how the use of gas in the First World War can be justified:

Possible subject criteria
Clear introduction
Accurate information (dates, events)
Complete information on how gas was used and by whom
Reasons why the use of gas can be justified
Reasons why its use cannot be justified
Clear conclusion
...

Possible language criteria for speaking
Pronunciation, intonation, word stress, grammatical accuracy grammatical range, vocabulary range, use of linking words, fluency, use of language of persuasion, ...

Possible presentation criteria
Attention-grabbing start
Visuals support points
Eye contact
Body language
Audience awareness
Amount of text on PowerPoint slides
...

3. From the brainstorm, select five to eight criteria, so that the rubric fits on one page. Write them in the left-hand column.

4. Write *descriptors* (short descriptions) in the boxes. Start with column 4, the best achievement, and work backwards. Be as specific and positive as possible: write what IS true as far as possible, rather than what is not. A useful technique for writing descriptors is to use the phrases *4. yes; 3. yes, but; 2. no, but; 1. no* while writing each category. For example if the criterion is *species information*:
   level 4: *Yes*, species information is complete and correct
   level 3: *Yes*, the species information is correct, *but* it is not complete
   level 2: *No*, the species information is not all correct, *but* some of it is
   level 1: *No*, the species information is not correct at all

5. Share the first draft with other colleagues or another group of learners and ask them to give feedback on its clarity. You could also try assessing some assignments with it, if available. Discuss how clear and useful the criteria are.

6. Revise and improve the rubric. Make any changes you feel are necessary based on the feedback and your own experiences in the try-out.

Activity 5.9.5 High or low demands

Using Cummins' Quadrants to balance cognitive and contextual demands

Description

Design an assessment which would fit into each of Cummin's quadrants. Use this to design assessments which vary the cognitive and contextual demands you make on learners across the years.

Subject example

Geography: Development of a waterfall

Quadrant 1

Label

Provide diagrams of the two stages in the development of a waterfall, with a list of terms. Ask learners to draw an arrow from each term to the correct place on the diagram.

Quadrant 2

Reproduce information from a text

Give learners a text on waterfalls and ask them to write down their answers to written questions on the text.

Quadrant 3

Transform and personalise

Ask learners to draw a diagram and explain the two stages in the development of a waterfall for a tourist brochure for a well-known waterfall.

Quadrant 4

Argue a case using evidence

Ask learners to write an article for a local newspaper, arguing against placing a pipeline in a waterfall.

Activity 5.9.6 Relay race labeling

Assessing kinaesthetically

Description

Make four large, clear drawings of a picture you would like your pupils to label. You will also need 4 marker pens. Pin the drawings to the wall on the other side of the room. Make four teams. Teams stand at one end of the room; the drawings are at the other end. Teams have a pile of word cards (the labels for the picture). They send one member of the team at a time to label the drawing; learners are only allowed to complete one label at a time. Teams receive points for the number for labels they accurately place in a fixed amount of time. This can count towards their final grade at the end of term.

Subject example

Physical education: Parts of the body

Original idea by Dennie Lodders, Dr. Mollercollege, Waalwijk

Use a picture of the human body and ask learners to label the different parts. Picture and labels can be found on www.enchantedlearning.com/subjects/anatomy/body/label/

Activity 5.9.7 Inner / Outer circle

Sit in two circles and answer questions about a topic
Description Create two parallel circles of equal numbers of learners (e.g. five in the inner circle and five in the outer circle), facing each other. Tell the learners they are going to have a test. They will revise together, and then take the test individually. Tell them the topic of the assessment. Show a question on the topic, which they discuss with the learner opposite them. Then say: *outer circle move one person/two people to the left*, so that they are then facing a new partner. Call out a second question which they discuss with their new partner. Call out: *inner circle move two people to the left*, and call out your third question. After all the questions have been asked and discussed, give the learners the questions in writing and allow them to write down their answers. Grade as a test.
Subject example **Biology: Photosynthesis** On a digital white board project ask questions about photosynthesis (to be found at www.bbc.co.uk/apps/ifl/scotland/education/bitesize/higher/biology/cell_biology/quizengine?quiz=photosynthesis) and reveal one question at a time, allowing the learners to discuss their answers.

Activity 5.9.8 Correction code

Give feedback selectively

Description
Use a correction code to give feedback on learners' language.

Subject example

History: First World War
Learners have written a letter from a soldier in the trenches to his family at home (original idea by Jan de Brauwer of Cals College, Nieuwegein).

^ Mom, dad and lovely sister,
P
I can't hide it anymore, it is too hard to be here without telling you. I am really sorry, but I
Prep T
lied. I am not at a boarding school, but I am at the army. I know you wouldn't accept it,
T
that's why I didn't told you anything. The teacher at school (Mister Webber) said that we
S V
needed to serve our country by going into the army and that we would be honred a lot if the
T ^
war would be over. I signed for the army with a lot of my friends, and now I need to serve
/
the army till the war is over. I really want to go home, but I can't anymore. With my friends
P
I'm now fighting against the Germans in the trenches. It is horrible, killing someone is much
? WO
harder than I expected and I've seen one of my friends getting killed. I dream now every
night about that moment.

Here is a key to the correction code

Symbol	Meaning
T	Change tense or time
S	Try spelling this again
P	Correct the punctuation
V	Vocabulary: find a different word for this
Prep	Change the preposition
^	Put in the missing word
Exp	Rewrite this, to improve the expression
WO	Change word order
WF	Wrong form (e.g. told instead of tell)
/	Split word up
☺	Well-written section: apt and clear

Variation
There are many different possible correction codes. Here is an example of the most common codes used for correcting English. The most effective code is one which is designed and then used by all the teachers and learners together.

Code	Meaning	Example
WW	Wrong word	The **revelation** started in 1879
WT	Wrong tense	The revolution **has started** in 1879
WO	Wrong order	The revolution **in 1879** started
Sp	Spelling	The rev**a**lution started in 1879
P	Punctuation	The **R**evolution started in 1879
X	Extra word	The revolution started in **the** 1879
?	Meaning not clear	The revolution which started was 1879
M	Missing word	The revolution started 1879
S	Style	The revolution **kicked off** in 1879

Activity 5.9.9 Common mistakes

Identify and correct common mistakes

Description
Draw up a list of mistakes that learners often make in their writing or speaking for your subject. Put them in a table, and ask learners to identify the type of mistake and then correct it.

Subject example

History: The French Revolution

Common mistakes	**Type of mistake**	**Correct sentence**
The revelation started in 1789		
The revolution has started in 1789		
The revolution in 1789 started		
The revalution started in 1789		
The Revolution started in 1789		
The revolution started in the 1789		
The revolution which started was 1789		
The revolution started 1789		
The revolution kicked off in 1789		

Activity 5.9.10 Card game with typical mistakes

Learners play a card game correcting typical mistakes

Description
Draw up a list of mistakes that learners make during a series of lessons for your subject. Create cards. Form groups of four. Stack the cards in the middle of the table. Learners take turns to turn over a card. They read the sentence aloud and decide if it is correct or not. If the sentence is correctly identified as a correct sentence, they may keep the card. If the sentence is not correct, the learners say what is wrong with it and how it should be corrected. If their correction is accurate, they keep the card; if not, it is returned to the pile. The winner is the learner with the most cards when all the cards in the pile have been turned over.

Subject example

Any subject: Conversation
Below you find some examples of sentences that you can put on the cards:

I was together with a friend.
His mother she was the head of volunteers.
She's good in English.
I've been working on school.
I didn't knew that.
Is it possible that I get some tea?
We're with the four of us.
On the havo that's impossible.
What do you like of this school?
I live here about four years.
I do my shoppings.
He's doing it enthusiastic.

Activity 5.9.11 False friends

Description
Some words seem similar in Dutch and English but are used to mean different things. These are called False friends. Collect examples of these in your subject, and compare and highlight their use in English and Dutch with a table.

Subject example

Chemistry: boiling points

	UK	NL	
Water **consequently* boils at 100 degrees centigrade.		Consequent	
Rain fall decreases; consequently, there are water shortages.		Dus	

	UK	NL	
Water **consequently* boils at 100 degrees centigrade.	Water **consistently** boils at 100 degrees centigrade	Consequent	*Water kookt **consequent** bij 100 graden.*
Rain fall decreases; consequently, there are water shortages.	Consequently	Dus	*Regenval vermindert, **dus** komt er watertekort.*

Activity 5.9.12 Record learners performing a speaking assessment

Giving feedback on spoken language

Description
Make a recording of learners performing a speaking assessment. Use the recording for feedback on spoken language or for peer or self-assessment.

Subject example

History: Roleplay on Elizabeth I
Record the roleplay and ask learners to give feedback on different aspects of spoken English using a feedback sheet. In the feedback sheet, they should note down good language points and points for development in different areas (vocabulary, pronunciation, grammar).

Activity 5.9.13 Let's talk

Giving feedback on writing during writing

Description
Talk to the learner as they write, and discuss what they are trying to explain.

Subject example

English: Describe how the characters interact in J.B. Priestley's 'The Go-Between'
See the discussion between Susanne and her teacher in 5.6.8.

Activity 5.9.14 Name cards

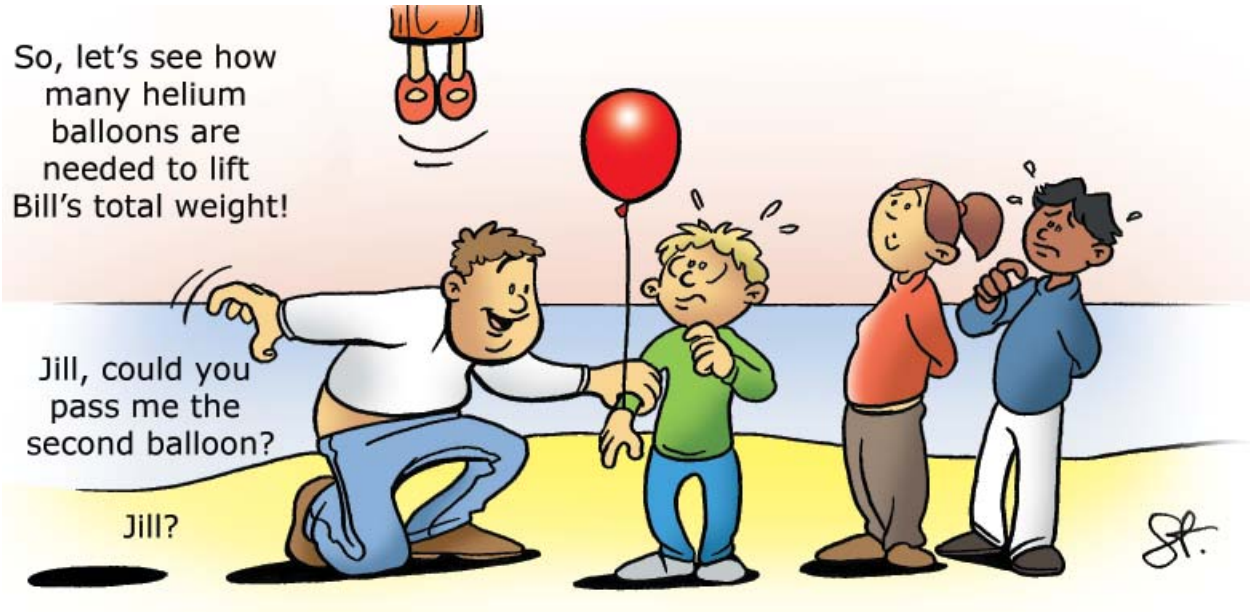
Note language mistakes on individual name cards and give these out individually after a speaking or writing assignment

Description
Produce a name card for each learner like this:

Name:
Good use of language:
Language mistakes:
Corrections:

As learners carry out an activity in class, note their mistakes on the card. At the end of the lesson, hand out the cards and ask the learners to correct the mistakes on the card and return it at the beginning of the next lesson.

6 Using Projects for CLIL



6.1 SUMMARY

This chapter covers:

- CLIL projects[#] and their advantages and disadvantages for learners and teachers;
- characteristics of good CLIL projects;
- cross-curricular and integrated projects;
- grouping learners for CLIL projects;
- CLIL project aims and design;
- the learners' and teachers' roles in CLIL projects;
- WebQuests[#] for CLIL;
- practical ideas for CLIL project work.

6.2 INTRODUCTION

Working on projects can be an extremely rewarding experience for bilingual learners and their teachers. A well-designed project can achieve a greater learning impact than, for example, chronologically working through tasks in a course book. Learners often blossom during project work and put more effort into project lessons. They often work together and retain more about what they are learning, since they discuss and recycle and are creative with information. Moreover, projects are also rewarding for teachers: they can work together on creating materials and evaluating final products or performances[#] and are often pleasantly surprised by the quality of learner work produced during project work.

A project is a multi-skill activity for learners, which focuses on one theme or topic; it supports learners in carrying out one or more performances or pieces of work. Projects are usually collaborative but can also be done individually. Good projects help learners to show the learning that they have already done and at the same time, push them a few steps further. A project can be intensive, lasting for a few lessons, or it can be more extended, taking up one or two hours a week for several weeks. Learners sometimes do projects individually, but they are usually collaborative pieces of work where two learners or more work together.

This chapter discusses and describes CLIL projects. We look at the advantages of using projects and the characteristics of good CLIL projects and WebQuests (projects using the Internet). We also discuss some issues related to groups and projects. The chapter is illustrated with some examples of practical CLIL projects and the practical ideas support teachers in designing and working with CLIL projects. It starts with an example of a cross-curricular geography and English project.

6.3 LEAD-IN

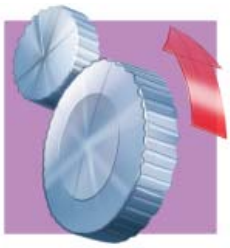
Below in 6.4 you can find the description of a geography and English project called *Expedition through the Sahara*. The project was carried out after the learners had done some work on deserts.

Task 11 Giving feedback about a project

Imagine you are one of the teacher's colleagues and that she has invited feedback from you about her proposed project. She is planning to hand out the document (see Example 37 in 6.4) to her third-year classes. Read the project description and think about or write down your answers to these questions:

- What do you like about this project for use in a CLIL setting?
- How will the teacher's CLIL learners benefit from this project?
- What improvements might you suggest to the teacher to make the project more useful for CLIL?

When you have thought about your ideas, read the comments in 6.4.1. Our suggestions for possible improvements can be found in the Key to all tasks at the end of the book.



6.4 CASE STUDY

This project, designed by Heidi Krieger (Rijnlands Lyceum, Wassenaar), introduces several aspects of working with projects that are covered in this chapter. Heidi comments:

> This project, *Expedition through the Sahara*, forces the learners to sort through an overwhelming amount of information on the Internet in order to choose the information that is appropriate. As the demands are specific, they are forced to change this information into their own words and design. The learners work in pairs on this project and all classroom time is scheduled in the computer room.

The content aims of this project are that learners can:

- describe the characteristics of deserts which affect travel there;
- suggest ways of surviving dangerous situations in the desert;
- draw a map showing a clear route;
- understand food webs in desert climates;
- understand and describe the way of life of the Tuaregs (nomads who live in the Sahara);
- illustrate the brochure appropriately.

The language aims are as follows. At the end of the project, learners can:

- write an informative brochure for members of a desert expedition;
- organise text into a clear brochure;
- write using appropriate tenses (particularly the future tenses);
- scan information to take notes on the dangers involved.

Example 37 Instructions for a project on the Sahara

Internet project: Expedition through the Sahara

Based on a project from Gallagher & Parish (2008)

You are going to lead an expedition across the Sahara. You must research the area in which you will be travelling, map out your route, plan your expedition and then write a brochure. Your brochure must include the following items:

- a title and an attractive title page;
- an introduction about where the expedition is going;
- a map with the route clearly outlined (be careful to avoid conflict zones);
- a paragraph about the things you might expect to see and do on the trip, including information about the landscape, cultural sites and people you might meet;
- a list of all of the things you will need to take and why you might need them;
- a risk assessment chart which discusses the hazards you might face. The chart should look like this:

HAZARD	WAYS TO AVOID HAZARD

- a simple food web that includes at least ten plants and animals from the Sahara (be careful not to choose animals from other deserts that do not live in the Sahara, such as the kangaroo);
- a short diary entry (approx. 250 words) describing a visit with the Tuareg people. This visit would have occurred on a previous expedition;
- a conclusion about how you are looking forward to the trip and to meeting the new members of your group.

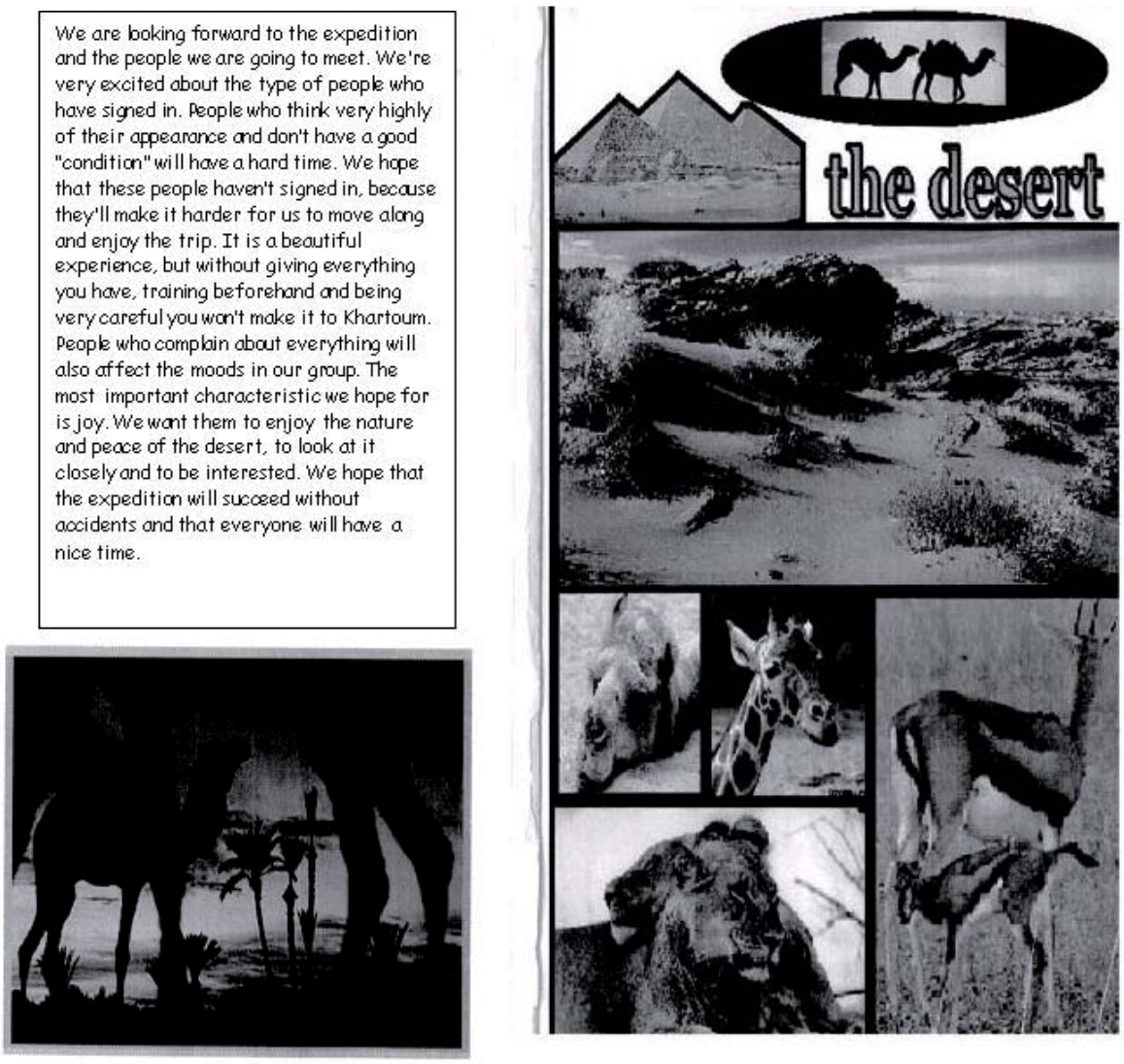


Figure 6.1 Some pages from a Sahara brochure made by learners

6.4.1 Why is this CLIL?

The project is a good example of a CLIL project, since learners are working on a subject (the desert) and language skills (writing a brochure) at the same time. The topic in general is appealing and motivating for the learners. It is quite clear what the teacher expects of the learners in terms of a final product. There is an interesting variety of tasks - a map, descriptive written work, a chart, a food web, a more personal writing task (diary entry) - so that the work that the learners produce will show their understanding of the topic in a variety of ways. The instructions are clear and short and the project is also quite challenging, as it requires the learners to synthesise information from a variety of sources.

The project is a good example of (transformation) scaffolding, since the learners are required to sift through a great deal of information on the Internet and change it into a new form: a brochure for expedition members. Therefore, there is little chance that the learners will only cut and paste information. The project is a culmination of work around the topic of deserts, and thus recycles and adds to information the learners have already come across in the lessons. The tasks are clear, which helps the learners to focus while searching. Finally, the learners are given a considerable amount of freedom and choice in the project; for example, they will need to decide on their route, how far they will travel and for how long, as well as working with design issues for their brochure. This element of choice allows them to display their talents (Mehisto, Marsh & Frigols, 2008).

Task 12 Issues about projects in CLIL

CLIL teachers who work with projects have said the following about them:

Our English department is always very willing to help when we do projects and often initiates them. Our art teacher often has a good, creative idea, and then she asks other colleagues to join in.

Working in groups can be problematic. One group finishes way ahead of time and then hangs around distracting the others. Plus there's always one group that doesn't work together, doesn't hand in stuff, etc. Why bother?

Geography and history have a cross-curricular project, but it doesn't involve the English department, unfortunately.

Projects are so time-consuming, both to create them and to do them. For that reason only, we don't do much project work.

Working on our geography and English project is one of the most satisfying aspects of my year. I have a good relationship with the geography teacher, the learners really like doing the project and come up with some fantastic products. We are going to do it again next year.

The children make lovely products, but sometimes they only cut and paste from the Internet to make their projects. Projects don't really seem to add to their learning.

Based on your own experience, which quote do you agree and disagree most with? Imagine that you are discussing these quotes with your colleagues, which arguments would you use to motivate your choice?

6.5 BACKGROUND

6.5.1 CLIL projects

CLIL schools carry out different types of projects. In CLIL, projects almost always involve two subjects, since the final products of the projects are written in English. Some schools carry out international projects, either face-to-face or online. Other CLIL schools work with individual projects for the International Baccalaureate Middle Years Programme# (MYP) or the International Baccalaureate# extended essay. Teachers working on MYP projects can find a document on www.richmond.k12.va.us/ib_jefferson/MYPPersonalProject.htm. You can copy and use this to help your learners think through their own ideas about individual projects, or you can adapt it to your own school context. CLIL schools may also require learners to write their Dutch *profielwerkstuk* in English.

Cross-curricular projects for CLIL involve two or more subjects. In cross-curricular projects, teachers of two or more different subjects together choose a project topic and formulate aims. These aims can be related to learning, language, content and thinking skills that are useful for the topic. An example of a cross-curricular project is one involving science, religious studies and English, where learners work towards having a debate on different aspects of stem cell research.

In some projects, learners carry out work in different subject lessons for the duration of the project: for example, two hours of English and two hours of geography related to a project on Aboriginals. Some schools organise complete cross-curricular project weeks, where a large project replaces the normal timetable and covers many aspects of the same topic but from different subject angles. Other schools do international projects, where learners work together with other English-speaking learners or visitors on a topic either face-to-face on an exchange programme or online.

A CLIL project is all of the above, but it includes a balanced language and subject focus. Since English is always involved, a CLIL project is by nature cross-curricular. Learners work on aspects of one or more subjects as well as on an aspect of English, and they are assessed on their work in terms of both subject and language. Heidi Krieger's project on the Sahara is an example of an integrated CLIL project: learners are working on their geography knowledge and skills as well as on their English skills when writing a brochure.

6.5.2 Types of projects

Haines (1989) divides projects into four useful categories:

Information and research projects

Information and research projects involve studying or comparing a particular aspect of a topic. For example, learners carry out research into the effects of global warming, comparing two different countries (geography, language work on comparatives).

Survey projects

During survey projects, learners create surveys, questionnaires or interview questions and then gather information about people's opinions on a topic. An example of a survey project would be an interview about energy use in the home (physics, language describing the home, comparisons and statistics).

Production projects

In production projects, learners create or design an authentic or semi-authentic product, for example a radio or television interview where a famous interviewer, for example, Oprah Winfrey, interviews a historical character, for example, William of Orange (history, language for making questions).

Performance and organisational projects

In performance and organisational projects, learners organise an actual experience for others, for example a real mediaeval feast for a group of parents (history, language of cooking).

6.5.3 Advantages of CLIL projects for bilingual learners

There are several good reasons for working on CLIL projects with your learners.

Engagement, motivation and creativity

Project work is a refreshing break from the normal routine and can be relaxing for learners; it allows them to be creative with what they are learning. It is often a way to engage learners, to increase their motivation in their learning process and to support them in taking control of their own learning. Relaxation is important here: creative work can help learners to relax and, thus, to work more fluently and take more risks with their language skills.

Transfer

One of the most important arguments for using projects in CLIL is that learners learn to transfer the information they have learned by applying it in another context or to a different subject.

Example of transfer
Learners learn about classification in biology, then work on a visual poster representing an animal and write a poem about it, thus changing their knowledge about classification to a new form.

Thinking skills

Projects can develop a number of thinking skills simultaneously and in context. Projects often present complex problem-solving activities. This requires learners to work with language at many different levels: to think, to explain, and to reflect on their learning. All of this results in deeper and more effective content and language learning.

Example of thinking skills
Learners gather information about an economic issue (e.g. the credit crunch) and hold a debate, representing different countries' experiences or points-of-view.

Language skills and output

Projects help learners to develop language and produce a lot of output (see Chapter 4). In a CLIL project, learners work on content and English at the same time, thus interweaving content and language. Learners also work on different language skills (reading, listening, watching, speaking and writing) over a period of time. Projects also provide realistic contexts in which learners can apply their existing language skills as well as develop new ones.

Interaction in English during project work can encourage second language acquisition: when interacting, learners need to use English creatively and fluently. According to the multi-feature hypothesis (Westhoff, 2004), the more a learner is involved in a task, the more mental actions are involved and the more learning will occur. As learners interact during project work, they can become aware of what they still need to learn as they speak and write, and thus try to improve their spoken and written work.

Projects also allow learners to recycle language they already know, as well as to discover, create and experiment with new language. In other words, learners produce spoken and/or written output. Projects often encourage writing: through creating different kinds of written products in a project, learners learn to work on different authentic text types and to write informally and formally for different audiences.

Example of language skills
Learners prepare a television debate about global warming. As preparation, they practise giving and asking for opinions by designing a questionnaire for classmates about their opinions on music, thus rehearsing the language needed for the final debate.

Reading strategies - such as guessing the meaning of unknown words from context or scanning texts to see if they contain useful information - are developed during project work and can be transferred and practised in any subject (see 3.6.8).

Finally, learners work on both accuracy and fluency during project work. During peer-to-peer discussions about the project, learners work on their fluency. Accuracy skills in language are developed as they design and polish their final product.

Skills integration

Subject skills and language skills have the potential to be doubly integrated in projects; they can be integrated both within the subject and across the curriculum. For example, if learners have learned to assess the reliability of sources for history and use linking words to narrate a series of events, these are language and subject skills which can be practised again in a different context.

Example of skills integration
Learners have learned during biology lessons to discuss the reliability of sources when discussing, for example, evolution. They have also learned linking words needed to describe processes. Reliability of sources is also a subject skill in history, where different issues are highlighted. A cross-curricular project on the history and theory of evolution could highlight these differences, and at the same time encourage the transfer of language and subject skills.

Transferable skills

Projects can also encourage the development of a number of skills other than language or subject-related skills. Learners who are weaker in language can show their understanding and skills of a subject in non-linguistic ways: see Chapter 4 for more ideas on this. Some of these skills include designing (e.g. leaflet), illustrating (photos, drawings), organising (of people, materials, tasks, and time) and using equipment (camera, computer, or DVD recorder). Thus, bilingual learners can demonstrate their knowledge in non-linguistic ways, so that weaknesses in language do not interfere with their progress in the subject.

Example of a project involving other skills
Learners make a sketch or film about a famous scientist such as Marie Curie or Gregor Mendel, and dramatise an important scientific discovery, developing organisational skills along the way.

Authentic assessment

Projects can work as a form of continuous assessment and can allow learners who perform less well in a testing situation to be assessed, arguably in a fairer way, on a wider variety of skills. More information on this aspect of projects can be found in Chapter 5.

Cooperation

Most projects are carried out in pairs or groups and encourage and develop cooperative skills. A well-designed project encourages all learners to be actively engaged and involved, and encourages positive interdependence. For more information on creating projects which involve all learners, see section 6.6.

Example of cooperation
In a project on Aboriginal Dreamtime stories, learners research information from different sources, and then put their individual work together to produce a final poster presentation.

Learner differences

Projects enable learners of different abilities, skills and multiple intelligences to work together, using their talents and qualities (see practical lesson idea 6.9.5). This shows all learners how useful the different types of intelligence can be and encourages them to value and develop a variety of types of intelligence.

Example taking learner differences into account
In a project on life in the trenches in the First World War in Europe, learners are given the choice of presenting their knowledge in different forms: a pen and ink sketch showing the details of a trench, a letter from the trenches, a rap about living in the trenches, or a conversation between two soldiers in a trench.

Independence

Projects encourage and provide practice for independence and autonomy, since the learners are responsible for planning, decision-making and division of work. For example, learners can choose a topic or sub-topic within a theme or choose from a variety of end products. In a Dutch context, projects prepare learners for working on their *profielwerkstukken*. In an international context, projects prepare learners for their individual personal project in the Middle Years Programme or the International Baccalaureate extended essay.

Example encouraging choice and autonomy
In a project on hip hop music, learners choose whether to write a song, make a film or write a biography.

Connection with the real world

Projects can bring real-world situations into the classroom or involve fieldwork or work in the community. Using language in a real-life context makes more realistic language demands on CLIL learners. Moreover, if they have practised producing language during a project, learners are more likely to be able to produce it themselves in real-life situations.

Example of connection with the real world
A biology project on water involves collecting water samples from different sources.

6.5.4 Advantages of CLIL projects for teachers

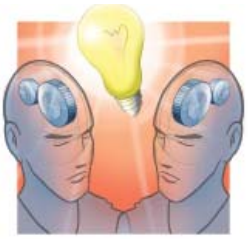
Projects also have a number of advantages for teachers. Firstly, good projects are durable and can be used for several years in succession. Ready-made projects for the sciences for worldwide collaboration can be found on the Internet, for example at www.scienceacross.org. WebQuests - projects on the Internet - for all subjects in English can also be found on the Internet (see 6.6.9 for more information on WebQuests). Projects enable teachers to develop themselves through working together, and talking about teaching and learning in project settings helps teachers to focus clearly on their aims. During project work, teachers can come into more personal, close contact with learners, coaching them through the different stages of their work. They become better acquainted with their learners and more aware of each individual's qualities, contributions and level of English, as well as of the areas in which they still need support. This is good for CLIL because both language teachers and subject teachers become more aware of what the learners need to learn to perform well.

6.5.5 Disadvantages of CLIL projects

Projects have their disadvantages, too. Designing and working with projects can be time-consuming and requires careful planning and coordination within the school. Some teachers refuse to cooperate on projects, and some learners need a great deal of structure and can lose track of things if a project is not well-designed: it is advisable to start with a small scale project if a class is not used to this type of work.

Some groups work faster or slower than others. If this is a problem with your groups, design some extra, more challenging activities for fast finishing groups or encourage them to choose more difficult end products. Other learners may take a 'free ride' in their group, letting others to do all the work.

Furthermore, there are problems with plagiarism sometimes, especially concerning copying and pasting from the Internet without mentioning sources. To avoid this, projects should be designed so that learners need to transform information from one source into another product. For more on this issue, see section 6.6.



6.6 APPLICATIONS FOR CLIL

In this section of the chapter, we look at characteristics of good CLIL projects, at project design, at the roles of teachers and learners in projects and at WebQuests for CLIL.

6.6.1 Characteristics of good cross-curricular CLIL projects

CLIL projects work on both language and subject. Some characteristics of good CLIL projects are listed below. A good CLIL project:

- balances subject and language demands and expectations;
- gives the learners a clear, overall subject and language aim;
- motivates learners and appeals to them;
- challenges faster learners and supports weaker learners;
- tells the learners clearly what skills and understanding they will gain during the project;
- takes the learners into the real world and brings the real world to the learner;
- clearly connects the subjects involved to each other;
- involves teachers equally;
- has a variety of clear final products;
- provides models and examples;
- explains who the realistic audience is for the final products and therefore gives a reason for writing or speaking in English;
- puts cooperative learning into practice;
- includes crystal-clear instructions;
- shows the learners how they are to be assessed on subject, language and process, for example in the form of a rubric;
- includes a number of realistic, lifelike subject and language activities which relate and lead clearly to the overall aim;
- gives the learners an element of choice, in terms of topic, way of working, or final product or performance;
- can be completed in the allocated time;
- provides coaching and/or feedback to the learners when needed;
- helps learners to practise transferable skills.

6.6.2 Formulating project aims

When teachers design projects, one of the first steps after deciding the topic is to formulate the aims. One way of thinking about aims can be to express them in both statements and questions, which helps teachers to formulate aims in terms learners can understand. Here are some examples of a few overall aims for some single-subject projects.

Example projects aims for content	Example project aims for language
Geography Learners will understand public opinion concerning local shops and businesses on a shopping street. (Why do people shop in the high street?)	Geography Learners know how to design a questionnaire and write up the results of a survey.
Art, craft and design Learners will understand what is meant by *Dreamtime* and its importance for Aboriginal people. (What is *Dreamtime* and what does it mean for the Aboriginal people?)	Art, craft and design Learners can describe Aboriginal art work, stories and the Australian landscape both verbally and in writing.
Biology Learners will understand how gene mutations cause disease. (How do some genes make us ill?)	Biology Learners can describe the effects of gene mutations verbally or in a PowerPoint presentation.
Geography Learners will appreciate how population distribution and growth affects society. (How does the size and growth of a population affect how we live?)	Geography Learners can comment on graphs and explain arguments.
Physics Learners will understand how embryonic stem cell research might affect society. (How does stem cell research into embryos affect our lives?)	Physics Learners can formulate arguments related to a controversial topic.
Biology Learners will understand the effects of eating fast food. (How does eating fast food affect people's lives?)	Biology Learners can use the language of cause and effect.
Learners will appreciate why it is necessary that there is a healthy *Happy Meal*. (How can we design and present a healthy *Happy Meal*?)	Learners can present the characteristics of a healthy meal verbally and in writing.
Maths Learners will understand how to measure phenomena, such as water flow, the height of buildings and the width of rivers. (How can I measure how fast a river flows or how high a building is?)	Maths Learners can explain data, facts and figures.

Table 6.1 Example project aims for content and language

6.6.3 Project design

First of all, a number of conditions need to be met before you can start a project. For example, if the project is cross-curricular, there must be a logical link between the subjects, and all teachers should be equally involved. Teachers need to have sufficient time and energy to develop and carry out the project and its evaluation. Finally, the school needs to be flexible in timetabling, to enable teachers and learners to carry out the project.

There are many aspects to consider when designing good cross-curricular projects. Teachers can use these questions to discuss and design a CLIL project: they cover many aspects of project design. A shorter checklist is also provided in 6.6.1.

The learning

One aspect of projects to think about is the learning itself. The clearer this is to all the teachers involved, the easier it is for them to explain to the learners. Aspects to consider include:

- How can you interest and motivate the learners?
- What do you want the learners to learn during the project? What are the overall, general learning aims (for both language and subject)? What are more specific learning goals (per subject)? What do the learners need to understand at the end of the project?
- What new knowledge or skills do learners learn or practise during the project?
- How does each activity within the project contribute to the whole project?
- How is the project connected with the outside world?
- What is/are the final product or products or performances and how are these related to the overall project aims?

The learners

Teachers also need to consider the learners and what they can contribute to a project. This may save the teacher work.

- What choices can you build in for learners (in terms of topic, groups, planning and performances)?
- How are the learners divided into groups or pairs (by learning styles or multiple intelligences, preferences for friends, faster and slower learners together or not)? Who decides on group division?
- How is the work divided fairly and equally between the learners?
- How do you ensure that each learner does their work?
- How do you cater for fast finishers or slower groups?

Organisation

Several aspects of organisation also come into play during a project.

- Who is coordinating the project?
- Which subjects and teachers are involved?
- Which and how many learners are involved?
- How can you organise time to prepare, complete and assess the project? Which materials do you need?
- How is ICT involved?
- Which classrooms need to be booked?
- Is fieldwork involved? If so, who is doing the fieldwork, when and where?
- Who introduces the project to the learners?
- Who is in charge of each class or group of learners?
- When are learners assessed?
- How can you ensure deadlines are kept? What are the consequences for learners if deadlines are missed?

Example 38 Fit is cool

Idea provided by Dennie Lodders, Dr. Mollercollege, Waalwijk

The project *Fit is cool* is a one-day cross-curricular project to raise awareness of the importance of exercise and diet, which involves the teachers of English, physics, physical education, biology and maths, and all the learners in year 1.

Here are some examples of activities the learners carried out per subject:
Biology: note down everything you eat for a whole day and calculate the calories you took in.
Maths: calculate your body mass index (BMI).
Physical education: carry out different tests to measure how fit you are; for example, measure how supple you are, heart rate and blood pressure.
English: write a report on the conclusions about your fitness, including some resolutions about exercise and/or diet, and an action plan for the future.

Coaching - the process

Teachers can think about aspects of coaching and build these into project work, allotting time for coaching during the project.

- Who coaches the learners during the project and when?
- What sort of feedback is provided for the learners during the project as they go along? Is it feedback on English or feedback on the subjects? Is the feedback in English and is it given orally, in written form, or both?

English

In a CLIL project, the language element is important.

- How are the learners helped to learn English in the project? Why do learners really need to use English in this project?
- Which good English models of final products can you provide?
- What feedback do you give to learners on their English both during and at the end of the project?
- What language support can the English teacher give to learners to help them write and/or speak fluently and accurately during the project?
- What language support can the English teacher give to the teachers during all stages of the project?

Presentation of final products or performances

As teachers design projects, they can consider the form of a presentation or performance.

- How are the final products presented?
- When are the deadlines for the final products?
- To whom are the final products presented (teachers, learners, parents, management or another audience)?

Assessment and feedback

It is useful to give learners the assessment criteria right at the start of a project; preferably in the form of a rubric (see Chapter 5).

- What are the assessment criteria for the final products?
- How is the process and/or group work assessed?
- Is there a balanced focus on both content and language?
- What sort of feedback will learners get on their final products: oral, written, a mark?
- What is the status of the marks?
- Is there an individual or a group mark, or both?
- Who assesses: the teacher, the learners, or both?

Evaluation

At the end of a project, evaluate the project with the teachers and learners so that everyone can learn more about projects.

- Which aspects of the project will be evaluated?
- Who evaluates?
- How can you learn from the evaluation for future projects?

6.6.4 The learner's role in projects: grouping learners

There is a big difference between letting learners work in groups and structuring group work so that learners really have to work together. There is also a difference between giving a group a task and structuring a task so that everyone plays an equal part. When designing or searching for a project, teachers need to think about the roles learners will play during the project and the tasks they will each undertake, to ensure good learner cooperation and a fair division of work. The clearer and fairer the roles and tasks for each learner and the group as a whole during the project, the more rewarding the cooperation.

Badly-functioning groups can be disastrous during project work, so it is worth taking some time to consider fair and effective groupings for learners. The groups in which learners work during project work are vitally important for both the learners themselves and for teachers. The main objective is to divide the class into an optimal number of different learners. How can teachers divide their classes into effective and successful groups for project work?

As a general rule, groups of two to four members work best: they are easy to organise, each member can contribute a reasonable amount of work, and decision-making is efficient. With a group of four, there is less chance that the group will split off into smaller groups than with a group of five or more learners.

There is no right way to divide a class into groups, but here are some aspects to consider. Some ways of dividing classes into groups are more time-consuming, and therefore only relevant for longer projects. A teacher can choose:

- **Random selection:** The teacher gives the learners a number and groups them according to the numbers, in arbitrary groups. This is easy to organise for the teacher and breaks up friendship groups. However, learners often feel that they have no choice, and groups may turn out to be incompatible.

- **Self-selection:** The learners choose the groups themselves. This is easy to administer from the teacher's point-of-view, and learners like to choose their own group members. Some research has also shown that friendship groups perform better. However, there are also disadvantages: some learners might feel left out, and this way of dividing up the class can often result in one or more groups not functioning well at all.

- **Partial self-selection:** The learners state their preferences which the teacher takes into account. Before the project starts, the teacher discusses the issue of group formation with the group, for example by asking questions: *What makes a good group? Why do some groups work well whereas others do not? What are the advantages and disadvantages of being in a group of friends?* There are examples of such discussion questions in the practical project ideas section of this chapter. After the discussion, learners can write down three names of classmates with whom they would prefer to work, as well as three names of classmates with whom they would rather not work. The teacher tries to take these preferences into consideration when dividing the class into groups. In this way, both the teacher and the learners have a say in how the groups are put together.

- **Learning styles:** The learners are grouped according to learning styles (or multiple intelligences). Before the project, the learners do a learning style - or multiple intelligences - test in order to discover their own learning styles profiles (see practical lesson idea 6.9.5). Groups are then formed according to the test results. Grouping according to similar learning styles or intelligences is a good idea if groups can choose a final product together. Grouping according to different learning styles ensures a variety of strengths in a group, so that all learners can use their particular talents to contribute to the final product.

- **Group appointment:** The teacher decides on the grouping according to his or her own criteria, such as behaviour, marks, level of English, learning style and gender. Learners usually feel that this is a fair way of dividing groups. A disadvantage is that the learners do not have a say: it does not encourage learner autonomy.

- **Task appointment:** Groups are divided according to their preference for the final product. If in a project the learners may choose the final product themselves, the groups can be divided according to their wishes. This is motivating for learners, since they are working in a group towards the product they have chosen. This way of forming groups encourages learner autonomy. However, there is one disadvantage: too many learners may want to create the same final product. In such situations, the teacher could ask the learners for a second and third choice.

6.6.5 Cooperative learning: SPIRE

Marzano (2000) mentions five conditions which stimulate cooperation in groups and which can also be applied to project design. These are simultaneous interaction, positive interdependence, individual accountability, reflection and equal participation: we use the acronym SPIRE. When designing projects, teachers can use these conditions to plan and check the activities that learners do, to ensure more collaboration and participation during project work. A brief definition of each of these conditions, illustrated with a project on stem cell research, can be found in Table 6.2.

S P I R E		
	Condition for cooperative learning	**Example project: an informative brochure on stem cell research for patients with non-curable diseases**
S	*Simultaneous interaction* Each learner works on their part of the project at the same time.	Learners can work at the same time collecting information about different aspects of stem cell research, related to their own role (see below).
P	*Positive interdependence* Learners sink or swim, succeed or fail together. Each learner has a different task to carry out, and each task contributes to the completion of the final product. For example, this may relate to four different sub-topics in the research subject; the ideas from each of the four members are thus needed for and contribute to the final product. The roles can also be process roles, such as timekeeper, recorder, designer, chairperson, and monitor of English.	After some class work on the stem cell research controversy, the class is divided into groups. The four learners in the group each receive a role on a card. In role, they gather arguments for or against stem cell research. The roles are: 1. Janie, aged 24 and just diagnosed with Parkinson's disease; 2. Margaret, a pro-stem cell researcher about to gain fame through her research; 3. Robert, aged 56 with multiple sclerosis, totally against the use of embryos but for the use of adult stem cells; 4. Joe, a pro-life American politician. Using the results of their research, the group then formulate a list of ethical claims for and against stem cell research as preparation for their brochure. To create the brochure, each learner is given (or chooses) one of the following roles: designer, illustrator, writer or language expert.

I	*Individual and group accountability* All the group members are responsible and do their fair share of the work during the project, which contributes to the group effort. The role each learner has played must be clear.	The project includes timesheets, on which each learner keeps a record of what they have done during a lesson, or for homework. Cognitive organisers related to each of the four roles above are provided to structure work. These are handed in with the brochure. In this way, the teacher can assess how much effort learners are making and provide feedback as the project progresses.
R	*Reflection* Learners think and talk about how the group is functioning and how this can improve.	Halfway through the project and at the end, the teacher provides some questions for groups to discuss group cooperation (or lack of it). The conclusions are included in the final product. For an example of such questions, see practical lesson ideas 6.9.8.
E	*Equal participation* Learners contribute the same amount of work to the project.	The four tasks mentioned above are equally challenging to learners. Some work is done individually and gathered together at a later stage; for some parts of the brochure it is necessary that they are discussed by the group as a whole (introduction, conclusion, overall structure).

Table 6.2 Conditions for cooperative learning: SPIRES

6.6.6 Teacher's role at the start of a project

The teacher plays a variety of roles during different project phases.

Project stage	**Teacher's roles**
Start of project	Organiser, information provider, motivator
During project	Coach, facilitator, mediator, record keeper
End of project	Assessor, evaluator

Table 6.3 The teacher's different roles in projects

At the beginning of a project, teachers are project organisers. They plan the work, give instructions and divide the class into groups. They discuss the subject and language aims of the project as well as the expected final product, and they share or develop the assessment criteria with the class (see Chapter 5). Teachers can also provide materials and resources, or explain where the learners can find these themselves. During the introductory lesson, teachers can design motivating activities to interest learners and 'draw them in' to the topic. At this stage, too, teachers provide a project timetable, making it clear to learners what is expected of them at the different stages of the project. Example 39 shows a project timetable provided by Sally Hill, Van Der Capellen Scholengemeenschap, Zwolle.

Example 39 Project timetable for project on gene mutations and disease

Project: Gene mutations and disease	
Date	**What is expected of me?**
Tue 13 March	*Orientation:* Read through the assignment at least twice; form a group; select a disease and discuss your presentation form; start looking for information to answer the questions; give each other tasks.
Mon 19 March	*Getting to work*: Find as much information as you can about your disease and select what is relevant; finish answering the questions; start preparing the presentation.
Tue 20 March	*Finalisation*: Decide who is to do what during the presentation; organise any materials (e.g. ping-pong balls, coloured wool) or equipment you may need (data projector, smartboard). The science assistant can help.
Mon 26 March	Three presentations (max. 15 min per group, including questions).
Tues 27 March	Three presentations (max. 15 min per group, including questions).
Tues 3 April	Three presentations (max. 15 min per group, including questions).
N.B. Use this as a guide only, don't forget that I expect you to spend time on the project outside the lesson as well.	

6.6.7 Teacher's role during a project

As the work progresses during a project, teachers gradually take on more of an observing, coaching and facilitating role. At this stage, teachers provide ideas and help learners find resources and materials which are relevant to their project. They are also mediators, helping to solve group conflicts and disagreements. It is advisable for teachers to keep a record of how each group is progressing. Alternatively, a timesheet or project diary, which the learners complete themselves, can be added to the project. This timesheet can be included as a final product and be used for assessment or evaluation purposes.

Teachers also need to keep in contact with each group doing the project work, so that they can give feedback and keep each group on track. They can make a plan or timetable for coaching each group, or groups can approach teachers when needed. Still, each group should be coached and monitored several times during the project. The more feedback the learners receive during the project, both on the subject and on language, the more refined and complete their final products will be.

6.6.8 Teacher's role at the end of a project

At the final stages of a project, teachers ensure that groups are nearing completion of their final products, and that the displays or presentations are being organised. They can remind groups about the assessment criteria, or organise peer or self-assessment of completed products. The teachers' role now becomes that of assessor of the final product of the project. For more on assessment, see section 5.5.

Example 40 Cross-curricular CLIL project: overview, planning, aims

This is an adapted example of a successful cross-curricular CLIL project on Aboriginal Australia and Dreamtime stories, carried out by teachers and first-year learners at the Herman Wesselink College in Amstelveen. The teachers involved were Annelet Lykles (English) and Victoria Sybrandi (art and design).

Overview

This project lasts five weeks and consists of a number of lessons (five to six 45-minute periods of English and four periods of art and design per week), an excursion to the Aboriginal Art Museum in Utrecht, the production of a poster of a Dreamtime story related to a modern-day story, a piece of art including an 'artistic statement' and an exhibition. This exhibition was held during a parents' meeting for bilingual learners, which also coincided with a ceremony where learners received language certificates.

Planning

Week	English	Art and design
1	• Introduction to the project; KWL grid[#] (What I know, want to know and learned; see Activity 1.9.10). • Scenes from the film *Ten Canoes*. • Pointing out the importance of storytelling as a means of passing on beliefs and values. • Discussing the Aboriginal way of life as it used to be.	• Introduction to Australian Art. Slide show of traditional Aboriginal art. Dreamtime pictures were painted with ochre on cave walls, bark shelters or in the sands and on bodies. Important to show cultural diversity. • Key words introduced: figurative, ochre/ natural pigment, bird's eye view, x-ray style, cross hatching, geometric designs, dotting and symbolism.
2	Visit to Aboriginal Art Museum in Utrecht, including an introduction by a museum guide and an interactive element involving speaking English.	
2	Learners listen to and read Dreamtime stories online. In groups learners start working on their own Dreamtime story and poster.	Learners start work on their individual piece of art using ochre colours.
3	Further work on Dreamtime story and poster.	Work on piece of Aboriginal art.
	Group presentation of the Dreamtime story and poster in class and re-visit to the KWL chart (do you remember what you wanted to know?).	
4	Learners write artistic statements to accompany their individual work of art.	
5	Exhibition for parents at parents' meeting and certificate ceremony.	

Project aims

Content aims	English language aims
• understand what is meant by Dreamtime; • understand the importance of Dreamtime for Aboriginal people; • understand the influence of the natural environment to Aboriginal people and their relationship to it; • understand the current position of the Aboriginal people as a minority in Australian society; • recognise the cultural diversity of Australian indigenous peoples; • design a creative poster.	• use a variety of English vocabulary to describe Aboriginal art work, Aboriginal stories and the Australian landscape; • understand Dreamtime stories through listening and reading; • summarise a story; • orally present information about a Dreamtime story; • write a coherent 21st century Dreamtime story.

This is the teachers' handout for the English lesson in Week 1 of the project Aboriginal Australia and Dreamtime Stories.

Example 41 Cross-curricular CLIL project: handout KWL chart for teachers' use

Aims

- Learners think about their own prior knowledge about indigenous culture in Australia/Aboriginal people.
- The learners can complete a KWL (Know, Want, Learn) chart.

Materials

- Sets of cards of Australian animals (3 kangaroos, 3 platypus, 3 wombats, etc.). Write role descriptions on the back of each card.
- KWL chart (large sheet of paper).
- Tape.

Procedure

1.Before the lesson, make enough sets of three Australian animal cards. On the back of one card in each set, write one of the following three roles and tasks:
The **leader** gathers materials, keeps the group on task and makes sure everyone agrees.
The **reporter** tells the class at the end of the task what the group has decided for each part of the KWL.
The **recorder** writes down what the group decides for each part of the KWL organiser.
2. Tape a big KWL chart to the board (you will need to use it again later). Explain how and why we use it (graphic organiser), and present an example: "Today I am going to introduce you to a strategy that can help us to visually organise what we already know, what we want to know, and what we are going to learn. This strategy is called the KWL".
3. The learners provide one or two more examples for each section of the KWL. Add them to the chart, as guided practice. Once learners understand the chart, put them into groups of three.
4. The learners pick an Australian animal card and those with the same card make up a group. They then work on their ideas for the KWL in their groups.
5. In plenary, the reporters from each group share their KWL charts; the teacher adds information to the large chart on the board.
6. Summarise what is on the KWL chart. Then explain that next lesson the group will start learning some things about Aboriginal people and their culture and hopefully start to fill in the 'What we learned about Aboriginal people' section of the chart.

KWL Chart: Australian Indigenous people

	K **What we know**	**W** **What we want to find out**	**L** **What we learned**	
	Categories you can think about: country, way of life, history, beliefs, environment			

Example 42 Cross-curricular CLIL project: learners' handout art and design

This is the learners' handout for the art and design lessons (Week 2, 3, 4) of the project Aboriginal Australia and Dreamtime Stories.

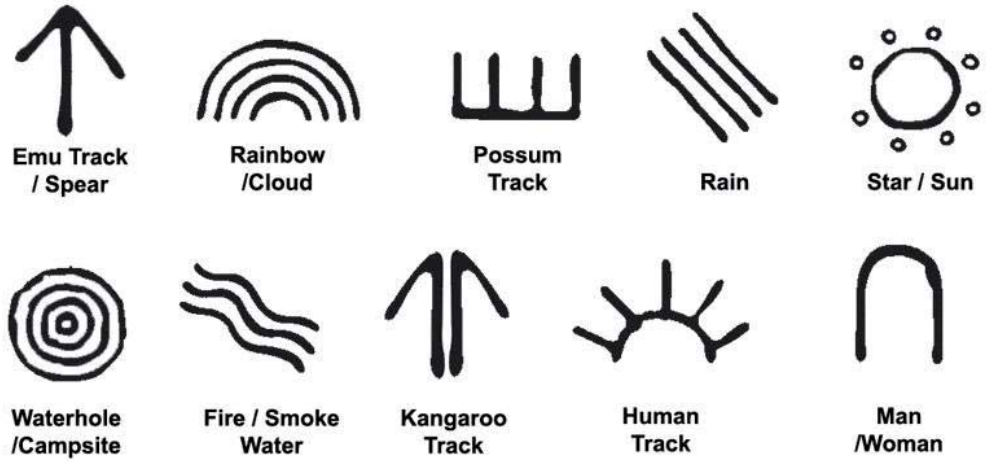
First year art and design project
Aboriginal Art

Background
Subject: Aboriginal artwork.
You are going to make your own Aboriginal painting using your own symbols. The painting shows a story or event which is important either to you personally or to your culture. In your English lessons, you will write an artistic statement explaining your story.

Materials
- sketchbook, for your symbols and sketches;
- piece of cardboard of 20 x 20cm;
- 2HB pencil;
- poster paint: yellow, yellow ochre, red, burnt sienna, ultramarine, black and white.

Procedure
Work alone. Think of a story or event which is important to you as a person or as a member of your family, or a story that is important in your own culture.

Take a good look at the Aboriginal symbols on your handouts; most of the symbols are simplified shapes. Start simplifying shapes from your own world that are important to you and to the story you are going to draw. Make sketches in your sketchbook. Simplify them until you have at least FIVE symbols of your own. Add them to your handout. Make a sketch of your story, using your own symbols.



(Symbols from www.aaart.com.au/GIFS%20for%20Web/symbols.gif).

If your teacher approves of your sketch, transfer it onto your piece of cardboard. Paint your sketch by using the Aboriginal dotting technique. You can achieve this by keeping your paintbrush upright. Make sure you use enough paint.

Use unmixed colours and make sure one colour is dry before painting another colour next to it. The whole piece of cardboard should be covered.

Artistic statement
Write an artistic statement about your work. Describe the story painted and explain why it is so important to you or your culture. This will be the text that accompanies the painting on the exhibition for parents. You will work on the statement during the English lessons.

Example 43 Cross-curricular CLIL project: learners' handout English

Aboriginal Dreamtime and its Stories

Introduction

In your group you are going to listen to a particular Dreamtime story on the Internet told by an Aboriginal person. All these stories will tell you something about Aboriginal culture and the Aboriginal way of thinking about the world.

From an early age, storytelling plays a vital role in educating children. These stories help to explain how the land came to be shaped and inhabited; how to behave and why; where to find certain foods, etc. Gathered around the camp fire in the evening, on an expedition to a favourite waterhole, or at a landmark of special significance, parents, elders or aunts and uncles use the stories as the first part of a child's education.

Then, as children grow into young adults, more of the history and culture is revealed. Adults then take responsibility for passing on the stories to the following generations. In this way, the Dreamtime stories have been handed down over thousands of years.

Task

Create a poster presentation in a group around your Dreamtime story. The best poster will be shown at the Aboriginal Art exhibition for parents on June 8th. The class as a whole will vote for the best poster.

Instructions (groups of four)

1. Go to http://australianmuseum.net.au/Stories-of-the-Dreaming. Read and listen to a story together and make sure you understand it. The teacher will tell you which story to listen to.
2. Divide the roles and tasks (see below). The experts find information related to their own field and fill in a handout. Then everybody shares their information with the rest of the group. If you find information which is interesting for another role, give it to the group member with that role.

Roles and tasks

Storyteller. Prepare to retell the story and explain what Aboriginal children can learn from it. What is its meaning?

Aboriginal way of life expert. What tools do the people in the story use? Find out about the way Aboriginal people lived and other tools they used.

Animal expert. Research which animals appear in your story and what they symbolise.

Geographical expert. Look for information about the location of your story. Where is it set, what are the important landscape features, and what is the climate like?

3. When you have carried out your research, share the information as a group as preparation for your poster design. You have to provide information about the following points:

Storyteller. Story title and summary of the story.

Animal expert: Information about animals that appear in the story.

Geographical expert: Kind of landscape and climate of the part of Australia the story is from.

Aboriginal way of life expert: Aboriginal way of life and tools used in the story.

4. Design the poster together: plan where the information and pictures should go. When you are ready, show your plan to your teacher.
5. Create your poster together, including interesting texts and pictures. Your poster should show the story and its meaning. The **storyteller** prepares the talk to accompany the poster.
6. Present your poster to class (10 minutes).

Example 44 Cross-curricular CLIL project: painting and artistic statement

This painting and artistic statement were made by a pupil at Herman Wesselink College, Amstelveen

Artistic statement

This painting is about my younger years. The time that I fell off my bicycle (and hurt myself). Some parts don't really fit in the painting I made. But that's because it would be a very empty painting if I didn't put all the other stuff in.

6.6.9 WebQuests

WebQuests were originally created by the American Bernie Dodge and the Australian Tom March in 1995. According to Dodge, a WebQuest is "an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web" (see http://webquest.org). March (2003) defines WebQuests in a slightly more academic way - and perhaps more accurately:

> "A WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate learners' investigation of a central, open-ended question, development of individual expertise and participation in a final group process that attempts to transform newly acquired information into a more sophisticated understanding. The best WebQuests do this in a way that inspires learners to see richer thematic relationships, facilitate a contribution to the real world of learning and reflect on their own meta-cognitive processes."

In other words, WebQuests are ready-made, Internet-based projects, which require learners to think about, synthesise and transform information on the web to design their own products or performances. There are WebQuests for all age groups.

WebQuest elements

A WebQuest usually contains seven main elements:

- an introductory paragraph which motivates learners and sets the stage;
- a task;
- a description of the steps needed to complete the task;
- resources (usually online) which learners can use to complete the task and which may include worksheets, websites or handouts to support learning;
- a rubric or other list of assessment criteria to assess the final product;
- a conclusion, rounding the WebQuest off and encouraging learners to take the topic further;
- instructions for the teacher on how to work with the WebQuest.

6.6.10 Why WebQuests for CLIL?

There are several reasons why teachers might use WebQuests as CLIL projects. Since most WebQuests are in English, they are a good source of ready-made project material for CLIL. In addition, they save time: a teacher somewhere else in the world has designed and tried out the WebQuest. Moreover, they provide authentic written - and, these days, more and more spoken - input in English. They "provide learners with exposure to authentic material, meaningful content and possibilities for real communication in the target language" (Stoks, 2002). Furthermore, good WebQuests are meaningful learning activities, which involve problem-solving (Pérez Torres, 2007); they provide lots of opportunities for spontaneous speaking and communicative writing in English. Finally, WebQuests can provide interesting cultural input.

Characteristics of WebQuests for CLIL

However, a WebQuest written entirely in English does not necessarily make a good CLIL WebQuest. A good CLIL WebQuest helps learners with their subject skills, knowledge and thinking, as well as with their language development.

How can teachers evaluate a WebQuest for CLIL? Some characteristics of good CLIL WebQuests are listed below. Teachers can use these criteria to assess whether a WebQuest is appropriate for their CLIL learners. These criteria are based on the rubric that Dodge designed to evaluate WebQuests and the evaluation instrument to evaluate Language Quests (*Meetlat talenquests*, published on Kennisnet).

Characteristics of good CLIL WebQuests		
Subject elements	**Other elements**	**Language elements**
• The introduction motivates and attracts the learner. • The WebQuest builds on the learner's prior knowledge about the topic. • The WebQuest is linked to the subject curriculum. • The task is much more than cutting and pasting information. It is engaging and motivating and requires learners to use thinking skills, transforming or synthesising the information in the WebQuest into new products. • The resources provided help with the accomplishment of the task. • The resources are varied and meaningful. • The rubric (evaluation) includes clear criteria for assessing the content of the finished product.	• The task in the WebQuest is a task which might be carried out in real life: it is authentic. • The WebQuest exposes learners to different cultures or cultural issues. • The visuals are appropriate and support the topic. • It is easy to navigate through the WebQuests (all the links work). • The organisation of the WebQuest is clear to learners. • The steps in the process are clear. • Learners have clear and distinct roles and responsibilities. • The evaluation criteria are clear and in the form of a rubric. • The rubric includes clear criteria for assessing the process, individual and group work.	• There is a variety of language materials and texts. • Learners work on a number of language skills (listening, reading, speaking and/or writing). • The WebQuest is linked to the language curriculum and states language aims. • The language material (input) is at the correct level, neither too simple nor too difficult. • The WebQuest includes tasks or task elements to help learners become aware of both the language in the texts and the language they need to produce. • Tasks lead to language output in spoken and/or written communication. • The tasks include tasks which help learners to learn new language skills and improve existing skills. • The language input supports the learners in improving their language. • The learners have a reason to communicate in order to complete the task. • Doing the WebQuest involves interaction - real communication - in English. • The tasks help learners with language learning strategies, such as predicting, guessing or organising text. • The tasks help learners to become aware of producing language for a particular audience. • The rubric includes clear criteria for evaluating the language element of the finished product.

Table 6.4 Characteristics of good WebQuests

Table 6.5 shows some specific examples of language help (or scaffolding) included in actual WebQuests.

Examples of language help in WebQuests		
Subject(s)	**Topic and task**	**Language help (scaffolding)**
Geography	Aboriginals Write a letter to the Australian government including your opinion about apologising to the Aboriginal people.	Information about how to write a formal letter; reminder about the standards relating to language (e.g. awareness of audience, purpose and grammar).
Geography	Aboriginals Oral report (PowerPoint presentation).	Rubric including language aspects such as use of voice, conciseness of language and awareness of audience.
Music	Hip Hop Write a rap or make a clip defending Hip Hop as an art form.	Guidelines on how to write persuasively; graphic organiser about different elements of poetry (e.g. alliteration, enjambment and assonance); models of good raps.
Maths	Logical thinking Solve a mystery using logic and reasoning.	Input on deductive and inductive arguments; article on constructing a logical argument; information on "if... then" sentences.
Maths/economics	Small businesses Go through the initial steps for starting a small business.	Model business plan.
Science	Genetic disorders Gather information about genetic disorders.	Graphic organiser to focus note-taking.
Chemistry	Careers in chemistry Argue for a career in chemistry.	Online pages to help with persuasive arguments.

Table 6.5 Examples of language help in WebQuests

6.7 CONCLUSION

We have seen many aspects of CLIL projects in this chapter. Working with projects can help learners to work together, to be creative, and to acquire skills and knowledge relating to both subject and language in a realistic and natural way.

To sum up, here are some points that teachers can use when working with projects in CLIL:

- Start small. Do a project which lasts a few lessons first, then try a longer one. Work initially with one colleague rather than the whole team.
- A WebQuest is a readymade project in English which another teacher has had so much success with that s/he decided to take the time to write it up and publish it. It may be a good idea to start with a WebQuest.
- Work with colleagues you enjoy working with. Give each other clear feedback about how things go.
- When designing a project, give the learners some choices; they will appreciate this!
- Design projects in such a way that learners learn something new and are challenged.
- Design projects where learners have to 'transform' information from one form into another, to avoid simple cutting and pasting.
- Think carefully about groups: who will work with whom and why? Be explicit to your class about how they will be grouped.

- Plan a project well in advance, so you can enthuse colleagues, learners, timetable-planners and parents. Plan it at a time when learners are often at school and not on trips.
- Inform other colleagues about your project; they may want to join in next time or do related work in their lessons.
- Plan coaching time into your project; the learners will produce better results if you take time to coach them on content and language.
- Create a clear rubric (maximum length one page) for assessing the project, which includes both language and content assessment criteria. Provide the learners with this rubric before the start of the project.

6.8 TEACHER DEVELOPMENT

1. Open the website on WebQuests (webquest.org). Click on 'find WebQuests' and use the database to search for appropriate WebQuests for your subject. If you scroll down, you can refine your search to the appropriate age group (grades 6-8 in the United States are lower secondary school in the Netherlands, 9-12 are upper secondary school).
2. Look through the chapter for inspiration and jot down ideas for a project in your subject. Alternatively, do this with a colleague, for example a subject or English teacher. Brainstorm possible angles and ideas together.
3. Consider a project which you have carried out. How could you improve it using the advice in this chapter? Use the checklists that can be found in section 6.6).

6.9 PRACTICAL LESSON IDEAS

How can you use projects in CLIL? Here are some practical ideas for projects.

Activity 6.9.1 Brainstorming for projects

A graphic organiser to help teachers to brainstorm ideas for projects

Description

Brainstorming with colleagues can be a first step to project design and can provide inspiration for interesting projects. First choose a topic together, then each brainstorm possible ideas for your own and colleagues' subjects. Here are some topics which might inspire you.

Addiction	Food and nutrition	Paris (or another city)
Africa (or another continent)	Germany (or another country)	Photography
Alternative energy	Global warming	Robots
Biotechnology	The Holocaust	Starting a business
Blood and water	The human body	Survival
Disaster	Life stages: birth, death and	The weather
The 18th century	rebirth	World religions
Electronics	The Olympic Games	World wars

After the brainstorm, share ideas and examine links between these ideas to narrow them down to one or two related themes or topics. Then search for combinations which will allow plenty of CLIL opportunities and transfer between the subjects.

Subject example

All subjects: water

Below you can find an example of a brainstorm session for ideas for a project on the topic of water, with suggested topics for nine different school subjects.

Music:

- Classical music related to water (e.g. Handel's *Water music* and Ravel's *Jeux d'eau*)
- Composing music related to water
- Making water-related musical instruments (e.g. bottles and jars of water)
- Pop songs about water

Economics:

- Economic development related to water: seas, rivers, deserts and jungles
- Global warming and carbon trading
- World Wildlife Fund
- Decline and recovery related to water

Chemistry:

- The chemistry of H_2O
- Electricity and water
- Ph levels
- Water chemistry, e.g. aquarium water, swimming pool water

Physics:

- Steam engines
- Waves
- Water towers
- Water heaters
- Water slides and the laws of physics

Geography:

- Flooding and drought
- How water forms our planet
- Collecting and recycling water
- Rainfall worldwide
- Rivers and oceans

English:

- Poetry related to water, e.g. 'Not waving but drowning' (Stevie Smith)
- Novels or films related to flooding, drought or the sea, e.g. *The story of Pi* (Yann Martell), *On Chesil Beach* (Ian McEwan), *Jaws*, *Titanic*.

Art and design:

- Artists depicting water
- Photographs: reflections in water
- The Impressionists
- Liquid sculptures
- Water symbols in art
- Water colours

History:

- Water mills and the Industrial Revolution
- The Great Fire of London and its effects on water management
- Roman water systems

Biology:

- Water creatures and plants
- The human body in relation to water (dehydration, diving, hypothermia)
- Coral reefs

Variation
An alternative way of thinking about projects is to start from the syllabus of one or both subjects. Find similar topics and seek relationships between both curricula and start from there.

Activity 6.9.2 Designing a CLIL project

Structuring ideas with colleagues for a CLIL project

Description
Once you have thought of a topic for a cross-curricular CLIL project, use the table below to work with colleagues to expand on initial ideas. It is based on ideas from Blythe (1998).

Project title: .....

What is the topic of our CLIL project?	What are the overall goals for our CLIL project? "Learners will understand..."
What are the specific content aims for our CLIL project? "At the end of this project, learners can..."	What are the specific language aims for our CLIL project? "At the end of this project, learners can..."
What questions (about content and language) can our learners answer at the end of the project?	What final products can our learners create to demonstrate that they understand both the topic and use the language?
What kind of continual assessment can we use to keep learners on track? What type of feedback will learners receive on both language and content during the project to further their learning?	How can we assess our learners' learning? What are our assessment criteria (per subject and for English) for the project? Who is assessing what?

Activity 6.9.3 Project checklist

Use the checklist with your colleagues while designing a project

Description
This checklist is based on the questions asked in section 6.6. It can be used to design a new project or to evaluate an existing one. Read section 6.5 and 6.6 to refresh your ideas about project design and use the checklist to ensure you haven't forgotten anything while designing your project.

Have you thought about...?

The learning
- ❑ Overall aims?
- ❑ Language and subject aims?
- ❑ How the parts of the project link together and link to the real world?
- ❑ The final product or products?

The learners
❑ Learners' contributions?
❑ Giving them choices?
❑ Group and work division?
❑ Dealing with diversity: learning styles, fast finishers, language level, slower groups?

Organisation
❑ Coordination?
❑ Planning for teachers and learners?
❑ Materials, rooms, fieldwork, computers or other media?
❑ Deadlines for learners and consequences?

Coaching - the process
❑ Who coaches whom and when and about what (subject and/or language)?
❑ Type of feedback?
❑ Spoken or written feedback, or both?

English
❑ Why do learners really need to use English in this project?
❑ Can we find good product models in English as input?
❑ Input and feedback on English both during the project and at the end?
❑ Language support for teachers and learners?

Presentation of final products
❑ How are the final products presented?
❑ Who is the audience?

Assessment and feedback
❑ Assessment criteria for final product and group process?
❑ Kind of feedback for learners: oral, written, a mark?
❑ Marking?
❑ Who assesses?

Evaluation
❑ How?
❑ When?
❑ Who?

Activity 6.9.4 Forming groups

Divide your class into groups

Description
This is an activity for dividing your class into groups, which takes into account the learners' preferences but which produces groups in a fair way. It is worth taking time to divide the class into groups carefully, since the formation of the groups influence the results of the project work.

1. Explain to your class that they are going to do some project work in a few weeks' time and that you would like to divide them into groups in a fair manner. Discuss aspects of groupings with them, such as:
   - Who would you like to work with and why?
   - Who do you work well with (not just friends)?

- How do you choose who to work with?
- Who has skills or qualities which you don't have?
- What skills or qualities do you have to offer?
- When does a group work well and why?
- When does a group fail to work well and why?
- What do you think about boys and girls in the same group?

2. Ask each learner to complete a card like this one:

My name: .....

Three people I would like to work with on a project:
1.
2.
3.

Three people I would definitely NOT like to work with on a project:
1.
2.
3.

3. When you have all the information from the class, you can use the information to make groups. If you like, you can make a table to show preferences, like the one below.

☺ means that a learner has a preference to work with someone else.
☹ means that a learner does not want to work with the other learner.

Here, Adri likes working with Bas, Christa and Ernst, but not with Beata, David or Jane. Once you have this information, you can decide how to group the learners. Aim to put the learners who like working together in the same group, but if this is not possible, spread the less popular learners between the groups.

Preferences ↓	Adri	Bas	Beata	Christa	David	Ernst	Felicity	Jane	Roos
Adri		☺	☹	☺	☹	☺		☹	
Bas									
Beata	☺			☺	☹	☹		☺	☹
Christa									
David									
Ernst		☺	☺						
Felicity									
Jane									
Roos									

The website Sociogram! helps you to create a sociogram online: www.sociogram.nl

Activity 6.9.5 Forming groups according to multiple intelligence profiles

Discover learners' multiple intelligence (MI) profiles

Description

This is an activity first published in a different form in Mulder & Tanner (1998). Let your learners read the information about multiple intelligence and complete the questionnaire. Ask them to provide you with their top three intelligences. Use the results to divide up the groups according to similar or different intelligence groups.

Information

We are all intelligent - in at least eight different ways. Which are your strong intelligences? An American professor, Howard Gardner, has discovered that we have at least eight different kinds of intelligences: linguistic, logical-mathematical, bodily-physical, visual-spatial, musical, naturalistic, interpersonal and intrapersonal. Here is a brief description of each intelligence.

Linguistic: Verbal. You like working with words, reading and writing.

Logical-mathematical: You like concepts, think logically and like puzzles and problems.

Bodily-physical: You enjoy sports and games. You like to move around and learn by doing. You use body language to communicate.

Visual-spatial: You think in images or pictures, learn by seeing and by using charts or diagrams.

Musical: You enjoy learning and/or making music. You have a sense of rhythm and melody.

Naturalistic: You enjoy the natural world, animals and are interested in the environment.

Interpersonal: Social. You like working in groups, and learn well if you study or discuss things with other people.

Intrapersonal: You understand your own feelings and thoughts. You like to daydream and fantasise and to work alone. You like to know why you are doing something.

Instructions

Score each of the 40 statements below like this:

4	always true for me
3	often true for me
2	sometimes true for me
1	very occasionally true for me
0	never true for me

MULTIPLE INTELLIGENCE TEST

1.	English, social studies and history are easier for me at school than maths and science.	1. _____
2.	I am aware of the weather.	2. _____
3.	Friends come to me for advice.	3. _____
4.	I am good at chess, draughts and other strategy games.	4. _____
5.	I see words in my head.	5. _____
6.	I can imagine how something might look from above, like a bird would.	6. _____
7.	I can tell when a music note is out of tune.	7. _____
8.	I sometimes walk down the street with a tune playing in my head.	8. _____
9.	I consider myself a leader (or others think I am a leader).	9. _____
10.	I would rather spend my evenings at a lively party than having a quiet talk to someone.	10. _____
11.	I enjoy word games like Scrabble, anagrams, crosswords and tongue twisters.	11. _____
12.	I like analysing, calculating and measuring things.	12. _____
13.	I find it difficult to sit still for long periods of time: I need to move around.	13. _____
14.	I use a camera or video recorder.	14. _____
15.	I love animals and think about working with them.	15. _____
16.	I have a good sense of direction.	16. _____
17.	I enjoy biology lessons and learning about the natural world.	17. _____
18.	I have a very close friend.	18. _____
19.	I like learning about my own personality.	19. _____
20.	I keep a personal diary where I write down my thoughts.	20. _____
21.	I like working with my hands, e.g. model-building, sewing, weaving, carving, or woodwork.	21. _____
22.	I make tapping sounds or sing little melodies when I work or study.	22. _____
23.	I am interested in 'green' issues related to the environment.	23. _____
24.	I have music on in the background when I study.	24. _____
25.	I need to DO things with a new skill rather than simply reading about it or seeing a video that describes it.	25. _____
26.	I often see pictures when I close my eyes and I often have vivid dreams at night.	26. _____
27.	I prefer looking at reading material with pictures.	27. _____
28.	I regularly spend time alone to think about important life questions.	28. _____
29.	I see myself as a loner (or others see me as a loner).	29. _____
30.	I sometimes have good ideas when doing physical activities.	30. _____
31.	I like planning, e.g. my school work or a party.	31. _____
32.	I am interested in how (mechanical) things work, e.g. a clock, a computer or a CD player.	32. _____
33.	I would describe myself as physically well-coordinated.	33. _____
34.	I like watching nature programmes on television.	34. _____
35.	I would prefer to spend a weekend in a house in the woods than at a busy place with lots of people and action.	35. _____
36.	I've written something that I am proud of or that others enjoyed reading.	36. _____
37.	If I hear a song or piece of music once or twice, I can sing it accurately.	37. _____

38. Maths and/or science are some of my favourite subjects at school. 38. _____

39. When I drive down a road, I pay more attention to words written on signs than to the scenery. 39. _____

40. When I've got a problem, I look for someone to share it with rather than try to work it out on my own. 40. _____

Scoring

Multiple intelligence questionnaire: add up your scores

	A	B	C	D	E	F	G	H
	1	4	13	6	7	2	3	19
	5	12	21	14	8	15	9	20
	11	31	25	16	22	17	10	28
	36	32	30	26	24	23	40	29
	39	38	33	27	37	34	35	18
TOTALS	A	B	C	D	E	F	G	H

TOTAL

A. Linguistic (Ling) _____

B. Logical-mathematical (LM) _____

C. Bodily-physical (BP) _____

D. Visual-spatial (VS) _____

E. Musical (Mus)

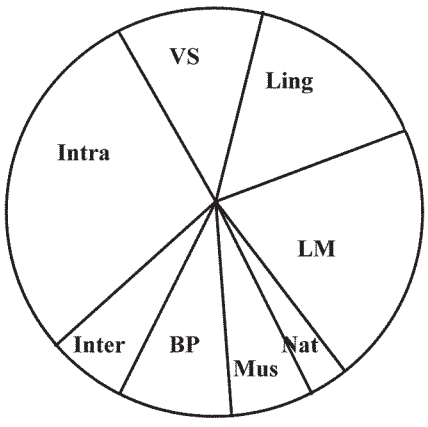
F. Naturalistic (Nat) _____

G. Interpersonal (Inter) _____

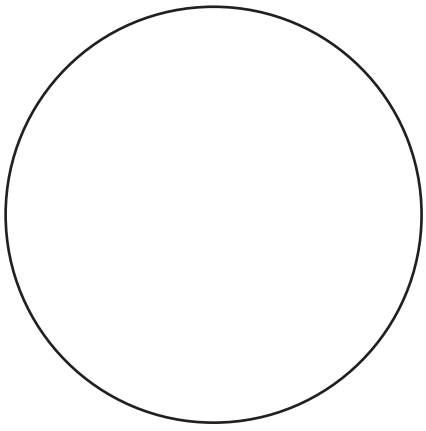
H. Intrapersonal (Intra) _____

We are all a mixture of all intelligences. You now have scores which make up a profile of your own (stronger and weaker) eight intelligences. On the left, is an MI 'pizza' made by a 3rd year learner, completed according to her scores. Fill in the right-hand pizza, showing how your scores are divided.

KRIS' PIZZA



MY PIZZA



Activity 6.9.6 Group contract

Groups plan their own work together to help them to keep to their goals

Description

Once you have divided your learners into groups, ask them to discuss and complete the group contract below. The groups sign this contract at the start of a project, to agree on who is doing what during the project. You may want to obtain a copy, so that during the project you can coach the learners on work done.

GROUP CONTRACT

Group members:

1. _____

2. _____

3._____

4. _____

Our project is: _____

Our final product is: _____

We would like to share our final product on (date) _____ and it will take _____ minutes.

We are going to finish our work on (date) _____.

This is what each member is going to do during the project (each member should have different work to do!).

Name	Action
1.	
2.	
3.	
4.	

Group signatures: 1. _____ 2. _____ 3. _____ 4. _____

Activity 6.9.7 Group self-evaluation sheet

Complete a self-evaluation sheet during a project

Description

Adapted from a handout used by Sally Hill of Van Der Capellen Scholengemeenschap, Zwolle

Provide one self-evaluation sheet (see below) per lesson per learner. Explain that each learner needs to keep their own individual record of how group work goes during each project lesson. They do this by completing a copy of this handout each time and keeping it in their file. You can use the handouts to coach the learners as they go along, too.

SELF-EVALUATION SHEET	
Name ..... Date	
Who worked the hardest in your group this lesson? Or did you all contribute equally?	
What did you do well in this lesson?	
What were you not so pleased about this lesson? What do you want to do better next lesson?	
Have you divided the tasks between you to prepare for next lesson? Who is doing what?	
Are you on schedule with the planning? If not, why not?	
Make an estimate of the time you personally spent on the project outside the lesson (between this and the previous lesson).	_____ minutes

Activity 6.9.8 Coaching questions

A list of questions to use when coaching a group during project work

Description

This list of questions is for you to use during group coaching. Pick and choose which questions you need to use, according to the stage of your project and your learners. Aim to keep your questions open and try to get the learners to tell you how they are doing as they go along. The aim of the questions is to get the learners to think about their project and their role in the team.

Coaching questions

General

- How's it going?
- What's going well?
- What's not going so well?
- What are you getting out of working on this project?
- Do you need any help from me? If so, what?
- (Towards the end of a project) What would you do the same/differently next time? Why?

Working together

- How's the working together going?
- Is everyone pulling their weight?
- (If not:) What's stopping you from working together effectively?
- How do you give feedback to each other?

Product

- Tell me about your final product. What does it look like, ideally?
- What do you think you are learning?
- How might you learn more?
- What could you do about that?

Language

- How much English are you using in the group?
- If not enough: What can you do about that?
- How are you checking your language?
- Do you need help with language? If so, what help? How can I help you?

Planning

- Are you on track with the planning? If not, discuss why not.
- Who is doing what?
- What do you still need to do?
- How can you improve your planning?

Closing

- What's your next step?
- What are our conclusions after this talk?
- Do you need any more help?

Key to all tasks

Task 1 Images of activating

Image	Possible title	Underlying theory
1	Forming a web of connections/ or associations	Cognitive learning theories: you activate knowledge by linking old ideas with new ones.
2	Allowing time for individual contemplation	Transmission model of learning/ intrapersonal learning style: activating is done by individuals reflecting on previous ideas.
3	Revealing an iceberg of hidden knowledge	Common Underlying Proficiency: learners already have knowledge and skills in one or more languages. Activating involves helping them to access these and involves making learners aware of what they already know or can do in one language. This builds confidence and encourages them to transfer useful skills from one language to another.
4	Lighting bulbs in the mind	Connectionism and motivation: activating involves helping the learners to activate the neural pathways in the brain. It strengthens associations they have, which will help them to process and remember information.
5	A brain in conflict	Cognitive conflict: activating should challenge learners' ideas or assumptions. This means they have to adjust their thinking and helps them to actively process and remember ideas and information.
6	Sharing ideas through interaction	Social constructivism: you activate knowledge by discussing ideas with others.

Task 2 Thesaurus entry

Main Entry: activate

Part of Speech: verb

Definition: initiating

Synonyms: actuate, arouse, call up, energise, impel, mobilise, motivate, move, prompt, propel, rouse, start, stimulate, stir, switch on, trigger, turn on

Antonyms: arrest, extinguish, paralyse, stop, turn off

Notes:

1. when something is activated, it is made active; when something is actuated, it is moved to take action (or produce a consequence)

2. to actuate is a general word meaning 'to set working' and has more to do with mechanical action - while activate is used mainly in scientific expressions

Source: *Roget's New Millennium™ Thesaurus, First Edition (v 1.3.1)*

(From thesaurus.reference.com/browse/activate).

Task 4 Alternative ways of supporting understanding

Subject input	Example	Alternative way of supporting understanding
Music: video from YouTube about Beethoven's life	List of questions about the content and images of the video clip.	A worksheet of an empty timeline which shows the chronology of Beethoven's life.
Economics: population density	A shaded (coloured in) map about population density in Africa with a list of questions.	A gapped text about population density for completion by the learners.
Maths: algebra	Teacher explanation about algebraic symbols.	A stack of cards with algebraic symbols and a stack with definitions. Learners match the symbols and their definitions.
Physical education: areas of fitness	A text about suppleness, strength and stamina. A list of true and false statements about areas of fitness.	Some tests which learners do to test their own suppleness, strength and stamina.
Chemistry: a video clip about sedimentation and soils	Red and green cards. Each learner is provided with one red and one green card. After the learners have watched the video, the teacher reads out true and false statements about the contents of the video. If learners agree, they hold the green card up; if they disagree, they hold the red card up.	Some drawings of sedimentation which learners have to label with words which have been provided.

Task 5 Text types and purposes

Text 1 = inform
Text 2 = describe
Text 3 = instruct

Task 6 Fat and skinny questions

Alternative fat questions:
4. What do you think the prefix *in-* means? How many other prefixes can you think of which mean the same in English?
5. What is your opinion of Chapter 8?
6. How do you think David Livingstone's early life affected his career? or Describe a day in the life of David Livingstone in Africa.

Task 8 Learning activities to encourage speaking or writing

	Activity	Quadrant
1	Name and label the parts of a human skeleton	1
2	Participate in a debate on nuclear energy	4
3	Write short instructions for a simple chemical experiment	2
4	Show a picture of a painting and give a short presentation about it	3

Task 10 Your own ideas about assessment and feedback

1. I don't know enough about English to give learners feedback on their language mistakes, so I shouldn't even try.

Our comments:
Most subject teachers will know more about English than most of their learners, and so are able to give feedback on some language mistakes, even if this is only about spelling. We feel that the more feedback learners get on language mistakes and language use from both language and subject teachers, the more learners will pay attention to their language, and therefore become more accurate and more active users of language in the subject.

2. English teachers already have enough marking to do. They don't have time to mark everything learners write for the other subjects as well!

Our comments:
Increasing the amount of marking that teachers do is never a popular suggestion! We would not suggest that English teachers mark all subject texts. We suggest that if English and subject teachers design combined assessments, they may save time, and be more effective. If they use combined assessments, the amount of marking will not increase for either teacher, but the effectiveness of the marking for the learners will be greater. The teachers will also learn from each other what is expected in English and what is expected in other subjects, so they will both become more effective at giving relevant feedback.

3. Paper and pencil tests are much easier and quicker to mark than portfolios.

Our comments:
It is true that paper and pencil tests can be designed to be easy and quick to mark; however, they don't always reflect the learning done. Alternative assessments such as portfolios can also be designed to be easy and quick to mark, for example with the help of assessment rubrics. Of course, there is a place for paper and pencil tests in CLIL. However, we feel there are many good arguments for other types of assessment which encourage learners to produce a greater variety of spoken and/or written texts and therefore help their learning of both content and language.

4. I just want to give every learner a grade for my subject and that's it. I am not qualified or trained to do anything else.

Our comments:
The primary task of subject teachers is to teach and assess their subjects. However, in CLIL there is a dual focus on subject and language. In order to emphasise this, we feel subject teachers should make clear how they will be assessing the effectiveness of the language their learners use to express their ideas about the subject. The language teacher can help them to do this by co-operating on the formulation of language-learning aims and assessment criteria for language.

5. Using pictures in tests is childish and as a result the learners won't take the test seriously.

Our comments:
Pictures are a means of providing visual support to learners who are struggling with complex concepts; they take different learning styles or multiple intelligences into account. They allow learners to visualise concepts, and to make their own ideas clear without using language. Encouraging the use of visuals in CLIL is helpful to learners both for their understanding and for demonstrating what they understand.

6. I just don't see or hear the language mistakes my learners make, so I can't correct their English.

Our comments:
Some subject teachers will not notice all the mistakes learners make, but this does not mean they should not listen out for or pay attention to them when they do hear or see them. Again, the English teacher may play a role here in highlighting common mistakes and giving subject teachers support in identifying and correcting these. English teachers can also support subject teachers in describing the level and type of language they can expect.

7. Asking learners to assess each other is not fair because the learners may be biased and they don't have enough expertise to identify mistakes and give suitable feedback.

Our comments:
Peer assessment should not be used as a way to provide final grades for learners. However, if this assessment takes place with clear assessment criteria, it can be a useful tool in helping learners become aware of what is expected of them. Some learner training might be necessary, but learners can also become skilled in giving and receiving feedback.

8. If a learner fails a test, it is usually because they didn't prepare for it properly.

Our comments:
In CLIL this is not necessarily true. Learners may perform badly because they have not understood the language or are unable to express their understanding clearly in a second language. CLIL teachers need to take this into consideration when designing and grading assessments in both initial and later years.

Task 11 Giving feedback about a project

Some aspects of the project might be improved.

Planning
A few aspects of the planning are unclear. An overview or plan for learners or some instructions to help learners with their own planning might help. The learners work in pairs on the project, but there are no instructions about how work can be divided. Therefore, it is actually possible for one person in the pair to do all the work and for the other learner to do little or nothing. It would be useful to give some suggestions about how they might divide the work.

Product and process
The project focuses on a final product. An additional idea might be to divide it into stages, with feedback from the teacher during work, so that learners improve the draft they are working on and therefore eventually produce work of a higher standard. In terms of input, the teacher might provide a number of pre-selected websites, to prevent learners wasting time searching the web and finding irrelevant information.

In order to make the project even more realistic, the teacher could provide the learners with an audience for the brochure; in other words, clarify who they are writing it for. For example, is it for expedition members who have already signed up, for potential expedition members, or for a totally different audience? Writing with an audience in mind helps learners to write more clearly and to focus on meaning (see also Chapter 4). Similarly, the teacher could give a clearer aim for the brochure, thinking about the question *Why are the learners writing the brochure?* Is its aim to enthuse people to join the expedition, to sell the expedition or to inform expedition members?

Assessment
It is unclear how the learners will be assessed on this project. It helps learners if they know from the very start of a project what they are going to be assessed on, as far as both content and language are concerned. The teacher could provide some assessment criteria or a rubric in advance. Chapter 5 provides more information on rubrics and assessing projects.

References

Publications

Assessment Reform Group (2002) Assessment for learning: 10 principles. Available at: http://www.qca.org.uk/libraryAssets/media/4031_afl_principles.pdf [accessed 3 February 2009].

Baker, C. (2006) *Foundations of bilingual education and bilingualism,* 4th edition. Clevedon: Multilingual Matters.

Barnes, D. (1992) The role of talk in learning. In Norman, K. (ed) *Thinking voices: the work of the National Oracy Project*. London: Hodder & Stoughton, pp. 123-128.

Bentley, K. (2007) Student talking time. *Revista española de lingüística aplicada*, 1, pp.129-139.

Biggs, J. (2003) *Teaching for quality learning at university: What the student does*. Buckingham: SRHE and Open University Press.

Blythe, T. (1998) *Teaching for understanding*. San Francisco: Jossey-Bass.

Bolitho, R. & Tomlinson, B. (2005) *Discover English*. Oxford: Macmillan Heinemann.

Buskop, H., Dalhuisen, L., Geest, R. van der ,Steegh, F., Veltmaat, M. & Waal, C. de (2008) *Moving history havo/vwo 1*. Baarn: Nijgh Versluys.

Collier,V.P. (1995) Acquiring a second language for school. *Directions in language education*, 1(4).

Council of Europe (2001) *Common European Framework of Reference for Languages: Learning, Teaching, Assessment.* Cambridge: Cambridge University Press. Available at: http://www.coe.int/t/dg4/linguistic/CADRE_EN.asp [accessed 19 May 2009]

Counsell, C. (1997) *Analytical and Discursive Writing in History at Key Stage3*. London: Historical Association.

Cummins, J. (2000) *Language power and pedagogy: Bilingual children in the crossfire*. Clevedon: Multilingual Matters.

Cummins, J. (2005) Teaching for cross-language transfer in dual language education: Possibilities and pitfalls. Paper presented at the TESOL Symposium on Dual Language Education, Istanbul Turkey, September 2005. Available at: www.achievementseminars.com/seminar_series_2005_2006/readings/tesol.turkey.pdf [accessed 5 January 2009].

Dawes, L. & Wegerif, R. (1998) Encouraging exploratory talk: Practical suggestions. Available at: http://primary.naace.co.uk/curriculum/english/exploratory.htm. First published in MAPE Focus on literacy pack, Autumn 1998. [accessed 25 June 2009].

Department for Education and Skills (2002a) *Literacy in art and design: For school-based use or self-study*. DfES. 0054-2002, Norwich: HMSO.

Department for Education and Skills (2002b) *Access and engagement in history: Teaching pupils for whom English is an additional language*. DfES. 0656-2002, Norwich: HMSO.

Department for Education and Skills (2004a) *Pedagogy and practice: teaching and learning in secondary schools - Unit 7*. DfES. 0430-2004, Norwich: HMSO.

Department for Education and Skills (2004b) *Pedagogy and practice: Teaching and learning in secondary schools - Unit 14: Developing writing*. DfES. 0443-2004, Norwich: HMSO.

Ellis, R. (2005) Principles of instructed language learning. *Asian EFL Journal,* [Online]. September 2005, Available at: http://www.asian-efl-journal.com/sept_05_re.pdf [accessed 10 February 2008].

Fisher, P. (2002) *Thinking Through History*. Cambridge: Chris Kington Publishing.

Gallagher, R. & Parish, R. (2008) *geog.2. Student's book*. Oxford: Oxford University Press.

Gibbons, P. (2002) *Scaffolding language, scaffolding learning*. Portsmouth: Heinemann.
Haines, S. (1989) *Projects for the EFL classroom: Resource material for teachers*. Walton-on-Thames: Nelson (out of print).
Harmer, J. (2004) *How to teach writing*. Harlow: Pearson Education Ltd.
Hedge, T. (2000) *Teaching and learning in the language classroom*. Oxford: Oxford University Press.
Krashen, S.D. & Terrel, T.D. (1983) *The natural approach: Language acquisition in the classroom*. Oxford: Pergamon Press.
Lightbown, P.M. & Spada, N. (2006) *How languages are learned*, 3rd edition. Oxford: Oxford University Press.
Lyster, R. (2007) *Learning and teaching languages through content: a counterbalanced approach*. Amsterdam: John Benjamins Publishing Company.
Lyster, R. & Ranta, L. (1997) Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in second language acquisition*, 19, pp. 37-66.
March, T. (2003) What WebQuests Are (Really). Available at: http://bestwebquests.com/what_webquests_are.asp [accessed 19 February 2009].
Marzano, R.J., Gaddy, B.B. & Dean, C. (2000) *What works in classroom instruction*. Aurora, CO: Mid-continent Research for Education and Learning. Available at: http://www.mcrel.org/PDF/Instruction/5992TG_What_Works.pdf [accessed 19 May 2009].
Mehisto, P., Marsh, D. & Frigols, M.J. (2008) *Uncovering CLIL*. Oxford: Macmillan.
Mercer, N. (2000) *Words and minds*. Abingdon: Routledge.
Milton Keynes Ethnic Minority Achievement Support Service, *Supporting pupils with English as an additional language (*2004). Available at: http://www.mkweb.co.uk/emass/documents/Website_EAL_Artwork.pdf [accessed 26 February 2009].
Moonen, M. (2008) *Testing the multi-feature hypothesis: Tasks, mental actions and second language acquisition*. Utrecht: IVLOS Institute of Education, Utrecht University.
Mulder, J. & Tanner, R.L. (1998) *Bronnenboek Engels in het studiehuis*. Zutphen: Thieme (out of print).
Neu, H. & Reeser,T.W. (1997) *Parle-moi un peu!: Information gap activities for beginning French classes*. Boston: Heinle & Heinle.
Noonan, F.J. (2004) Teaching ESL students to "notice" grammar. *The Internet TESL Journal,* [Online]. 10 (7), Available at: http://iteslj.org/Techniques/Noonan-Noticing.html [accessed 26 February 2009].
Nuttall, C. (1996) *Teaching reading skills in a foreign language*, 2nd edition. Oxford: Heinemann English Language Teaching.
Perez Torres, I. (2007) WebQuest: a collaborative strategy to teach content and language on the web. Virtual strand paper. EuroCALL 2007. Coleraine, September 2007. Available at: http://vsportal2007.googlepages.com/Perez_Torres_EuroCALL07.pdf [accessed 30 September 2009].
Qualifications and Curriculum Authority (2000) *A language in common: Assessing English as an additional language*. Available at: www.qca.org.uk/libraryAssets/media/3359_language_in_common.pdf [accessed 3 February 2009].
Reppen, R. (2002). A genre-based approach to content writing instruction. In J. C. Richards & Renandya, W.A. (eds.) *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press, pp. 321-328.
Sadler, R. (1989) Formative assessment and the design of instructional systems. *Instructional Science*, 18(1), pp. 1-25.
Scrivener, J. (2005) *Learning teaching*, 2nd edition. Oxford: Macmillan Education.
Seow, A. (2002). The writing process and process writing. In J. C. Richards & Renandya, W.A. (eds.) *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press, pp. 315-320.
Sharpe, T. (2001) Scaffolding in action: snapshots from the classroom. In Hammond, J. (ed.) *Scaffolding: Teaching and learning in language and literacy education*. Marrickville: Primary English Teaching Association (Australia), pp.31-48.

Smits, G., Waas, B., Bos, A., Kalverde, O., Boer, I. de & Middendorp, C. (2008) *Your biology 1a havo/vwo*. 's-Hertogenbosch: Malmberg.
Stoks, G. (2002) WebQuest: task-based learning in a digital environment. *Babylonia*, [Online]. 1(02), Available at: http://www.babylonia-ti.ch/BABY102/PDF/stoks.pdf [accessed 19 February 2009].
Ur, P. (1996) *A course in language teaching*. Cambridge: Cambridge University Press.
Vygotsky, L. (1978) *Mind in society: The development of higher psychological processes*. London: Harvard University Press.
Walsh, B. (2004) *Empires and citizens: Pupil book 2*. Cheltenham: Nelson Thornes.
Westhoff, G. (2004) The Art of Playing a Pinball Machine. Characteristics of effective SLA-tasks, *Babylonia,* [Online]. 12, pp. 58-63. Available at: http://www.gerardwesthoff.nl/publicaties-wetenschappelijk-didactiek-van-de-vreemde-talen.php [accessed 25 February 2009].
Westhoff, G. (2009) *Leren overdragen of Het geheim van de flipperkast*. Biezenmortel: MesoConsult.
Williams, M. & Burden, R.L. (1997) *Psychology for language teachers: A social constructivist approach*. New York: Cambridge University Press.
Wood, J., Bruner, D. J. & Ross, G. (1976) The role of tutoring in problem solving. *Journal of child psychology and psychiatry*, 17(2), pp. 89-100.
Wragg, E.C. & Brown, G. (2001) *Questioning in the primary school*. Abingdon: Routledge Falmer.

Dictionaries

Oxford student's dictionary for learners using English to study other subjects (2007) Oxford: Oxford University Press.
Cambridge School Dictionary (2008) Cambridge: Cambridge University Press.

Online dictionaries

http://dictionary.reference.com/
With pronunciation and synonyms
http://www.dictionary.net/
Free online dictionary, gives access to word, and phrase definitions from a variety of English dictionary resources
http://www.merriam-webster.com/netdict.htm
Merriam-Webster online dictionary, with definitions and word pronunciation
http://visual.merriam-webster.com/
Merriam-Webster online visual dictionary
http://www.teachers.ash.org.au/jeather/maths/dictionary.html
Online maths dictionary

Websites

CEFR

www.europeestaalportfolio.nl
Online European language portfolio, for self-assessment
www.dialang.org
Dialang, language tests related to the CEFR

CLIL, International education

http://www.factworld.info
The forum for across the curriculum teaching
http://www.ibo.org/myp/curriculum/project
International baccalaureate, Middle years programme curriculum: Personal project.

Lesson plans, handouts

www.standards.dfes.gov.uk/schemes3/
The Schemes of Work site for Key Stage 3 (KS3 or lower level of secondary school) has ready-made lesson plans.
www.bbc.co.uk/skillswise
BBC Skillswise has many useful, clearly-written handouts which you can easily adapt for your lessons.

Projects

Science projects

http://www.scienceacross.org
Science across the world. This site provides projects where learners exchange information, opinions and ideas on a variety of science topics with other learners in other countries.

WebQuests, TalenQuests

http://webquest.org/index.php
Bernie Dodge's website; he is one of the founders of WebQuests. Click on 'find WebQuests' and then carry out a search on the large database.
bestwebquests.com/
Tom March's website, the other founder of WebQuests. These WebQuests have been reviewed for quality.
http://webquestmaker.nl/talenquest/talenquest_beoordelen
Meetlat - Criteria voor TalenQuests.

Other resources

www.teachers.tv/
Teachers TV. Education programmes online on most topics. Good resource for input
www.standards.dfes.gov.uk/schemes3/
The Standards Site. This British government site is a mine of ideas for projects on all subjects. Select a subject at Key Stage 3 level (11 to 14-year-olds) from the drop-down menu and browse through the ideas for your subject.

Rubrics

http://rubistar.4teachers.org/index.php
Rubistar, to create rubrics for project-based learning activities

Teaching methodology, scaffolding

http://www.co-operation.org
Cooperative learning
http://www.pgcps.org/~elc/strategies.html
Instructional Strategies
http://webquest.sdsu.edu/scaffolding/production.html
Production scaffolds
http://webquest.sdsu.edu/scaffolding/reception.html
Reception scaffolds
http://webquest.sdsu.edu/scaffolding/transformation.html
Transformation scaffolds

Text types and readability

http://www.bbc.co.uk/skillswise/words/reading/typesoftext/game.shtm
Types of text game
http://www.harrymclaughlin.com/SMOG.htm
SMOG Calculator, Simple Measure Of Gobbledygook
www.standards-schmandards.com/exhibits/rix
Readability index calculator
http://www.texamen.nl/index.php?id=1
Bureau taal, Texamen® online

Word lists

http://jbauman.com/gsl.html
General Service List
http://www.uefap.com/vocab/select/awl.htm
Academic Word List

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Appendix

Language levels according to the Common European Framework of Reference for Languages (CEFR)

		A1	A2	B1	B2	C1	C2
UNDERSTANDING	**Listening**	I can recognise familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.	I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). I can catch the main point in short, clear, simple messages and announcements.	I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.	I can understand extended speech even when it is not clearly structured and when relationships are only implied and not signalled explicitly. I can understand television programmes and films without too much effort.	I have no difficulty in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent.
	Reading	I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.	I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.

SPEAKING	**Spoken Interaction**	I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions in areas of immediate need or on very familiar topics.	I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers.	I can take part effortlessly in any conversation or discussion and have a good familiarity with idiomatic expressions and colloquialisms. I can express myself fluently and convey finer shades of meaning precisely. If I do have a problem I can backtrack and restructure around the difficulty so smoothly that other people are hardly aware of it.
	Spoken Production	I can use simple phrases and sentences to describe where I live and people I know.	I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	I can present clear, detailed descriptions of complex subjects integrating sub-themes, developing particular points and rounding off with an appropriate conclusion.	I can present a clear, smoothly-flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.
WRITING	**Writing**	I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	I can write short, simple notes and messages relating to matters in areas of immediate needs. I can write a very simple personal letter, for example thanking someone for something.	I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	I can express myself in clear, well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select style appropriate to the reader in mind.	I can write clear, smoothly-flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

Glossary

Term	Explanation
academic language	Formal language used to describe complex ideas
alignment	Setting up learning aims, learning activities and assessment so they match
assessment	Gathering information about learners' progress, making judgments about how successful learners have been in mastering subject specific skills and knowledge
assessment for learning	This type of assessment shows what a learner can do
assessment of learning	This type of assessment measures what a learner knows
authentic text	Real-life text which is written by native speakers
backwash effect	The influence of an assessment on the way learners study and learn
BICS	Basic Interpersonal Communication Skills. Day-to day language used in informal situations where learners can use clues, visuals, gestures or facial expressions to communicate with each other
brainstorming	A problem-solving technique where members of a group quickly and spontaneously share ideas and solutions, without judgment
built-in scaffolding	Support for developing language or content which is planned in advance by the teacher. For example, questions to ask in a lesson or a writing frame
CALP	Cognitive Academic Language Proficiency. Abstract language used for studying in formal situations; this is essential for learners to reach an appropriate level in school subjects
CEFR	See Common European Framework of Reference for languages
chunks	Words or phrases which are used in specific contexts and are often learned as a whole
CLIL	Content and Language Integrated Learning: learning a subject and another language at the same time
CLIL projects	Projects which work on content and language at the same time
cognitive conflict	A clash between existing ideas or beliefs and new ideas, which requires learners to adjust their ideas
cognitive learning theory	Sees learning as information processing
cognitive organiser	A visual representation and note-taking tool which helps learners to organise or re-organise language and ideas
Common European Framework of Reference (CEFR)	A guideline used to describe achievements of learners of foreign languages across Europe
Common Underlying Proficiency	Rather than having two separate areas for different languages, bilingual learners store two languages together and the knowledge is linked and can interact. The two languages are kept separate only at the surface level, where they are used to speak, read, write, and so on. Both areas can be compared to an iceberg, with a single big mass under the surface and two small peaks showing above it. This way of understanding bilingualism is also sometimes referred to as the iceberg analogy

Term	Explanation
comprehensibility	How understandable material is for learners
comprehensible input	The language input just beyond the level of a learner, but that the learner still can understand
constructivism / constructivist learning theory	Learning theory which sees learning as the building of ideas based on new experiences
content	Subject matter (information, knowledge, concepts) relating to a school subject other than language
contextual clues	Parts of a text which help with comprehension, e.g. title, pictures, subtitles, the way a text is arranged on the page
contingent scaffolding	Immediate, on-the-spot scaffolding, which helps struggling learners to understand
correction code	A symbol used to show to learners what type of mistake they have made, e.g. G for a grammar mistake, P for a punctuation mistake, a smiley face for something they have done right
cross-curricular project	A project which involves two or more subjects
Cummins' quadrant	A model used to show how difficult a learning activity is and how much context it includes. Activities are arranged in two dimensions across four quadrants to show language and learning
deconstruction stage	A stage in teaching writing where learners look at how texts are organised and put together
descriptors	Descriptions in a rubric which shows what a learner can do if at a particular level
dual focus	A focus on both language and content
elevator pitch	A presentation of an idea which must last no longer than a ride in a lift (e.g. 30 seconds, 300 words)
elicit	To draw out (from a learner) something which they already know, half know or remember
everyday language	Language commonly used in general social situations
exploratory talk	Discussion where pupils engage critically but constructively
factual information gap	Communication between two or more people and where factual information is known only to some of the people present
false friends	A word in the target language which looks or sounds as if it has the same meaning as a similar word in the learners' first language but does not
fat and skinny questions	Skinny questions usually provide facts, are easy and quick to answer in a few words or less. Fat questions help learners to think more deeply about input, have more than one answer and require longer answers
first person	If a text is written in the first person, it is written from the "I" perspective
freewriting	When you do freewriting, you write on the page without stopping; the ideas do not need to be grammatical or correct; freewriting is used for brainstorming ideas
freeze frame	A single frame of film, like a still photograph

Term	Explanation
functions / communicative functions	This term refersto the uses of language required by the learner. Examples of functions are inviting, requesting services, apologising.
general vocabulary	The commonest words used in everyday language such as *the, be, book, table* etc.
genre approach	A way of looking at texts which shows how texts are put together and organised
genres	Text types with specific aims, structure and language features
glossary	Word lists learners collect in a notebook or word file
graphic organiser	See cognitive organiser
higher thinking skills	Thinking skills which get the brain working harder, such as analyzing, evaluating, creating
information gap activities	Activities in class where there is real communication between two or more people and where factual information is known only to some of the people present
input	The information provided to help learners understand ideas and to construct meaning
input hypothesis	Learners learn a language by exposure to language (input) that is just beyond what they already know
intake	A distinction is made between what learners understand (input) and what they learn (intake)
interactionist theories	Theories which see interaction and meaning as being linked. Meaning is created through interaction. Just listening or reading or just speaking or writing is not enough. It is only when a learner notices that they have to adjust their language to make themselves understood that language learning takes place.
International Baccalaureate Organisation (IBO)	International educational foundation headquartered in Geneva, Switzerland. IB offers three educational programmes for children ages 3–19.
joint construction	Learners create something (a discussion, a performance) together
key words	The words learners need to understand basic ideas in a text
KWL grid	Know, want, learn grid. Learners put in the first column what they know, in the second column what they want to learn, in the third column what they have learned
L1	First language, often Dutch in the Netherlands
L2	L2 in CLIL is the target language, often English in the Netherlands
L1 interference	Applying what you know about your first language incorrectly to a second language
language exposure	Amount of language learners hear, read, watch or listen to. The part of the memory which stores information for a longer time; information is remembered
language functions	Language used to achieve a communicative purpose, e.g. persuading, describing, giving opinions
language skills	Listening, reading, writing, speaking
linguistic	Related to language

Term	Explanation
listenability	How understandable listening material is
long-term memory	The part of the memory which stores information for a long time (from hours to years); the information is retained and remembered
Middle Years Programme (MYP)	A programme offered by the International Baccalaureate Organisation (IBO) which helps learners to develop skills which are useful for them in the world
mode continuum	The way language changes between speaking and writing, formal and informal, depending on the context
multimodal input	A variety of types of materials, provided through several different channels (visual, auditory or written) not related to language
negotiation of meaning	A process that speakers go through to reach a clear understanding of each other
no-hands rule	A classroom procedure where the teacher can ask anyone the answer: no-one puts their hand up
non-linguistic	Not related to language
noticing	Looking carefully at aspects of language in a text
opinion information gap	communication between two or more people where opninions are known only to some of the people present
output	The production of language and content in the target language
output hypothesis / theory	Suggests that language learning takes place when learners produce spoken or written language
peer assessment	Learners at the same level assessing each other
performance	A way of showing learning which is not in writing, e.g. a role-play, a painting, a model
personal idiom file (pif)	A file where learners store language which is useful
personal information gap	communication between two or more people and where personal information is known only to some of the people present
personalisation/ personalising	The way in which tasks are made meaningful and relate to learners' personal experiences
presentational talk	A talk where learners present information
pre-teach	Teach important concepts or words in advance
process approach	A way of teaching writing where writing is seen more as a process than a product. This includes drafting and rewriting
processing input	The action of working actively with input
production scaffold	Helpful tasks where learners produce or create something new which shows their understanding
productive skills	Writing and speaking
productive vocabulary	Vocabulary which learners can use, e.g. in writing or speaking
readability	How understandable reading material is

Term	Explanation
reading strategy	A plan of (mental) actions to achieve a reading goal
reception scaffold	A special kind of help (Gibbons 2002) that teachers can use to help learners move forward in their learning and understanding
receptive skills	Listening (both to audio and video), reading
receptive tasks	A listening or reading activity
receptive vocabulary	Vocabulary which learners understand but cannot (yet) produce
rubric	A rubric is a scoring tool often in the form of a matrix that teachers use to assess learner outcomes (products, performances). A rubric includes a set of criteria and levels of performance
scaffolding	A special kind of help (Gibbons 2002) that teachers can use to help learners move forward in their learning and understanding. See built-in and contingent scaffolding
scaffolding tools	Helpful tools (teacher talk, cognitive organisers, speaking and writing frames) which aid learners to organise, understand and record spoken and written information, as well as to speak and write
scanning	A reading skill: reading through a text to find specific information
self-assessment	A way of evaluating work where the learners score themselves
signal words	These words give hints about what is about to happen in what you're reading. For example: *firstly, finally, next*
skimming	A reading skill: reading quickly in order to find out main ideas in a text
socio-constructivist learning theory/ social constructivism	Theories which see learning as a social process which occurs through interaction between learners and others
speaking frame	A written structure which helps learners to produce spoken language; it is a scaffolding tool and may provide help at word, sentence or text level
storyboard	A sequence of sketches, images and notes for a cartoon, animation or film
subject-specific terminology	Words which are used to describe concepts in a particular subject, e.g. homeostasis in biology or democracy in history
substitution table	Arrangement of words in columns in a table which can be put together to make sentences
syllable	A part of spoken language consisting of a one sound. E.g. The word *spoken* is made up of two syllables: *spo* and *ken*
target language	The language the learners are learning, mostly English in the Netherlands. It could be a third or fourth language for some learners
text type	Sort of text, e.g. a brochure, an article, a magazine editorial

Term	Explanation
thinking skills	Processing information actively, critically and creatively in a range of contexts
third person	He, she or it
transfer	The ability to apply information, knowledge or skills learned in one context and use it/them in another context or in a different subject
transformation scaffold	A helpful task which helps learners to change information into another form, and requires higher thinking skills
Venn diagram	Diagram composed of two overlapping circles, used to to highlight similarities and differences related to a topic. Learners write the two chosen topics to compare in the two outer circles, and then write similarities between the topics in the middle (overlapping) space, and differences in the outer spaces
visual support	Pictures, drawings, diagrams which help learners to understand material
warm-up task	A task which introduces learners to material, stimulating them to think about prior knowledge or interesting them in a topic
watching frame	A cognitive organiser which helps learners to understand and focus on visual material such as a DVD or film
WebQuests	A WebQuest is an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web
working memory	The part of the memory which stores information for a short time; the information is quickly forgotten. Also referred to as short-term memory
writing frame	A written structure which helps learners to produce written language; it is a scaffolding tool and may provide help at word, sentence or text level
zone of proximal development (ZPD)	The distance between a learner's original level and next level of development

CLIL SKILLS

A practical book on content and language integrated learning

CLIL Skills is a practical resource book for subject teachers of twelve to eighteen-year-olds working in Dutch bilingual (TTO) secondary schools. It supports these teachers in their everyday practice and informs them about key issues related to content and language integrated learning (CLIL).

Good CLIL teaching interweaves content and language. This book covers six important **CLIL Skills**: activating, providing lesson input, guiding understanding, encouraging speaking and writing, assessing and giving feedback, and using projects. It is essential reading for all CLIL teachers in the Netherlands.

CLIL Skills includes:

- over seventy practical lesson ideas based on real classroom activities
- case studies from schools
- examples and illustrations from teachers
- useful theory explained in clear language
- a glossary of useful terms
- teacher development activities

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