

Undergraduate Dissertation

Trabajo Fin de Grado

The use of ICTs to enrich CLIL courses and materials

Author

Carolina Blasco Rincón

Supervisor

Maria José Luzón Marco

FACULTY OF ARTS
2016-2017

Línea temática: Lingüística aplicada e inglés académico

ABSTRACT

New technologies are having an increasingly important role in the teaching and learning of languages. They are a useful tool in the CLIL classroom, since they help students to understand content which is taught in a foreign language. This dissertation aims to explore the benefits of ICTs in CLIL and how CLIL teaching and materials could be improved and enriched by using them. An interview with a teacher was carried out. From the answers given, a webpage with several online resources and activities was created. The proposal was implemented and results were drawn. ICTs were shown to help students understand the content, and online games and videos were preferred over the rest of materials. However, **only** 54 % of the participants used ICTs to revise and study the subject, and 87% assured they would use the webpage section with additional materials. Future studies should consider whether students are really encouraged to use ICTs to complement classroom materials since it has been shown they play a fundamental role in the teaching and learning of languages.

Keywords:

CLIL ICT Foreign language Teaching Learning

RESUMEN

El papel de las nuevas tecnologías en la enseñanza y el aprendizaje de idiomas es cada vez más importante. Son una herramienta útil en la clase de CLIL ya que ayudan a los alumnos a entender el contenido que se imparte en la lengua extranjera. Esta tesis tiene como objetivo explorar cómo las TIC benefician a este método de enseñanza y cómo se pueden complementar los materiales utilizados con ellas. Se llevó a cabo una entrevista con una profesora de CLIL. A partir de sus respuestas, se creó una página web que contenía varios recursos en línea y actividades. La propuesta se puso en práctica y se obtuvieron unos resultados. Se demostró que las TIC ayudaban a los alumnos a entender el contenido, y que se preferían los juegos online y vídeos frente a otros materiales online. Sin embargo, solo un 54% de los participantes utilizaba las TIC para estudiar y repasar la asignatura, y un 87% aseguró que utilizaría la sección de la página web en la que hay materiales adicionales. Las futuras investigaciones deberían considerar si realmente se motiva a los estudiantes a que utilicen las nuevas tecnologías para complementar los materiales de clase ya que se ha demostrado que juegan un papel fundamental en la enseñanza y aprendizaje de idiomas.

Palabras clave:

CLIL TIC Lengua extranjera Enseñanza Aprendizaje

TABLE OF CONTENTS

1.	Introduction.....	1
2.	Theoretical Framework.....	2
	2.1. Content and Language Integrated Learning.....	2
	2.2. CLIL in Aragón.....	6
	2.3. CLIL and Materials Design.....	7
	2.4. CLIL and ICT.....	10
3.	My Proposal.....	13
4.	Results.....	18
5.	Conclusion.....	23
6.	Bibliography.....	25
7.	Appendices.....	27
	Appendix 1.....	26
	Appendix 2.....	28
	Appendix 3.....	29
	Appendix 4.....	31

1. INTRODUCTION

New technologies are having an increasingly important role in the teaching and learning of languages, since they facilitate access to a high variety of materials in different formats and increase students' motivation. ICTs are a particularly useful tool in the CLIL classroom, since they help students to understand content which is taught in a foreign language. As they must learn the content through a second language they need support and help that sometimes cannot be provided by the teacher due to the restricted time they have to deal with the subject. Most of them do not have the language level required to fully understand the contents taught in class. Consequently, the use of new technologies such as videos, games and other online resources may complement the classroom materials and help students in the learning process.

The main aim of this dissertation is to explore the benefits of ICTs when teaching Content and Language Integrated Learning (CLIL) and how CLIL teaching and CLIL course books could be improved and enriched by using new technologies in the classroom.

The dissertation is structured as follows: first, I will present CLIL and I will analyse the situation of this approach in Aragón. After that, I will investigate how materials can be designed in order to meet CLIL principles. In order to finish with the theoretical framework, I will examine the role of ICTs in language learning. After studying the principles and ideas of CLIL, I will propose a CLIL lesson for a specific classroom in which new technologies will be the main resource to revise the content studied in class. This lesson has been designed taking into account the information and guidelines provided by the teacher during an interview about the use of new technologies in her own lessons. After implementing the lesson, I will analyse the

results produced in order to see whether new technologies help students to learn. Finally, I will draw conclusions to synthesize the results and outcomes.

2.THEORETICAL FRAMEWORK

2.1 Content and Language Integrated Learning

CLIL (Content and Language Integrated Learning) refers to an instructional approach to language learning developed in Europe in which students acquire a second language while learning content. Coyle et al. define it as "a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language. That is, in the teaching and learning process, there is a focus not only on content, and not only on language. Each is interwoven, even if the emphasis is greater on one or the other at a given time. " (2010: 1). According to the information network on education in Europe (Eurydice) "achieving this two-fold aim calls for the development of a special approach to teaching in that the non-language subject is not taught in a foreign language but with and through a foreign language." (2006: 7)

This approach to language teaching helps students to improve their linguistic competence, since communication must take place in the foreign language and there is a greater exposure to the second language. Besides, learners get motivated to acquire the foreign language because of its authentic use in the classroom; they need to learn the language in order to learn the content. As the European Commission states "[w]ithin CLIL, language is used as a medium for learning content, and the content is used in turn as a resource for learning languages. " (2005: 2). However, the meaning and implications of the term vary depending on the country where it takes place. For instance, in Sweden CLIL means immersion, in Finland, language-enriched instruction and in Spain, integrated curriculum. As Coyle says "[t]here is no single blueprint that

can be applied in the same way in different countries.” (2007: 99). In this work, CLIL in Spain and, more specifically, in Aragón will be examined.

Coyle et al. (2010) established the general principles which underline this approach. Firstly, CLIL aims to provide the student with a personalised learning (i.e., the learner has his/her own interpretation of the input). Secondly, that input must be clear and reachable and both the language used and the content must be related. Thirdly, as the main aim of this approach is to prepare students for a global market, interaction in the classroom is essential; language is a means of communication. In addition, a research-driven project supported by the European Commission showed that there were five main dimensions that related to the aforesaid principles: culture, environment, language, content and learning. They vary depending on the students' ages, the social-linguistic environment and the influence of CLIL in the students. The cultural dimension refers to the aim CLIL has of developing intercultural and cross-cultural communication; students get a wider context which includes knowledge of other countries and regions. Secondly, the environmental dimension is associated with the concept of 'Internationalisation': students must be prepared to face an international labour market. The third dimension is language: students develop polyglot attitudes and interests and improve English competency. The content dimension is attributed to the acquisition of subject-specific terminology in the target language which may be necessary for the future. Finally, the learning dimension involves the knowledge of different methods and teaching practices and also the growth of the students' motivation, since they use the language for real purposes.

The theory of language that underlies CLIL is based on four assumptions (Richards and Rodgers, 2015). Assumption number one deals with the importance of vocabulary; students must learn subject-specific vocabulary, so it is the link between

content and language (Llinares et al., 2012). Assumption number two states that grammar only has a communicative purpose; students improve their grammar competence through use (Coyle et al. 2010). Assumption number three explains that language is just the vehicle and students need to comprehend the input and take part in the activities which are done in the classroom (Llinares et al., 2012). Finally, assumption four is concerned with the authentic use of language; in the activities students do in the CLIL lessons, they may link several skills, as it would happen in the real world; there is an integration of content, language and thinking skills.

This approach draws on a number of hypotheses about second language learning (Richards and Rodgers, 2015). First, as Lyster states "[t]he goal of teachers through any type of content-based program is to enable students to comprehend the curriculum presented through the second language." (2011: 617) Students must understand the input in order to learn. Therefore, teachers must make the simplifications and adjustments required to be understood by non-native speakers (e.g., they must speak slowly, emphasise the key concepts and ideas, repeat them, give synonyms of the keywords and phrases...). Besides, both the teacher and the learner must negotiate the meaning by asking questions, amplifications of what one speaker has said, reformulations and clarifications...Thirdly, feedback is an essential element when learning a language, since it facilitates the process. If the teacher uses clarification requests, explicit corrections, recasts, elicitations, repetitions or metalinguistic feedback, students learn how to discern between correct and incorrect linguistic constructions. The fourth assumption states that the main objective when learning a language is communication, so dialogues are very important in the classroom. Through dialogues, the participants of the learning process achieve "common understanding, through structures, cumulative questioning and discussion which guide and prompt, reduce

choices, minimise risk and error, and expedite 'handover' of concepts and principles." (Alexander, 2008: 30). Communication provides chances for exposure to a rich language and also the opportunity to use it (Llinares et al. 2012). Finally, as I will explain later on, scaffolding plays an important role in CLIL. Scaffolding refers to the temporary instructional techniques that teachers use in order to help the students in the learning process until they become independent (Gibbons, 2002). Scaffolding occurs when one member of the class has a higher knowledge than the other, for example between the teacher and the learner. It is an essential component in the classroom because, as students are learning content through a foreign language, they will have to deal with complex structures and ideas.

When learners enter school they often have no preceding education in the foreign language. Therefore, it is very difficult for them to learn complex input without help. From the beginning, they are encouraged to use the FL but they logically use their mother tongue. Teachers provide students with input such as vocabulary and expressions in the second language in order to help them to follow the activities done in the classroom. However, teachers must answer to the students' linguistic necessities as they emerge. Therefore, both the teacher and the learner have clear roles. CLIL tends to be a student-centred approach since learners take an active role and must participate in the classroom in order to acquire language and autonomy. Concerning teachers, they must correct the students, provide content through the L2 and facilitate learning and comprehension; in other words, their role to ensure the students' understanding of the materials provided.

However, this approach poses difficulties not only for learners but also for teachers. As regards methodology, content and language teachers face different obstacles. In a subject-area classroom, the teacher must explain and provide a great

quantity of input imperative in the curriculum. He/she takes an active role because interaction is reduced and he/she has to explain from the front of the classroom. There is no time for scaffolding and the teacher may lack English language competence. By contrast, in a language class, students are encouraged to interact in pairs or groups. Therefore, they are the ones who have the active role. There is scaffolding and the teacher's talk is based on repetition and clarifications. Nevertheless, the teacher may not master subject-specific input and might not feel confident.

Graaff, Koopman and Westhoff (2007) have stated a series of guidelines CLIL teachers must follow in order to teach effectively. As it is above-mentioned, teacher must facilitate learning by adapting the input to the level just a bit beyond the learners' current knowledge. They must also provide feedback and propose activities that make learners construct meaning. In addition, they must promote form-focused learning by implicit and explicit techniques and also foster pair and group work to make them communicate with each other (output). Finally, they should provide students with compensation strategies because, at least at the beginning, they will face difficulties when trying to express themselves.

2.2. CLIL in Aragón

In this section, CLIL in Spain and, more specifically, in Aragón will be examined. In 1996, an English-Spanish integrated curricular program was established in the country, since the Ministry of Education and Science signed an agreement with the British Council to set up 44 bilingual pre-school and primary schools; 4 of them were established in Aragón. This initiative aimed to prepare students to acquire both the linguistic and the professional competence to face the challenge globalisation has posed. Focusing on Aragón, this bilingual program started in 2007 and in the school year 2008-

2009 there were 21 primary schools and 4 secondary schools (Dobson, Pérez Murillo and Johnstone, 2017).

In 2013, the so-called "Programa integral de bilingüismo en lenguas extranjeras en Aragón" (PIBLEA) was published in Official Bulletin of Aragón. It guaranteed the continuation of the existing bilingual program and included every school paid with public funds that plan to teach non-linguistic subjects or modules in a foreign language, either in English, French or German and at any level- pre-school, primary school or high school. (Boletín Oficial de Aragón, 2013). In this text, there is a distinction of two kinds of bilingual programs: the so-called "CILE1" and "CILE2". CILE1 (Curriculo impartido en lengua extranjera 1) refers to those schools who aim to teach one subject or module in the foreign language, while CILE2 (Curriculo impartido en lengua extranjera 2) schools would teach at least two subjects or areas in the L2.

This program started to function in the school year 2013-2014 and established a series of requirements for schools. First, those schools that want to become bilingual must have a number of teachers with linguistic competence to teach the subject. Secondly, most of the faculty must approve this program and present a bilingual project in accordance with the general guidance of the call in which it will be presented.

2.3. CLIL and Materials Design

When planning and delivering CLIL lessons, there are several aspects that must be taken into account. Mehisto et al. (2008) establish six characteristics good CLIL teaching must have. Firstly, learning must have a multiple focus; it refers to what Coyle et al. (2010) called "the Language Triptych": "language of learning", "language for learning" and "language through learning". Secondly, there must be an enriching environment during the lessons in which students feel confident. Thirdly, authenticity is

essential in the CLIL classroom. Students must realise they are learning content through language not only to learn specific data but also to develop linguistic competencies which are essential in real life. Besides, the CLIL classroom requires an active participation of the student individually, in pairs and in groups; the teacher is only a facilitator but students must develop their own learning. Scaffolding strategies are very common in CLIL; these strategies help learners to remember information they already know and promote critical thinking. As Wood, Bruner and Ross (1976) define, scaffolding is an "adult controlling those elements of the task that are essentially beyond the learner's capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence". Finally, co-operation between content and language teachers is indispensable. Furthermore, parents should also know how to help children with their homework since they may need support.

Those core features lead to a set of adequate activities that can be done in the CLIL classroom. Darn (2006) states that a CLIL lesson is divided into four stages. First, students are shown a text and they have to make predictions about its content. Second, they must identify and organise knowledge; this task is facilitated when there are graphics, tables or any other visual resource. The third stage focuses on the identification of the language used. Finally, students do a variety of tasks which include both productive and receptive activities and also the practice of the four skills (i.e. listening, speaking, reading and writing). Listening tasks include receptive activities such as labelling maps, charts and pictures, identifying locations, taking notes and reordering information. Regarding speaking, students can practise language production when presenting data derived from surveys or participating in debates. Reading and writing can be practised through a series of activities in which students get involved in the subject. These include tasks such as anticipation guides in which, before starting the

unit, students think of a series of statements the teacher has said; blind sequencing, to make them negotiate the correct order of a sequence; and KWHL (what I Know, what I Want to know, How I can find out, what I Learned) in which students write in a chart what they already know, then read a text and complete the information with what they have learned.

In the CLIL classroom, students have the challenge of learning specific vocabulary. If they do not understand the words, they do not understand the content. An approach to vocabulary learning may include an immersion in an environment in which academic words are plentiful and teachers who explicitly explain students several core words and help them to acquire learning autonomy. As Sadhana Puntambekar (2009) states, successful CLIL instruction must contain additional scaffolding for language, connections to students' linguistic resources in L1, additional opportunities for practice and development of strategic behaviour.

However, the syllabus of a CLIL course depends on the level for which it is designed and on the approach it follows. Coyle et al. (2010: 18-22) provide several instances of CLIL courses both in primary and secondary school. I will focus on secondary levels of education. In these courses, there may be a "dual school education"; students learn a specific CLIL course through the Internet (i.e., connecting with schools from different countries and following a class through Skype or VoIP). There are also schools which study most of the curriculum in the second language ("bilingual education"). Another common module is the "interdisciplinary module approach", in which there are teachers from different areas of knowledge working together. "Language-based projects" differ from the aforesaid modules, since the language teacher is the one who is in charge of the module. Finally, "specific-domain vocational

CLIL" is a module in which students learn specialised knowledge in order to carry out specific tasks.

2.4. CLIL and ICT

Information and Communication Technologies (ICT) are becoming an essential tool in the classroom, since they allow teachers to provide support for students which goes beyond the traditional materials used in the classroom, such as textbooks or additional worksheets. They could be defined as "the combination of informatics technology with other, related technologies, specifically communication technology." (UNESCO, -) However, the teacher must select the materials carefully because they have to meet the students' needs.

In order to encourage both teachers and students to use ICTs, the European Union has launched a proposal called The Digital Schools of Europe Project. It aims to enhance digital materials in education by creating educational platforms and digitalising and enriching classroom materials such as textbooks. Besides, one of its main objectives is to adapt classroom materials and resources to meet students' needs. Consequently, these materials must have, as main aim, the enrichment of the already used materials (i.e., textbooks).

The concept of enrichment has different definitions. Clendening and Davies considered this notion as available only for those students who were gifted (1983). However, Piggott (2004) refers to the chances every student gets to develop both socially and personally through a greater curriculum which goes beyond the basic one. Feng(2005) points out the idea that students' knowledge gets enriched because ICTs are flexible and can be adapted to the students' educational needs. However, this concept was first coined in 1939 by Vera Peacock, when she talked about "enriching a basic

textbook along broadly cultural lines" (24). However, she referred to realia rather than to new technologies. Recent studies carried out by Richards (1999) centre on the notion of enrichment regarding the different ways of adapting the materials to the curriculum. ICTs may address specific necessities the students have, but they could also act as a complement, providing the students with more practice. These materials must be adapted to the specific target group. Feng (2005) said that the definition of enrichment varies depending on for whom it is done, for which materials and how it may serve to students.

Although this concept is very recent, Mitsikopoulou(2014) developed a principled approach to digital enrichment. First, it must be systematic and have concrete objectives. Secondly, she examined the steps that must be followed in order to enrich the classroom materials through ICTs. First, the teacher's and the students' book and the workbook must be analysed. Then, there were discussions with EFL teachers about the specific materials the used in the classroom and their students were interviewed. From the results, several kinds of enrichment activities were proposed. All of them must be appropriate and specific for each textbook and it must support it, never correct the content or modify it.

Digital enrichment consists of different types of materials, which are classified by Tomlinson (2003). He divides them into four kinds of materials: informative materials, instructional materials, experiential materials and exploratory materials. Informative materials help the student get informed about the target language. Several examples are glossaries, audio extracts and picture dictionaries. Pictures dictionaries would be more suitable for primary school, while glossaries would help high school students; both of them would allow the learners to learn the specific vocabulary of each unit. Grammar comics are also an example of this type of materials because they teach

grammar while enhancing reading skills and being humorous (Ujiie and Krashen, 1996; Liu, 2004; Kew and White, 2009). Instructional materials are effective in language teaching when they "are based on theoretically sound learning principles, are appropriate to the learners' needs, provide examples of how language is used, and provide opportunities for communicative and authentic language use" (Richards, 1999: 50). These materials must let the students practise the language through content. Edugames, listening and reading apps and self-assessment tests are examples of these materials. As Richards states, these two kinds of materials are the most common ones (2001: 251).

Experiential materials are the ones which are more similar to real life. As they have real life purposes, students get more motivated and it makes personal engagement easier (Tomlinson, 2003). They include digital stories, virtual tours and interactive maps. Students can use real tools the Internet offers such as Google Earth. They aim to provide students with culture. Finally, exploratory materials encourage learners to feel curious and discover new things about what is explained in the curriculum. They are scarcely used because they are more difficult to create and are very demanding for the teachers. In some activities, students must guess a hidden message or solve a problem. These kind of materials help learners to practise several skills at the same time.

As Tomlinson (2012, p.146) states, it is necessary to see what the effects of this type of materials on learning are. In the case of CLIL, new technologies are very useful to help students understand and learn the content. The teacher can use visuals such as videos and photos in order to make students comprehend the input. Besides, online games are essential in CLIL because students learn while playing, what makes learning more enjoyable. In the proposal and results sections these facts will be proved.

3. MY PROPOSAL

This is a proposal for the use of ICTs to complement the textbook used in a CLIL course. The materials were created for students in the secondary school *Tiempos Modernos*. In this school, students are taught two content subjects in two different foreign languages: English and French. The main aim of the proposal was to help learners to revise what they had studied in class in two of the units by using new technologies. It was aimed at students of four classes of 1st ESO who were taught Biology and Geology in English. In order to prepare these activities, I interviewed the teacher so as to know what her students needed and work in collaboration with her. Then, I designed the materials I thought were suitable to meet their needs. I had the opportunity to use the materials I had prepared with them and, therefore, I could see if they really helped them. Finally, I gave every student a questionnaire to get feedback from them.

1. Findings from the interview with the teachers

As a starting point, I interviewed a secondary school teacher who was using CLIL in her biology and geology lessons. She taught it in 1st ESO and in four different classes. Before, she had taught the same subject in Spanish. She found several differences between teaching it in the L1 and in the L2: there were no differences in content but she had to make a bigger effort in order to make the students understand her. She sometimes did gestures and mimes and made use of pictures and graphs to be understood by the students. Therefore, I asked her if she prepared the lesson materials in the same way as when she taught the lesson in her L1 and she told me that it was more difficult for her to prepare them in the L2.

The next question was related to the teacher herself. I asked her what competencies a CLIL teacher had to have. Her answer was that first, the teacher had to master the subject in her own language, then have a good English level -at least B2, although it is better to have a higher level- and have a lot of resources to use in the classroom.

In this secondary school, students can choose between learning this subject in English or in Spanish. Consequently, I asked her if she worked together with other teachers and she answered that, from the beginning, she was very interested in having the same textbook but in the L2; they taught the same contents and usually met to see if they were doing more or less the same activities in both classrooms. However, the teaching of the content subject in the L2 needs to use more audiovisual materials.

Then, I focused on students. Students do not have the same needs when learning the content in the foreign language. They need to revise what the teacher says several times and use visuals in order to fully understand the subject. Regarding the language they use in the classroom, the teacher told me that they tried to use English when communicating with each other and with the teacher. However, some of them do not have enough level to do it.

Next, we talked about the materials used in her lessons. She mostly used PowerPoint presentations because the textbook was very difficult for them because it had a lot of text. Therefore, she tried to teach them how to take notes from the PowerPoint. She also added some outlines and images to the Power Point to make the task of understanding the content easier. She sometimes made references to the textbook and prepared some outlines with the information given in it, although the sentence structures used are a bit complex for them.

Finally, I focused on technology. She was in favour of using new technologies in the classroom and thought that they helped the students to understand the subject better. In the exam, her students must give their opinion about their general understanding of the unit in their mother tongue. They say that PowerPoint presentations help them a lot and, in some units, they also considered that the use of videos was useful. She also wanted to use pickers, a tool that allows students to give real-time feedback to the teacher but has not done it yet. These materials aimed for both revising and completing what the students learned.

2. Design and use of ICT-based materials

I agreed with the teacher that I would prepare ICT-based materials for a workshop focusing on units 11 and 12. Consequently, I created a web page in order to revise these units of their textbook.

The web page was called "The Ecosphere" (the-ecosphere4.webnode.es) because they were dealing with the different types of ecosystems and the different kinds of relationships the living things make with the environment in which they live. The materials included aimed to revise and complement what they have already studied in class. It was divided into four parts.

The first one is called "FIRST, LET'S REVISE THE MAIN CONCEPTS OF THE UNITS!"; it is the main part of the web page, since students have different resources to revise what they have already learnt. There is a video in which the principal ideas are explained in order to reinforce them and help students remember. Then, I created a crossword, which should be completed in five minutes, in which they can revise the different types of ecosystems they have already studied in unit 11. Next, they can click on a link which leads them to a gap filling exercise about the main ideas

of the unit. This exercise is material freely available on the internet. In the following activity, they have to watch a video which explains the relationship between the biocenosis (i.e., the living things) and the biotope (i.e., the physical environment). I prepared a worksheet in which I erased twenty words and they have to complete it while listening and watching the video (Appendix 3). At the end of this section, there is a game in which students must classify, in five minutes, each living thing in its correct trophic level. Every activity included in this section shows the correct answers when they click 'finish' or complete the whole task.

The second section is called "AFTER REVISING...". Just after completing the tasks in Section 1, students are presented two 'Kahoots'. They are multiple choice exercises in which they have to answer questions related to units 11 and 12 respectively. Once they have refreshed their minds with the previous activities, they face a kind of exam in which they win points if they answer the questions correctly. There are ten questions in each exercise and have between 20 and 30 seconds to answer each of them.

The name of the third part is "HELP FOR YOUR WORK". Instead of setting an exam for these units, students are asked to do an assignment and an oral presentation of a topic related to the units. Therefore, I considered essential to include some materials to help them with the task. Most of them do not have a high level of English because they are just starting high school and I thought they would be very grateful if I included some resources to make the task easier. I included both a Visual Dictionary - Merriam-Webster-(<http://visual.merriam-webster.com/earth/environment.php>) and a link to a web page in which they can type a word and it is pronounced in the accent they want (http://www.oddcast.com/home/demos/tts/tts_example.php?sitepal). Besides, I reminded them that they could use the videos aforesaid to revise the main concepts.

Finally, the last section of the web page is called "IF YOU WANT TO LEARN MORE...". As its title says, it is aimed at those students who are very interested in the topic and want to know more about it. As they like videos and visual representations, every material included in this section is a video. They do not only help them to revise what they already know but also go further and give them more specific and advanced content about the topic. The videos chosen are easy for them to understand and they can also make use of the optional subtitles that YouTube offers.

After the interview, the teacher offered me the opportunity to go to the high school and make use of my web page. Students in all the CLIL groups (1ºA, 1ºB, 1ºC and 1ºD) had a fifty-minute lesson where these materials were used. I accepted the request because I thought it would be very useful for those parts and that way, I could put into practice what I had created and see if it really worked.

I prepared my lessons in advance because I had to divide the available time into the different activities. Therefore, I thought that most of the time should be dedicated to revising the topic because it was the core of my web page. The time was divided in this way: I would spend 2 minutes introducing myself, the objectives of the lesson and how I was going to organise it. Then, we would see the video, which lasts 3:28 minutes and, after that I would give them 8 minutes to complete tasks 2 and 3 - the crossword and the gap-filling exercise. After these 8 minutes, I would share out the worksheets with the gap-filling exercise and play the next video whose duration is 4:57 minutes. I would play the video once and if I saw it was very difficult for them I would play it twice. After watching the video and completing the worksheet, I would use at least 10 minutes to correct it because I would want the students to read it out loud in order to practise pronunciation. After the video, there is an activity which may take them around 2

minutes to do it. We would go to the next section, the 'kahoots'. They will have 5 minutes to complete each of the tests.

3. Students' evaluation of the proposal

The remaining minutes- around 8- would be dedicated to doing a survey I have prepared for them in which they have to answer questions related to the activities they have done, such as "which is the most useful activity in your opinion?" and " which is the activity you liked the least?". I wrote the questions in Spanish and would make them answer in their mother tongue because, this way, they can answer better and in a complete way.

4. RESULTS

As the proposal was put into practice, I was able to know what its strengths and weaknesses were. Besides, I could modify the initial procedure and timings to adapt the materials to the students' needs. In order to present the results I will follow several steps: first, I will explain what problems we had and how I solved them; then, what results this lesson generated; finally, I will provide a possible interpretation of them.

The first problem I had was timing. These materials were used in five fifty-minute lessons. All students were of the same age and were supposed to have the same English level. However, every class was different. In the first session, students had some problems when typing the link on the Internet and, unfortunately, it took up their time. Consequently, it was impossible for them to do all the activities and they just did four of them. I decided to divide the activities of my webpage for the remaining sessions so that every activity could be practiced at least once. Time management was more adequate that way; they had enough time to do an average of three or four

activities per lesson. In order to control the time, I projected a countdown chronometer I found on the internet (<http://www.conversor.com.es/cuenta-atras.html>) and I gave them the time I considered was enough to do the activity. When the time finished, there was an alarm that told them they had to stop doing the activity. Besides, I tried to combine both theoretical and practical activities (e.g., videos to revise what they had previously studied in class and games). I also tried to adapt not only the materials but also myself to each class. They were totally different; one of them was prone to lose the attention and, therefore, I tried to do less theory with them. Two of them were very attentive and we were able to do both the theoretical and practical points. I had time to play *Kahoot* with all of them except for the first class because we ran out of time. In consequence, I gave two fifty-minute lessons to this class and that is the reason why we were able to do all the activities.

Secondly, the questionnaire I gave the students allowed me to know their attitude towards this type of materials. They had to evaluate each activity from 1 to 6 points, 1 being the lowest punctuation and 6, the highest. As I collected them after each class, I could modify and improve the materials from one day to the next according to what they had written. One clear example is the activity that consisted of a video and a worksheet in which they had to fill in the gaps according to the information given in the video. Some students said that they could not watch the video because they had to be writing the missing words. Consequently, they just listened to it. Therefore, as I consider videos are one of the best tools to learn, I modified the activity and followed a different procedure: students were asked to, first, pay attention and watch the video and, then, I gave them the exercise and they had to write the missing words with the context given by the transcript and what they remembered from the video. I thought this

procedure was better because it made students not only pay attention to the video but also try to memorize information in order to complete the transcript.

Thirdly, seating arrangement also affected the course of the lessons. For the first class, students were said to go to the computer room. However, the seating arrangement of this classroom was not good because students sat in a horseshoe but facing the wall. It made them feel uncomfortable because, every time they wanted to look at the blackboard they had to turn their chairs. Besides, the classroom was very long and those students sat at the end could neither listen nor see properly. In order to solve this problem, I asked the teacher to stay in their classroom and use laptops. Students sat in rows and they could see and listen everything. I also used the projector because, that way, students could follow my instructions.

I will now comment on the results of the questionnaire students completed a questionnaire in the last 5 minutes of the lesson. It was divided into two parts: they had to answer questions related to the activities done in that lesson, such as which activity was the most useful and which activity they liked the most, and why. They were asked about the other two sections "Help for your work" and "If you want to learn more..." I was interested to know if they would use them and if they were used to using other resources apart from the textbook.

Once the results were analysed, 95 % of the students considered the *Kahoots* as their favourite activities because they said they were very funny and original. On the contrary, the crossword was the activity they liked the least. 33 % of them stated that it was difficult to do it and the definitions given were very long and unsuitable. Regarding the rest of the activities, 60 % of the learners chose the video with a summary of the main ideas as the second best activity because it made them revise what they had learnt,

relegating the video with the gap filling exercise to the third place. However students who watched the video and then completed the worksheet on their own punctuated it higher, while students who just listened it and completed the worksheet at the same time gave it a lower punctuation. I only did the online gap filling exercise in one session because I found it was more difficult for them than what I expected. Therefore, only 19 students did it; they said that it was very demanding and they did not understand the text.

Regarding usefulness, students gave more varied answers. Most of them (77%) agreed that *Kahoot* was a good resource to revise the content they had studied in class because they learnt while playing. The video with the gap filling exercise also got 5 and 6 in the punctuation; 28 % of the students and 33 % respectively. Therefore, 61 % of them thought that this video was useful for them to revise. They stated that it was a good activity because they could practice listening, reading and writing at the same time and it almost talked about all the concepts they had studied in class. The least useful activity according to the students was the classification in trophic networks and the crossword; 13% and 14% of the students -respectively- evaluated these activities with a 1; However, some of them said that the first activity was very useful because it made them revise trophic networks and vocabulary about animals. That is the reason why 15 % of the students gave a high punctuation to this activity.

In the second part of the questionnaire, they were asked about the two remaining sections. In question 4, they had to say if they would use the section "HELP FOR YOUR WORK". I added two links: one to a visual dictionary and the other to a pronunciation webpage. 77 % of the students stated that they would use this section because the visual dictionary helped them to learn the concepts better and the pronunciation webpage would improve their speaking with regard to the oral

presentation of the project. However, the remaining students (23 %) said that they would not use these resources but gave no justification. The last part of the questionnaire was dedicated to the section "IF YOU WANT TO LEARN MORE..." A 87 % of the students said that they would use these resources to get more input about the subject. However, when I asked them if they used other resources than the textbook to revise and study the content 46 % of the pupils said that they just studied from the textbook and their notes. The other students said that they used videos, dictionaries, images, online exercises and games to study for the exam.

The third part of this section is a possible interpretation of the results. The fact that 95 % of the learners chose *Kahoots* as their favourite activity could be related not only to the fact that it is a game but also to motivation. In this activity, the whole class compete to win the game; they get award points every time they answer correctly and the one who wins is the student that gets more answers right and plays quickly. The fact that they are all competing to win the game, increase their motivation and learn more. Besides, after each question, the correct answer is shown, so students can learn it if they have given a wrong answer. I congratulated those who answered correctly and, as the names of the winners were shown, I asked who they were and recognized their worth out loud. Regarding the crossword, they could consider it difficult because they just had 5 minutes to do it and the definitions given were very long and complex. As they had an alternative assessment for these units- a project instead of an exam- they had not studied the definitions and they scarcely remembered the names of the different ecosystems. However, I acted as a facilitator because I gave them clues to make the task easier.

The fact that students evaluated the *Kahoots* with the highest mark regarding usefulness is not surprising. While playing, they revised the content they had learnt in class and, besides, they got immediate feedback after each answer. The video with the

filling the gaps exercise was also found useful because they could practise more than one skill at the same time. As I changed the procedure and let them watch the video first, they were able to revise the content visually and paid a lot of attention because they had to fill in the gaps later on. I considered it was a complete activity because after giving the students several minutes to complete them, we read the text out loud and I corrected both the answers and pronunciation.

Both the "HELP FOR YOUR WORK" and "IF YOU WANT TO LEARN MORE" sections were successful. Most students are aware of the fact that they may learn more and better if they complement the classroom materials with external ones. As they had to do an oral presentation, they found the pronunciation webpage very useful. The visual dictionary was also helpful for them because they could revise the terminology they had to use in the project. However, the fact that **only** a 46 % of the students stated that they did not use other resources beyond the textbook is very important; it can be contrasted to the 87 % of the students that said that they would use this section from now on. Maybe it could be interpreted as if students are not aware of the importance new technologies have on learning. They are not usually encouraged to use this kind of materials and just resign themselves to studying from the materials the teacher gives them. This should be changed because ICT offer a wide variety of resources to make students learn and improve their skills and competencies.

5. CONCLUSION

This dissertation aimed to design a proposal of materials of ICT materials that would be useful to complement the course book used in a CLIL class and to determine the effectiveness of these materials to help students to learn and revise the content studied in class. In order to do it, an interview with a teacher was carried out. According

to the answers given, a webpage with several online resources and activities was created. These materials were used as a complement of the textbook and the results produced showed that they really helped students to revise the content and improve their linguistic competence.

95 % of the students that participated in these lessons found *Kahoots* as one of the best tools to revise the units because it was motivating and they learnt while playing. They mostly agreed that videos also met their needs because they could revise the content visually and practice skills at the same time. The rest of the materials created for them were rated with lower marks-in general- but they would not remove any activity.

However, when they were asked if they use online resources to revise and study the subject, **only** 54 % of the students did so. This could be contrasted with the 87 % of the students who would use the last section of the webpage, in which they have several videos to learn more about the topic. Maybe it could be deduced that students are not encouraged to use ICTs to complement classroom materials. However, when they use them, they realise they are very useful and can meet their needs.

In conclusion, it can be stated that ICTs will be an important tool for the coming years in education. They have been proved to help students revise and understand the input better. Besides, they complement the textbook and can adapt to the students' needs more easily.

6. BIBLIOGRAPHY

- Boletín Oficial de Aragón*(2013). *Boa.aragon.es*. Retrieved 10 January 2017, from <http://www.boa.aragon.es/cgi-bin/EBOA/BRSCGI?CMD=VEROBJ&MLKOB=719311064343>
- CE FIRE. Conselleria de educaci3n, Investigaci3n, Cultura y Deporte. (2015). *CLIL Principles*. Retrieved from http://cefired.edu.gva.es/pluginfile.php/869799/mod_resource/content/1/CA_Unit%203%20CLIL%20principles.pdf
- Coyle, D., P. Hood, and D. Marsh. 2010. *Content and Language Integrated Learning*. Cambridge: Cambridge University Press.
- De Graaff, R., Koopman, G., Anikina, Y., & Westhoff, G. *An Observation Tool for Effective L2 Pedagogy in Content and Language Integrated Learning (CLIL)*. Utrecht, The Netherlands. Retrieved from http://www.unifg.it/sites/default/files/allegatiparagrafo/20-01-2014/de_graaff_et_al_an_observation_tool_for_effective_l2_pedagogy_in_clil.pdf
- Digital Schools of Europe (2015). *About the Digital Schools of Europe - Digital Schools of Europe*.(2017). *Digital Schools of Europe*. Retrieved 27 June 2017, from <http://www.digitalschoolseurope.eu/about/>
- Feng, W. Y. (2005) *Conceptions of enrichment*. Cambridge: University of Cambridge.
- Gibbons, P. (2002). *Scaffolding Language, Scaffolding Learning: Teaching Second Language Learners in the Mainstream Classroom*. Sidney: Heinemann.
- Gierlinger, E. (2017). CLIL models. *CLILingmesoftly*. Retrieved 4 February 2017, from <https://clilingmesoftly.wordpress.com/clil-models-3/>
- Liberal Obanos, M. (2013). Casi dos d3cadas de ense1anza biling1e en Arag3n. *Digital Forum Arag3n N.10*, 6-9. Retrieved from http://feae.eu/doc/ara/revista_digital_forum_aragon_10.pdf
- Linares, A., T. Morton, and R. Whittaker 2012. *The Role of Languages in CLIL*. Cambridge: Cambridge University Press.
- Lyster, R. 2011. Content-based second language teaching. In E. Hinkley (ed.). *Handbook of Research in Second Language Teaching and Learning*, Vol II. New York: Routledge.
- Marsh, D. (2010). David Marsh on CLIL. Cambridge University Press ELT. Available at: <https://www.youtube.com/watch?v=-Czdg8-6mJA&feature=youtu.be>
- Mehisto, P., D. Marsh, & M. J. Frigolos. (2008) *Uncovering CLIL: Content and Language Integrated Learning in Bilingual and Multilingual Education*. Oxford: Macmillan.
- Mitsikopoulou, B. (2014). *Materials design for the digital enrichment of the Greek EFL textbooks*. Athens.

- Nikula, T., Dafouz, E., Moore, P., & Smit, U. (2016). *Conceptualising integration in CLIL and multilingual education*.
- Orland-Barak, L., & Maskit, D. (2017). *Methodologies of Mediation in Professional Learning* (p. 4). Cham: Springer.
- Pachler, N., Evans, M., Redondo, A., & Fisher, L. (2014). *Learning to teach modern foreign languages in the secondary school* (4th ed., p. 132). London: Routledge.
- Peacock, V. (1939). 'Effective enrichment of the textbook in foreign language'. *The School Review*, 47/1: 24-30.
- Pinkley, D. *Children Learning English as a Foreign Language. CLIL: Content and Language Integrated Learning*. Pearson Longman. Available at: <http://www.pearsonlongman.com/primaryplace/pdf/clilmonograph.pdf> [Accessed 16 Feb. 2017].
- Richards, J., & Rodgers, T. (2012). *Approaches and methods in language teaching* (p. 122). Cambridge: Cambridge University Press.
- Tomlinson, B. (2012). Materials development for language learning and teaching. *Language Teaching* 45/2: 143-260.
- Tomlinson, B. (Ed.) (2003). *Developing Materials for language teaching*. London: Continuum.

7. APPENDICES

-Appendix 1: interview with the teacher

A) La experiencia de la profesora enseñando CLIL

1. ¿Qué asignaturas enseñas en inglés? ¿A qué niveles? ¿Enseñas la misma asignatura en español?
 2. ¿Crees que hay alguna diferencia entre enseñar la misma asignatura en inglés y en la lengua materna de los alumnos y el profesor?
 3. ¿Qué habilidades o competencias debe tener un profesor para enseñar una asignatura de contenido en una lengua extranjera?
-


B) Materiales utilizados

1. ¿Colaboras con otros profesores que imparten la misma asignatura en la lengua materna del alumno? ¿Cómo?
2. ¿Piensas que los materiales que se necesitan para enseñarla tanto en español como en la lengua materna son los mismos? ¿Los estudiantes tienen las mismas necesidades si asisten a clases impartidas en una segunda lengua?
3. ¿Cuál es el principal material que utilizas en tus clases? Si es el libro... ¿lo elegiste? ¿Por qué? ¿Te gusta? ¿Crees que tiene todo lo que necesitas para enseñar la asignatura o debería incluir algo más?
4. ¿Utilizas algún material de apoyo para ayudar a los estudiantes a comprender determinadas nociones y conceptos?
5. ¿Qué opinas sobre el uso de las nuevas tecnologías en el aula? ¿Y sobre su uso en esta asignatura? ¿Crees que ayudan a los estudiantes a entenderla mejor?
6. ¿Haces uso de las TIC en clase? Si es así, ¿cuáles utilizas? ¿para qué?
7. Ahora, te voy a decir algunas TIC que se pueden utilizar para mejorar el aprendizaje del alumno. ¿Cuáles utilizas?
 - Páginas webs
 - Diccionarios online
 - Videos
 - Juegos online
 - Aplicaciones multimedia
 - Blogs
 - Wikis
 - simuladores

- e-books

8. ¿Podrías ordenarlas de la más importante a la menos para ti?
¿Podrías clasificarlas de 5 (esencial en la clase) a 1 (inútil)?
9. Quizás no utilizas todas las nuevas tecnologías mencionadas... pero ¿crees que alguna de ellas podría ser útil para ayudar al estudiante a entender el contenido de la asignatura?

-Appendix 2: webpage and materials: Available at: the-ecosphere4.webnode.es



THE ECOSPHERE

After studying Units 11 & 12 in class, I provide you several materials which will help you to revise the content. I hope they are useful for you! good luck :)

FIRST, LET'S REVISE THE MAIN CONCEPTS OF THE UNITS!

1. This video shows us a summary of the main ideas these two units comprise: <https://www.youtube.com/watch?v=P1X-WpfUvm4>
2. If you want to revise the different types of ecosystems studied in the unit, click the following link and do this amazing crossword: <http://www.kubbu.com/?s=types-of-ecosystems>
3. Complete this gap filling exercise to make sure you know a lot about ecosystems and trophic networks: https://www.educaplay.com/es/recursoseducativos/2228589/ecosistemas_final_actividad.html
4. Watch this video to revise the feeding behaviour. Fill in the gaps with the information provided in the video (worksheet) <https://www.youtube.com/watch?v=hLq2datPo5M>
5. Does the term trophic network ring you a bell? Classify each living thing in its correct trophic level: <http://www.kubbu.com/?s=trophic-levels-groups>

AFTER REVISING...

- > It's time to see if you are already an expert in ecosystems... answer these questions and try to get more points than your mates! <https://play.kahoot.it/#/k/c814dd7e-f720-434d-ac80-50397b3f858b>
- > Now, let's answer some questions about the dynamics of ecosystems... good luck! <https://play.kahoot.it/#/k/39e22560-864a-4af8-a802-01537f55353d>

HELP FOR YOUR WORK

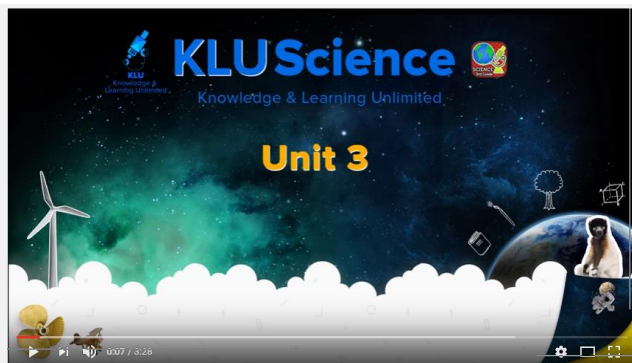
1. A **visual dictionary** which includes information about a lot of topics: <http://visual.merriam-webster.com/> You can find information about your topic by clicking the following link: <http://visual.merriam-webster.com/earth/environment.php>
2. I know English **pronunciation** can be difficult for you so... here you have a webpage in which you can hear how words are pronounced http://www.oddcast.com/home/demos/tts/tts_example.php?sitepal
3. You can also use the videos we have used in class.

IF YOU WANT TO LEARN MORE...

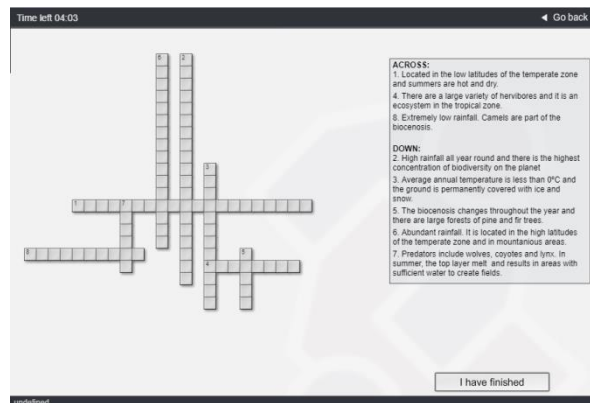
Here you have several materials if you want to be an expert on the topic!!

1. **'Food Chain Compilation'** "Maybe you'd like to just hear about one topic for a while. We understand. So today, let's just watch some videos about how we get energy. And how one animal gets energy from another animal or a plant. It's all about food chains and food webs." <https://www.youtube.com/watch?v=CZhE2p46vJk>
2. **'The Food Chain'** "A food chain is a great way to illustrate the flow of energy and matter through an ecosystem. Check it out!" <https://www.youtube.com/watch?v=OZOvqYypOuo>
3. **'Biomes of the World for Children: Oceans, Mountains, Grassland, Rainforest, Desert'** "From Antarctica to the hottest desert, there are many different places on Earth for plants and animals to live. Large groups of similar ecosystems are called biomes. You will probably recognise most of the biomes we visit in this video. Come learn a little more about them and the plants and animals that live there!" <https://www.youtube.com/watch?v=Ofb8143ndo8>
4. **'Examples of Organisms Working Together':** A ranking from 10 to 1 amazing examples of animals and other creatures interacting in beneficial relationships. <https://www.youtube.com/watch?v=Zx0a5a7066656d0c66587459.htm>

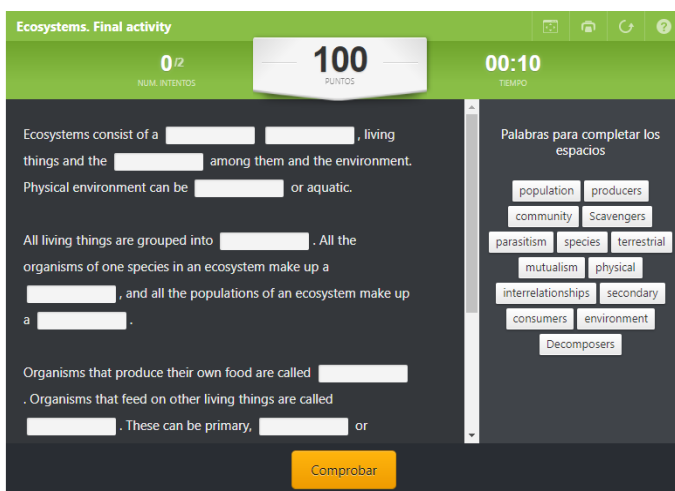
Resolviendo host...



video 1: summary of the main ideas



Crossword



Video for the gap filling worksheet

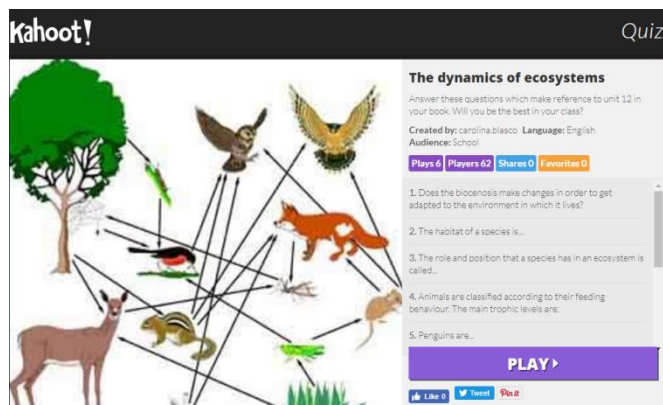
Gap filling exercise



Trophic networks activity



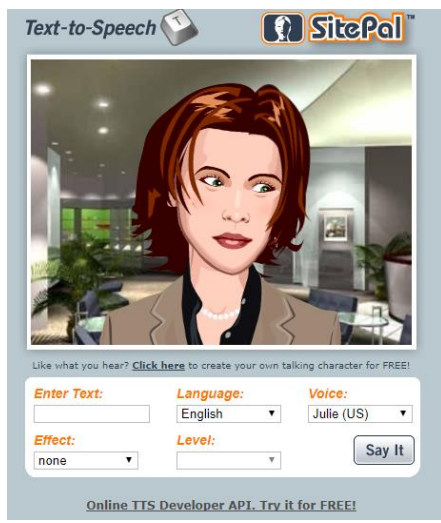
Kahoot 1



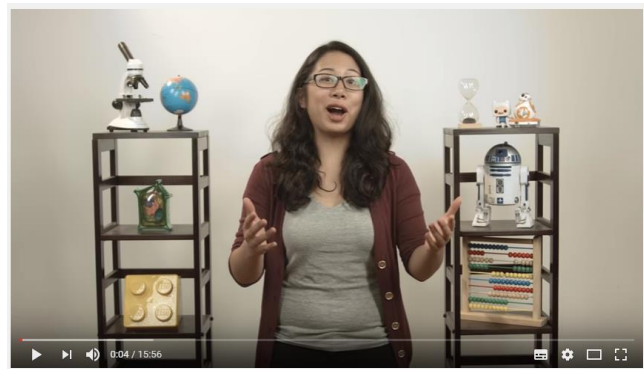
Kahoot 2



Visual dictionary



Pronunciation webpage



Video: 'Food Chain Compilation'



Video: 'The Food Chain'



Video: 'Biomes of the World for Children: Oceans, Mountains, Grassland, Rainforest, Desert'

Examples of Organisms Working Together

Grade: 5 - 12 | Amazing examples of animals and other creatures interacting in benefi... [View more](#)



Video: 'Examples of Organisms Working Together'

-Appendix 3: worksheet for the video

No matter where on earth you go, living things are connected to each other. From the tiniest of organisms to the largest of creatures, all living things need 1)_____ to survive.

So where does that energy come from? Well, matter and energy passes from one organism to another, connecting living things like links in a chain: a 2)_____. Of course a food chain is not an actual chain. It's a way to talk about the relationships between organisms and show how matter and energy flow between living things.

Every living thing on earth is part of a food chain, including 3)_____, and most things are part of more than one. All of the energy in earth's food chains comes from the 4)_____. The sun's energy reaches the earth as light and heat, and plants capture some of it and convert it into food through 5)_____.

Because plants make, or produce, their own food from the sun's energy, they are called 6)_____. Every food chain must begin with a producer- for example, grass. That's because animals cannot create their own food. They must eat, or consume, energy from other sources. That's why animals are called 7)_____.

The second link in a food chain is a consumer that eats plants - an 8)_____. When an animal eats plants, some of the energy the plant captured from the sun is transferred into the animal's body, where it is used for things like moving, breathing, and growing. An herbivore is called a primary consumer. 'Primary' means 9)_____, because an animal eating plants is the first consumer in the food chain.

Let's add a 10)_____ to our food chain. Next comes a secondary consumer, the second consumer in the food chain. This consumer is a 11)_____, and gets their energy by eating other animals. Maybe our rabbit will get eaten by a fox. When the fox eats the rabbit, part of the energy that the rabbit got from the grass is transferred to the fox. This is the end of this simple food chain. The rabbit eats the grass, then the fox eats the rabbit. The energy that came from the sun is captured by the grass, transferred to the rabbit, and then transferred to the fox.

Some food chains are longer than this one, but there can't be too many links in a food chain. Each 12)_____ in the food chain uses up a lot of energy from the previous level instead of passing it on, meaning that only about 10% of the energy consumed by an animal will be passed on to the next level.

Let's take a look at a longer food chain that also begins with grass. This time, let's make our primary consumer a grasshopper. The grasshopper eats the grass, and then gets eaten by a 13)_____ consumer- a bluebird. Then the bluebird gets eaten by a 14)_____, or third-level, consumer - a snake. The snake is eaten in turn by an owl. The owl is the apex predator in this food chain.

Apex predators are not hunted and eaten by any animals. We say that they are at the 15)_____ of the food chain! You probably recognize a lot of apex predators like lions, sharks, eagles, and 16)_____. Just because they don't get eaten doesn't mean that they don't contribute to the food chain, however! When an animal dies their body is broken down by decomposers.

Decomposers are usually 17) _____ and fungi that break down dead plants and animals into nutrients in the soil that in turn help the plants at the beginning of the food chain to grow. It's the circle of 18) _____!

Natural ecosystems usually have more complicated food chains, however. A network of interconnected food chains is called a 19)_____.

The arrows are used to show which direction the energy flows and help keep track of the connections between 20)_____. Now that you understand a little bit more about food chains, see if you can find the connections between living things around you!

-Appendix 4: questionnaire for the students

1. VALORA DEL 1 AL 6 LAS SIGUIENTES ACTIVIDADES EN CADA PREGUNTA.

	VIDEO WITH A SUMMARY OF THE MAIN IDEAS	CROSSWORD	GAP FILLING EXERCISE	VIDEO TO REVISE THE FEEDING BEHAVIOUR (+ WORKSHEET)	CLASSIFICATION IN TROPHIC LEVELS	KAHOOTS
DE LA QUE MÁS TE GUSTÓ A LA QUE MENOS						
UTILIDAD(siendo 6 la más útil y 1 la que menos te ha servido)						

2. JUSTIFICA POR QUÉ LA ACTIVIDAD VALORADA CON UN 6 ES LA QUE MÁS TE HA GUSTADO Y POR QUÉ LA QUE HAS VALORADO CON UN 1 ES LA QUE MENOS TE HA GUSTADO.

3. JUSTIFICA POR QUÉ CREES QUE LA ACTIVIDAD VALORADA CON UN 6 ES LA MÁS ÚTIL PARA TI. ¿POR QUÉ LA ACTIVIDAD VALORADA CON UN 1 NO ES ÚTIL? ¿LA ELIMINARÍAS?

4. ¿Crees que la sección 'HELP FOR YOUR WORK' te va a servir de ayuda a la hora de realizar tu trabajo? ¿Por qué?

VISUAL DICTIONARY	
PRONUNCIATION WEBPAGE	

5. ¿Utilizarás la sección "IF YOU WANT TO LEARN MORE..." para aprender más sobre el tema? ¿Sueles utilizar otros recursos además del libro de texto para repasar/estudiar el contenido? ¿cuáles?