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Trabajo Fin de Grado

La adquisición de la lengua inglesa y el aprendizaje basado en proyectos en la educación primaria

Second Language Acquisition and Project Based Learning in Primary School

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1. ABSTRACT

This final project is about Second Language Acquisition of the English language in the primary school students. It is a review of the most important theories that studied Second Language Acquisition. Some of these theories are the Universal Grammar of Chomsky, the communicative competence of Hymes, The Monitor Model of Krashen and the bilingualism. But this assignment also has a project to implement in a primary school, in which we use three different methodologies: the Cooperative Learning, the Content and Language Integrated Learning and the Project Based Learning, that is the main method. This project is about endangered species and is related with the subjects of English and Natural Science, and that is why the Content and Language Integrated Learning approach is used. In this project is also used the current law of education: the LOMLOE, and the sustainable development goals. This project is going to be put into practice in a fifth-grade group, and it is going to last seven weeks, that is fourteen hours. In this project they have to work in groups to complete the different activities planned, for example they have to make a lapbook about an animal that is endangered and some posters to raise awareness among the educational community. They also have to do some individual work, for instance in fulfilling some worksheets about two thought routines, related to what they know and what they have learnt about endangered species.

2. KEY WORDS

Second Language Acquisition, English, students, Project Based Learning, endangered species.

3. INTRODUCTION AND JUSTIFICATION

My final project is about Second Language Acquisition and the Project Based Learning method. Related to Second Language Acquisition, we have some authors with their theories, Chomsky with the Universal Grammar, Hymes with the concept of the communicative competence and Krashen with The Monitor Model. There is also a part in which is explained the concept of the bilingualism. We also have a project that is going to be implemented. In this project there are three main methods that are going to be explained: the Project Based Learning, the Cooperative Learning and the Content and Language Integrated Learning. The project is about endangered species, and students have to investigate about different aspects, they also

have to make decisions in groups, and they have to explain their work to their classmates and to their families too.

I have chosen this topic, because I think that is a very current and interesting topic, because nowadays a great extent of schools are bilingual, and they use the Project Based Learning and Content and Language Integrated Learning methods. I think that this topic is important, because I am going to be an English teacher, and I have to know how children acquire the second language and is important to know about the different methods that can be used to teach, and to understand how to manage the law in order to make the different syllabus using the basic contents, the operative descriptors and the assessment criteria provided in it. In my opinion this project can be very useful for English teachers, teachers in general or parents, because they can learn and understand how children acquire languages.

I want to do a project related to the English subject, because I have done the speciality of English, and I think that is a field in which I know a lot of content, and I feel comfortable doing it.

At the beginning, I was not very sure about doing it in English or in Spanish, but I thought that if I do it in English, it will help me to improve my level of English, and I will lose the fear of speaking in public in English. And I think that it is a good opportunity, because in the state exams you have to present your syllabus, and this is a bit similar.

4. THEORETICAL FRAMEWORK

This theoretical framework is related to Second Language Acquisition, bilingualism and this is related to a science project about endangered species, and there is some information about the methodologies that are going to be used in the project, that are the Content and Language Integrated Learning, the Project Based Learning and the Cooperative Learning.

In this project, I am going to work with some Sustainable Development Goals, because I am going to implement a transversal project in which Science and English are involved in, it is going to be related to endangered species and the reasons of the extinction, that are related with climate change. Some objectives that I will work with are: Climate action (13), because the children are going to see that climate change is a reason of the extinction of the animals, Life on land (15), Responsible consumption and production (12), Good health and well-being (3), because the students are encouraged to protect the environment, and the living beings and they are going to do some good practices.

The first point of my theoretical framework is the study of Second Language Acquisition. Regarding to the definition of Second Language Acquisition. This is the study of how languages are learned and it is also related of how learners create a new language system with the limited exposure to a second language. This study involves what is learned and what is not learned in the second language and why some learners do not achieve the same level of proficiency in a second language as they do in their native language. (Gass, 2013, p.1)

Related to this topic, we have some key concepts. The first one is native language, this is related to the first language that a child learns, it is also known as the first language or the mother tongue. Another important concept is the target language or the second language, that is the language being learned. And we have another concept, that is Second Language Acquisition, is the process of learning another language after the first language has been learned but we can refer to a third or fourth language too. It is a language or languages that have been learned after the mother tongue. (Gass, 2013, p.4)

In relation to children's Second Language Acquisition, it refers to the acquisition in a critical period of development of young individuals with the first language already learned. Related to this, we can refer to the acquisition of two languages at the same time in the childhood, that is called bilingualism. (Gass, 2013, p.117)

An author that is really important in Second Language Acquisition is Chomsky. For Chomsky we have an innate knowledge of Universal Grammar, that let students to get the language related to our environment in a critical period of development. Noam Chomsky (as cited in Hanoon, 2021) explains in this theory of Universal Grammar that 'all human beings are born with a set of basic language structures in their mind irrespective of the different language communities they belong to.' He thinks that children are not able to comprehend the language that the other people are speaking. Because the other people speak too quickly and without paying a lot of attention, and some children do not have some subconscious rules in their minds. In this way, for Chomsky, the language is an innate and biological creation. (Hanoon, 2021, p. 31).

Chomsky said that all humans' beings have a Language Acquisition Device in their minds, that they have since they were born to learn abstract rules at a young age. To acquire the language, the children's minds have to be lined up with some essential language principles that need linguistic exposure to develop the language. There are several modifications found in the speech of the adults that the children have changed. For instance, children often used verbs like, 'goed', 'comed', 'speaked' and 'putted , these verbs are not

produced by the adults, and this can demonstrate that the children have an internal structure of language in their mind. This over-generalisation of some rules is usual in children. (Hanoon, 2021, pp. 31, 36).

In his theory he included radical proposals of the nature of linguistic knowledge, its relation to other forms of thought, and the way in which children learn their native language. These ideas were very well-known and formed the basis of the language acquisition theories, but some linguistics have modified some aspects of the original proposals. (Gass, 2013, p.36)

The Universal Grammar is about the innate universal language that we acquire when we are children. As Chomsky (as cited in Gass, 2013) noted 'The theory of a particular language is its grammar. The theory of languages and expressions they generate is Universal Grammar (UG)'. For Chomsky, this theory is crucial for the initial state of the learning process. (Gass, 2013, p.160)

There is a main concept in the Second Language Acquisition: the communicative competence. This notion appears in the heart of linguistics. Nowadays, it is seen as a summary of knowledge, abilities, skills and aptitudes that collaborates in the production of a living together community and the interpersonal and cooperative relationships that it entails. (Bermúdez & González, 2011, p.96)

There are three fields of study that affect this competence. The first one is psychology, which is related to behaviour, as a part of human expression. The second one is linguistics, the relation is about the formation of language skills. The last one is pragmatics, in this case there are many important factors to study that are related to the communicative competence. (Bermúdez & González, 2011, p.97)

In 1965, Chomsky (as cited in Bermúdez & González, 2011) suggests the expression of communicative competence, and he establishes that is: 'the abilities and aptitudes for the interpretation and intervention'. Later, in 1971 Hymes increases the definition of Chomsky and it is defined as the communicative intervention regarding to the environment demands, in this definition includes the social and psychological aspects. (Bermúdez & González, 2011, p.97)

Regarding to the cognitive and sociocultural factors of the communicative competence, we have the cultural knowledges acquired, related to the individual's culture that interact with the values, necessities, emotions and motivations. For this reason, the communicative competence has influence in the environment, the relationships with the

> other members of the society, the roles that they play in the society and to the social position. (Bermúdez & González, 2011, p.99)

There are two fundamental dimensions in the analysis of the communicative competence: the linguistic dimension and the strategic dimension. (Bermúdez & González, 2011, p.99)

Chomsky (as cited in Bermúdez & González, 2011) said that 'the linguistic dimension is related to the traditional grammar, and its levels: morphology, syntax, phonology and semantics'. Hymes adds the ability and understanding to interact with the socio-historical and cultural context in which the communication is carried out. (Bermúdez & González, 2011, p.99)

According to Hymes, it is not enough to know the grammatical rules of the use of the language, it is also important to have the ability to relate them in a real context. (Bermúdez & González, 2011, p.100)

> In the linguistic dimension, it is included the discursive competence, the psycholinguistic competence, and the sociolinguistics competence. The discursive competence is about the ability of one person to communicate efficiently and properly using the language, correctly using the grammatical rules and the meaning of a text (orally or written) correctly. (Bermúdez & González, 2011, p.100)
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> The sociolinguistic competence involves all the components of the sociocultural aspects and the social convictions of the use of the language. According to Hymes (as cited in Bermúdez & González, 2011) said that 'this competence has the rules of the social interaction and the cultural competence, that involve understanding the rules of behaviour of the members of a specific culture, the assimilation of all the aspects of a culture, specifically the ones that they refer to the social structure, the values and the beliefs. (Bermúdez & González, 2011, p.100)

The last one is the psycholinguistic competence, in which they refer to factors such as the personality, the sociocognition and the affective component. (Bermúdez & González, 2011, p.100)

Another important author in Second Language Acquisition is Hymes. For Hymes it is not only important that the child knows the grammar in order to make appropriate sentences, he or she needs to know another useful knowledge. This knowledge gives the student the ability to talk in different situations and the student has to know in what way has to talk, this is related to the speech acts.

In his theory Hymes talks about the developing of the communicative competence, in this process takes place five different competences: the linguistic competence, the pragmatic and sociolinguistic competence, the discourse competence, the strategic competence and the

fluency. The linguistic competence is about to know the rules and how the words work. The pragmatic and sociolinguistic competence is related to the relation to the real world and the context of the communicative situation. The discourse competence refers to the cohesion, coherence and the turn to speak. The strategic competence is about the use of verbal and non-verbal materials to be more communicative. And the fluency is to connect units of speech.

Next we have Krashen with his theory of The Monitor Model. This theory was put in practice in the 1970s, and it has five hypotheses, that I would explain now. It was developed as a result of the behaviourism theory, and this theory is important for the history of Second Language Acquisition. (Gass, 2013, p.129)

The first hypothesis is the Acquisition-Learning Hypothesis: for Krashen there are two ways to develop the knowledge of a language, one is the acquisition and the other one is the learning. Regarding to the acquisition, this process is subconscious, because we are not aware of the acquisition of the language, we are only aware of the fact that we are using the language in order to communicate with other people. We are not aware of the grammatical rules that we have acquired, and we use when we are talking. Related to the learning, this process is conscious, because we become aware of the rules and we can talk about them. (Gass, 2013, p.129)

The second one is the Natural Order Hypothesis: this is related to the natural order of the acquisition of the elements of the language or the language rules, this order is the same for all the children.

The third one is the Monitor Hypothesis: here there are three conditions that we have to pay attention. The first one is the time, learners need some time to think about the rules that have learnt and use them. The second one is form, because learners have to know how to say something correctly, and they have to pay attention to form. And the last one is the rule, to apply a rule first you have to know it, and for this you have to have an appropriate leaned system. (Gass, 2013, p.130)

In the fourth place, we have The Input Hypothesis: this is about how learning takes place. Second Language Acquisition is acquired by understanding messages, or by receiving ‘comprehensible input’. For Krashen, the comprehensible input is a part of the language that is heard or read and is a bit ahead of the current learner’s state of grammatical knowledge. Krashen defined a learner’s current stage of knowledge as i and the next stage is +1. For this reason, the input that a learner is exposed has to be i+1. (Gass, 2013, p.131)

Other important concept for Krashen in this hypothesis is the Language Acquisition Device (LAD), this is an innate mental structure that is able to the management of both first

and Second Language Acquisition. The input activates this innate structure, but only the i+1 input is activated. Here the most important role of the teacher is to make certain that the students are receiving comprehensible input. (Gass, 2013, p.132)

The last one is the Affective Filter Hypothesis: this is related to the issue of that some people are able to learn second languages while others are not able to do it. There are some reasons that contribute to not acquiring this second language that are that the learners had not received comprehensible input in sufficient quantities, another reason can be some inappropriate affects, such as motivation, attitude, self-confidence and anxiety. According to Krashen, two variables are necessary for acquisition: comprehensible input and low affective filter. The affective filter is different in each person and is used to explain why some learners learn and others do not. (Gass, 2013, p.133)

Another key point in this project is bilingualism. We think of bilingual individuals as those people who are able to speak two (or more) languages, to some level of proficiency. Children can also become bilingual by learning only one spoken language, for example when a child knows a spoken language and a sign language in these cases the children are bilingual too, because the data confirm that has the same pattern and trajectory as for the acquisition of two spoken languages. Bilingualism has some psychological effects, because when we learn a language, we form our identity and it is important to the construction of ourselves. (Bialystok, 2001, p.5)

Children learn a language, interact with the social context, and receive linguistic input, using their brains; all these factors contribute to language acquisition. (Bialystok, 2001, p.31)

There are three basic issues in language acquisition that are important to every linguistic theory and to the difference between the formal and functional approaches. The first one is the independence of the language from other cognitive functions. In the formal approaches, the language is autonomous from other cognitive domains and has its own universal structure, but in the functional conceptions' language is connected to the rest of cognition. The second one is the linguistic input and the function that it has. In the formal generative theories, linguistic input is important to activate the emergence of the grammar from the universal template. In functional approaches, the input obtained is used to construct the language through social interaction. The third one is the nature of linguistic knowledge. In formal grammars, linguistic structures are expressed as abstract rules, but in functional approaches the linguistic rules are contextualized. (Bialystok, 2001, p.33)

Bhatia (as cited in Gass, 2013) states that 'the investigation of bilingualism is a broad and complex field, including the study of the nature of the individual bilingual's knowledge and use of two (or more) languages'.

The concept of bilingualism is interpreted in different ways. There are two possible interpretations, one is related to the field of Second Language Acquisition, and the other one is related to the field of psychology and education. Related to the field of the Second Language Acquisition, the concept of bilingual refers to someone who is in a continuous state of learning and now knows two languages. Second Language Acquisition researchers are more interested in people who are in the process of learning a language instead of people who are near-native speakers or advanced language learners. (Gass, 2013, p.478)

Related to the field of the psychological and educational term, we have an example of what Edwards says (as cited in Gass, 2013) that is the introduction of his article on the foundations of bilingualism: 'Everyone is bilingual. That is, there is no one in the world (no adult, anyway) who does not know at least a few words in languages other than the mother tongue'. For Edward you can be bilingual at any point of the Second Language Learning process, and you can know only one to two words of the language, but for Bhatia you have to be at the endpoint process, and you have to know a lot of the language. (Gass, 2013, p.479)

All these theories mentioned related to the Second Language Acquisition are linked to the current educational law called LOMLOE. The main point of the English subject in this law is the acquisition of the basic communicative competence in the target language, this helps to develop and enrich the intercultural awareness of students. The subject of the English language has to facilitate empathy, develop the curiosity to the knowledge of other social and cultural realities and support the intercultural and communicative competence making students talking with people of other countries. The student is an active agent in their learning process that has autonomy and is responsible for their own learning process.

Regarding to the subject of Natural Science, in this law the main point is to introduce the children in the understanding of natural phenomena that take place in the environment and to pay attention to the scientific and technologic advances. In this subject, the students are going to get closer to the put in practice of scientific practises adapted to the school context and are useful to introduce students to the development of scientific competences. The development of the scientific culture based on investigation make citizens with critical thinking, and able to make decisions in the situations set out whether they are related to the educational field or to

their everyday life. This subject helps the student to comprehend the world in which they live, to encourage to take care of it and to respect and value it.

> There are some methodologies that I am going to work with in the project of endangered species. The first one is Project Base Learning. The Project Based Learning is a teaching methodology that involves the students to learn actively, and they can study real-world practices. This method contributes to meaningful learning and is related to constructivism. This tries to engage the students in their learning process and demands a high amount of dedication to autonomous learning. (Molina-Torres, 2022, p. 1)
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> While the students are fulfilling the tasks, they are showing reflections, their needs and interests. The aim of this is to assess knowledge in real learning situations. The students have autonomy and freedom to choose a topic in which they are interested in, and they want to learn from it. (Molina-Torres, 2022, p. 2)

The students are set down in environments that are real, personalized and collaborative. (Molina-Torres, 2022, p. 3)

In this methodology we have seven basic steps that we have to follow. The first one is challenging a problem; this one is about giving the students a problem or a challenge to solve, or a question to be answered in order to learn something meaningful and related to the real world. The second step is continuous investigation, that is the time that the teacher gives to the students to search for information to find a solution. The third one is authenticity; the project has to be related to real life and the students' interests and needs to use 21st century skills. The fourth is the student voice and choice, this refers to the opportunity that is given to the students to make decisions and choose what they can create and in what way they can show their ideas. The fifth is reflection, children have to think about their ideas to develop their learning process. The sixth is critique and revision, here the students can give and receive feedback in order to improve their final product. The last step is the publication of the product, involves sharing, and presenting their project to an audience, that can be their families. This step gives the opportunity to the students to communicate with the outside community.

Another important method in this project is the Content and Language Integrated Learning. In this method the language is the medium in which the content is taught. Here we have four important main points: content, communication, cognition and culture. In this methodology the role of the teacher is a guidance, who has to know about the purpose of the activity, that has to be related to linguistics, cognition and communication. All language skills are going to be used, and the target language is used all the time in the lesson, but sometimes the native language can be used to solve some problems in case that they do not understand in the second language.

In relation to the assessment of this method, the evaluation is going to be related to their content knowledge.

As for the linguistic and pedagogical foundations of the Content and Language Integrated Learning there are eight principles. The lexis is important to learn the language and the content. The grammar is a material that is used to communicate content. The language is learned by texts and conversations and the focus is on the meaning of the information that is given in the texts and in the dialogues. The grammar is seen as a component of all the skills. The comprehension is fundamental to learn a second language and the content needs to be comprehensible. The focus is given to meaning, because it is essential to understand the content. To learn the content and language is used the dialogic talk. The scaffolding is really important in this method.

In relation to the four main components of this method (content, cognition, communication and culture). The content is related to the knowledge that is learnt, the skills that are worked and the understanding of the school subject, is about the what and the how of content learning. Related to communication, this is about how to use the language to learn and express ideas to learn. Regarding to culture, this is about learning about, from and with others using new ways of working, different materials and paying attention to the perspectives and appreciations of others. The classroom is a space that has to be like a community for learning, using intercultural dynamics to help understand and appreciate the others, and they have to pay attention to the local citizenship. And related to cognition, this involves high levels of cognitive engagement, and makes students think about their learning. Students can use the lower and higher order thinking skills to reach a deeper level of understanding. Learners are going to improve their learning process if they collaborate and cooperate with others sharing ideas.

> Content and Language Integrated Learning means learning the body of a subject and at the same time studying a language. The language in this method is used as a learning tool, that is essential for learning content while the language acquisition is developed. This approach is also known as Content-based Instruction, but in Europe is called Content and Language Integrated Learning. This method is spread over all the world. In some countries of Europe, for example Finland, the Netherlands and Spain, they are putting in practice this methodology. This method is taught in very young learners, but it is crucial that children have a knowledge of literacy in their mother tongue language, before developing the ability to read and write in another language. (Anderson & Larsen-Freeman, 2011, pp. 174, 175 & Hussain, 2022, pp. 386, 387)

There are some main principles in the Content-based Instruction. The first one is that the teaching process has to pay attention to the student's previous experience. The second one, is that the content being taught has to be related to their interests, because they learn in an effective way if they are motivated. The third one is that all the skills are going to be worked with, and a good way for learning vocabulary is to give them contextual clues and they convey meaning with some help. This vocabulary is learned in a natural context. And the grammar has to be learned using authentic language too. The fourth one is that the materials and tasks have to be authentic and related to the real life of the students, because they have to learn meaningful language and content. The last one is to use graphic organizers and discourse organization to help students to learn academic contents. (Anderson & Larsen-Freeman, 2011, pp. 179, 180)

In this method the role of the teacher is to encourage students to learn both content and language, but the teacher also needs to establish clear objectives and create adequate activities to learn content and language, for this he or she can use scaffolding. When the students make mistakes, the teacher helps them by giving the correct form or allowing to correct themselves. (Anderson & Larsen-Freeman, 2011, pp. 18, 182)

Regarding to the characteristics of the teaching and learning process that involves this method, teachers can use authentic texts, but helping the students to understand the meaning of the texts. They can also use visuals or realia to explain content in a clear way. They can use cooperative work in the tasks in which the students interact with each other, and the thinking skills and the graphic organizers are used too. (Anderson & Larsen-Freeman, 2011, p. 181)

In relation with the interaction between the teacher and the students, the teacher is a guide in the learning process of the students, the role of the teacher is to convey content and scaffold and help the students in their development of the language. The students are actively involved in their learning process, and they often work in groups to understand the content taught and at the same time they are using the language that they are studying to communicate. (Anderson & Larsen-Freeman, 2011, p. 181)

The last important methodology that is going to be worked and is really important is Cooperative Learning.

Cooperative Learning is universally known as a pedagogical procedure that promotes beneficial social interactions and success between students of all the ages and in the different subjects. This approach makes students to work together to reach common objectives or to fulfil group tasks. It also promotes inter-personal relationships, and students

improve their dispositions to work together and to be productive. The interest among the Cooperative Learning starts in the 1970s when in some reports have shown the social and academic benefits that has for the students. These researches explained that in Cooperative Learning children help each other in their learning process motivating, they improve their communication skills, and they are encouraged to show their opinions and give solutions to problems they were discussing. It is important that the groups consist of a maximum of four people. (Gillies, 2014, pp. 125,127)

Related to the role that has the teacher in this method, the teachers have a crucial role in provoking interactions between children and this approach gives the opportunity to the students to interact. This help students to learn from each other, be autonomous and students can be more active in their learning process, because it engages the interest of the students, the students make less bad behaviours and has a positive result on the development of the learning. (Gillies, 2014, p. 134)

This methodology increases the interaction and participation of the students in the lessons. In their groups the students share their feelings and ideas about the knowledges that they have had or they think about the knowledges they are developing. Apart from helping each other in the groups, the students develop self-direction and responsibility of their learning process. Pupils have the choice to make decisions, and the teachers have to give them the opportunity to perceive themselves as an active part of their learning process, this method helps to create a classroom as a new public place in which children can empower to say their points of view. Gillies and Haymes (as cited in Sharan, 2014) said that the teachers have the task of preparing the students by developing 'the skills of learning to communicate effectively through listening, explaining, and sharing ideas but also those skills needed to plan and organize their work that give them the confidence to work more independently of the teacher'. A successful strategy that promotes children's interaction and develops their individual responsibility to achieve the group's goals is the assignment of roles in the group. For example, one is the reporter, that is the person who talks with the class or the teacher about the results of the group, another one is the recorder, that is the person who is responsible for the group decisions, other one is the time keeper, who pays attention to the time, and the last one is the coordinator, who is the person that ensures that the group is focused on the task. (Sharan, 2014, p. 804)

There are four principles that make Cooperative Learning a successful method: Positive Interdependence, Individual Accountability, Equal Participation and Simultaneous Interaction. To encourage the positive interdependence, the teacher has to create group

objectives and each member of the team has to have a role with a specific work to do. To promote the individual accountability, all the students have the opportunity to show and demonstrate their abilities, give their replies and the teacher has to give and evaluate mini topics, but without giving a mark. About the equal participation, the teacher has to use different structures to take the turns of talking of the students, to organize the class that gives the opportunity to participate all the students and all the students have the same amount of time to participate and give some time to think and reflect on their ideas. In the simultaneous interaction, it is important to use usually team and pair work, in which students can share and present their opinions, and the teacher can provide to each student a response boards for showing the answers of all the students. (Kagan, 2010)

5. PROJECT

I am going to do this project in the pre-school and primary school called La Fuenfresca, this school is public and bilingual, because apart form the subject of English, they teach Natural Science in English, and they also teach German in the third cycle. This school is situated in the city of Teruel, specifically in the neighbourhood of La Fuenfresca, in the street 'Los Tilos' in the number 1. In this neighbourhood you can find different types of construction, for example, flats, detached houses and houses. Most of the families that live in this place are young and are involved in the life of the school, and they are middle-class. This school has approximately 600 students, with nine pre school units, and nineteen primary school units. In relation with the facilities that has the school, they have an ASD classroom because the school is a preferred school of autism, they also have a gym, a dining area, a library, a music room with musical instruments, a computing room with computers, a laboratory, a large playground with two basketball courts, two football pitches and a volleyball court…

The class in which I am going to do the project is a fifth grade class. In this class there are 18 students: 9 boys and 9 girls. They are 10 or 11 years old. This class has a lot of light, because they have many windows that provide sunlight, and is very spacious, and it has many resources, for instance a whiteboard, a digital whiteboard, a projector, a computer, chairs, tables, shelves…

Regarding to the diversity outreach, in this class there are some students that have a lot of difficulties with the English language, because they do not understand the language and they have some problems to pronouncing and writing well. For solving this problem, I am going to provide to these students the translation of some key words that are really important in the project (endangered species, extinct species, climate change…), apart from this, I am going to

explain to them some key concepts about the project in Spanish, for example, endangered species, extinct species…., and I am going to explain the tasks that they have to do in Spanish too. In relation with the other students, they have a good understanding of the language, but they have some problems with the pronunciation of some words and with the speaking part, because they do not have much fluidity. And sometimes they have some spelling issues.

This project is about endangered species. And for this project the students are going to work with two subjects: English and Natural Science. In this project we are working with the current law of education: the LOMLOE, and with the Sustainable Development Goals.

This project is going to last 7 weeks, that is 14 hours. To present this project, I am going to follow a presentation that I made. (see Appendix A).

In this project, there are three main methodologies that the students are going to work with: Project Based Learning, Content and Language Integrated Learning, and Cooperative Learning.

In relation with to Project Based Learning, at the beginning of the project I am going to do a brainstorming about the endangered species to activate the thinking skills of the students, in which they have to say what they know about the endangered species. During the project they have to investigate about endangered species. One part of the project is doing a lapbook in which they have to investigate where they live, what do they eat, how many there are… They also have to provide some solutions to help them, and at the end they have to explain to their families their investigation and project.

Related to the Content and Language Integrated Learning, the students are going to learn content related to natural science, specifically about animals and climate change, using the English language as a medium, because in the groups they have to communicate and make decisions using the English language.

In this method there are four main components: content, cognition, culture and communication. Related to content, the students are going to learn, for instance: endangered species, extinct species, causes of extinction and of being in danger, characteristics of the animal chosen (habitat, food, population, causes of being in danger and what are they doing to protect them), changes that we can do to change this in our home or in the society, climate change, changes that we can do in the school to change this situation and the scientific method (question, hypothesis, observation and experiment, results, conclusion). In relation to cognition, there are higher order thinking skills, in this case are evaluating and analysing, and there are lower order thinking skills, that are remembering, understanding and applying. In the communication part, we have three different parts: the language of learning, that is vocabulary related to the animals,

and the introduction of the endangered species, extinct species and climate change, examples of endangered and extinct species, vocabulary related to the scientific method (question, hypothesis, observation and experiment, results, conclusion); another part is the language for learning, that is expressions like 'I think that…', modals like 'we have to…', 'we must…', 'we might…' to make predictions, future tenses 'it will…' and present simple tenses 'I know..' and 'I want to know…'. The last part is the language through learning, that is the use of modal verbs and future tenses (will) for predicting the changes and the use of the present simple. In the culture part, we have in what ways we can help endangered animals, improving climate change, to have a better world to live. To be aware of climate change and the problems that causes to the human beings and the environment and try to reduce these problems being responsible with the consumption (of light, of fossil fuels, of plastic…).

Bellow you have a table in which you can find the tittle of the project, the topic, the length of time. In this table, you can find the four main points of the Content and Language Integrated Learning that are content, communication, cognition and culture. Regarding to the content, we have the content that is going to be taught, in the cognition we have the higher order thinking skills that are going to be worked with and the lower order thinking skills that are going to be worked with, in the communication part we have three parts: the language of learning, the language for learning and the language through learning, and in the culture part we have the contents that they learn that are related to the real world and they can put in practice in their real lives. We also have the learning outcomes that the students have to achieve at the end of the project. We have the resources that they are going to use in the project as well as the activities with their explanation and length of time.

Regarding to the Cooperative Learning, this methodology is used in all the project, because the students are working in groups all the time, they have to do almost all the activities in group, for example the lapbook of the animal chosen with all the information that they have to look for and write down, the exposition of the lapbook, the making of the posters, the experiment of the sea ice and the polar bears…

Table 1

Description Endangered species' project

ENDANGERED SPECIES PROJECT

Topic: Endangered species	**Time:** 7 weeks (14 hours)	**Grade:** Year 5

Content	- Endangered species. - Extinct species. - Causes of extinction and of being in danger. - Characteristics of the animal chosen (habitat, food, population, causes of being in danger and what are they doing to protect them) - Changes that we can make to change this in our home or in society. - Climate change. - Changes that we can make in the school to change this situation. - Scientific method (question, hypothesis, observation and experiment, results, conclusion)	
Cognition	**HOTS** (higher order thinking skills)	- Evaluating - Analysing
	LOTS (lower order thinking skills)	- Remembering - Understanding - Applying
Communication	Language of learning	Vocabulary related to animals, and the introduction of the concepts of endangered species, extinct species, climate change. Examples of endangered and extinct species. Vocabulary related to the scientific method (question, hypothesis, observation and experiment, results, conclusion)
	Language for learning	- Expressions like 'I think that...' - Modals, like 'we have to…', 'we must…', 'we might…' to make predictions. - Future tenses 'It will…'

		- Present simple tenses 'I know…' and 'I want to know…'
	Language through learning	The use of modal verbs and future tenses (will) for predicting the changes. The use of the present simple.
Culture	In what ways we can help endangered animals, improving climate change, to have a better world to live. To be aware of climate change and the problems that causes to the human beings and the environment and try to reduce these problems being responsible with the consumption (of light, of fossil fuels, of plastic…).	
Learning outcomes	- To know what an endangered species is. - To recognise what an extinct species is. - To learn some examples of endangered species. - To know some examples of extinct species. - To comprehend why this species are endangered or extinct. - To think about some changes (in our homes or in the school) that we can do to help these animals. - To be aware of climate change and the consequences that it has to our real lives. - To recognize the different steps of the scientific method in order to give a solution to process of observation of different events. - To be able to search for secure and adequate information in different webpages on the Internet.	
Resources	- Computer or tablet for each group (to search for information). - A colour cardboard for each group to make the lapbook. - A computer for the teacher and a projector to project the power point. - A powerpoint by my own creation. - Crayons to paint some drawings. - Markers to write the titles. - Pencil, rubber and pens to write. - Scissors and glue to stick some photos. - Worksheet about the KWL chart.	

	- Cardboard boxes to make the rubbish bins. - Paints to paint the carboard boxes. - Colour carboards or white cardboards to make some posters. - A freezer. - A hairdryer for each group. - Water. - Ice. - A container for each group. - Modelling clay or plasticine. - A hammer for each group. - Worksheet about the scientific method. - Worksheet about the thought routine: I used to think… and Now, I think… - Worksheet about some questions related to the experiment.	
Activities	**Explanation**	Time
Brainstorming about endangered species and KWL chart (Slides 1 and 2)	In this activity we are going to do a brainstorming about what they know about endangered species. First of all, I am going to project a short video to make them think about endangered species. And later, I am going to ask them what they know about endangered species, and I am going to write all the things that they say on the whiteboard. Then, I am going to give them a photocopy about the KWL chart (see Appendix B), and they have to complete the first part about what they know about the endangered species.	30’
Explanation of endangered species with some examples (Slides 3,4, and 5)	In this activity, I am going to explain to them what an endangered species is with a short definition and then I am going to play a video, in which there is an explanation of endangered species with some examples. In the video is also explained some causes to being in danger, and some actions that they can do to help them. After watching the video, I am going to give them some examples of endangered species. The last step is to complete the part of what they want to know about the KWL chart.	30’

Choice of an endangered animal	In this activity they have to join in groups of four people that I am going to make, because they have to be mixed with children of different levels. And then, they have to search on the internet about the animals that are in danger of extinction, and they have to choose one to do a project about it.	30’
Explanation of extinct species with some examples (Slide 6 and 7)	In this part, I am going to explain to the students the definition of what an extinct species and some examples of them is.	10′
Investigate the causes of this extinction and danger (Slide 8)	In this part, using a laptop or a tablet in the group that they had made before they have to investigate about the causes of extinction and becoming in danger of all the endangered species in general.	60’
Exposition and debate of the causes and sharing their searches (Slide 9)	In this activity, each group has to explain the causes that they have found and they can justify their answers using arguments. Before they explained their investigation, I am going to explain the students some causes that I have found.	30’
Preparing the experiment	In this activity, I am going to explain to the children that in the next lesson we are going to do an experiment related to the polar bears and the sea ice. And I am going to tell them all the materials that they need to do the experiment that are: a low sided container, water, ice, modelling clay or plasticine, a hairdryer and a hammer, these materials are for each group. And for the whole class, they need a freezer, but in the school in the teacher’s room there is a	20’

	fridge with a freezer. They also need to bring the container a day before doing the experiment to put the water in the freezer to change into ice.	
Experiment	In this activity, each group of students are going to do an experiment. The experiment was about the polar bears and the sea ice. For doing this activity, I am going to use a presentation that I made (see Appendix C). First of all, I am going to give to each group of students a laptop or a tablet in case they need to look for some information on the Internet. Then, I am going to ask them some questions, the first one is: In which places or countries live polar bears? they can answer using their knowledge or they can look for information on the internet. When they answer the question all the teams, I ask another question that is: What do they eat? and then they can do the same as in the other question done before. And the same with the other two questions: What do seals eat? And why is the sea ice melting? Secondly, I am going to explain them the experiment, I am going to tell the students that we are going to make our own sea ice. And I am going to explain briefly the steps that we are going to follow. Thirdly, I am going to name all the materials that they are going to use to do the experiment. Afterwards, there are two slides related to the scientific method. For doing this activity, I am going to give the students a diagram that they have to complete individually using their own words and ideas about the scientific method (see Appendix D). Regarding to the explanation, in the first slide there is a question that I am going to ask to the students that is: What do you think that will happen? and then the students have to copy the question and they have to write their answer in the hypothesis' part. In the second slide, they have the observation and the experiment itself and the conclusion	80'

	and results, these two parts they have to be completed meanwhile they are doing the experiment and when they have finished it. Then, I provide them a slide with all the steps to follow, and in their groups, they can start doing the experiment step by step. While they have to complete the observation of the scientific method diagram. Finally, they have to complete the part of the conclusions and results of the scientific method diagram, and I am going to give them a worksheet in which they have to answer some questions related to the experiment: Why is sea ice so important to polar bears? What do polar bears need to survive? What do polar bears eat? Why are seals on the sea ice?, How might less ice impact polar bears' ability to hunt for seals?, Why is the sea ice melting? And how can we help polar bears, seals and ice sea? When all the students have answered the questions individually using their own words, I am going to correct the activity asking the students their answers and writing down on the whiteboard the solutions, and they can correct their spelling errors. (see Appendix E).	
Investigate about the animal chosen and start the lapbook (Slide 10 and 11)	In this activity, they have to investigate about the animal that they have chosen, they can use the web pages that I provide to them or other webpages. While they can start doing the lapbook, using a colour cardboard, they have to write the title, the habitat, the food that is fed with, the population of the animal, and they have to answered two questions: why is endangered? and what are they doing to save the animal? They have to search for some photos of the animal, or if they want, they can draw the animal on the lapbook.	90'
Investigate about the possible changes in our society to change this	In this part, they have to investigate about what we can do in our society or in our homes to change this problem or to improve this problem.	60'

problem (Slide 12)		
Exposition and sharing of the changes (Slide 13)	In this activity, first I am going to explain some examples of changes that I have found, and then each group of students tells some of the changes that they have found or thought about.	30’
Explanation of climate change (Slide 14 and 15)	In this activity, I am going to explain to the students the definition of climate change, but first I am going to ask them what they know about the topic. Then, I am going to explain some consequences of climate change, and they can add some that I do not explain.	20’
Continue the lapbook	In this part they have to continue with the lapbook, they can add a part about climate change, and the changes. And if they had not finished the searching for information about the population, the habitat, the food that eats, the causes of why is endangered and in what ways they can help it they have to do.	60’
Investigation of the changes that we can do at the school to solve or improve this problem (Slide 16 and 17)	In this part, they have to think about some changes that they can make in the school that are related to this problem. For this, they search for some ideas on the Internet. And I am going to provide them with some examples.	60’

Exposition of the changes	In this part, they have to explain in their groups to their classmates the changes that they can do in the school to improve this problem.	30’
Put in practice in the school some changes mentioned before	In this part, they have to put in practice the changes at the school, for example they can make different rubbish bins to recycle, or they can make some posters to make people aware of this problem.	60’
Thought routines	In this part they have to complete the final part of the KWL chart, in which they have to write the contents that they have learned in this project. And they have to complete another thought routine, about what they used to think about endangered animals and what they think now (see Appendix F).	20’
Prepare an exposition to present the project to the families (Slide 18)	In this part, they have to prepare a short exposition about the project to explain it to their parents. Each group has to prepare a short explanation, and each member of the team has to explain a part of the project.	30’
Exposition of the project to the families	The last step is the exposition of the project to their families. In this exposition, each team has to explain their project.	90’

In the following table, we have a relationship between the assessment criteria, the basic contents, the concreteness in the project and the operative descriptors. The assessment criteria, the basic contents and the operative descriptors have been taken from the LOMLOE law. The nine that appear first are related to the Natural Science subject, and the three that appear next are about the English subject.

Table 2

Relation of the assessment criteria, basic contents, concreteness in the project and operative descriptors

Assessment criteria	Basic contents	Concreteness in the project	Operative descriptors
1. 1. To use devices and digital resources according to the needs of the educational context in a secure and efficient way, searching for information, communication and working in an individual way, in groups, in a networked way and creating basic digital contents.	**B. Technology and digitalisation** − Strategies of collection, storage and representation of data to facilitate its comprehension and analysis.	Searching for information about the animal chosen (habitat, food, population, the causes of being in danger, and what are they doing to protect the animal). Searching for information about the initial questions in the activity of the experiment. Searching for the changes that they can do in the society and in the school. Searching for information about the causes of being in danger.	CD1, CCL3.
2.1. To formulate questions and make reasoned predictions about the natural,	**A. Scientific culture** − Scientific practices (observations,	In the KWL chart, because they make questions, and they think about the topic.	CCL1, CC4.

social and cultural environment showing curiosity.	formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).	In the experiment of the sea ice, more specifically when they use the scientific method, and they have to complete the worksheet.	
2.2. To search for, select and contrast information of different safe and reliable sources, beyond the virtual field, using the reliability criteria of the sources, acquiring basic scientific lexicon, and using this information in school investigations related to the natural, social and cultural environment.	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).	Searching for information about the animal chosen (habitat, food, population, the causes of being in danger, and what are they doing to protect the animal). Searching for information about the initial questions in the activity of the experiment. Searching for the changes that they can do in the society and in the school.	CCL2, CD1.

		Searching for information about the causes of being in danger.	
2.4. To suggest possible answers to the questions raised, through the analysis and interpretation of the information and the results obtained, valuing the coherence of the possible solutions and comparing them with the predictions done before.	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).	In the preparation of the exposition of the causes of this extinction and being in danger, and after thinking about possible solutions in the society and in the school to improve this issue.	CCL1, CCL2.
2.5. To communicate the results and conclusions of the school investigations adjusting the message and the form to the audience that is directed, using a scientific language and graphical representations, and	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of	In the exposition of the whole project to their families.	CCL1.

explaining the steps followed.	information and data, communication of results and conclusions…).		
3.3. To develop a final product that gives a solution to a design problem, checking in groups different prototypes and digital solutions and using in a safe way the tools, devices and adequate techniques and materials.	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).	In the products that they made for the school, for example recycling rubbish bins or in the making of the posters to raise awareness of this issue.	CPSAA3, CPSAA4, CE1, CE3.
3.4. To communicate the design of the final product, adjusting the message and the form to the audience, explaining the steps followed, and showing why the prototype or the digital solution	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments,	In the exposition of the students to their families about the project that they have done.	CPSAA4, CPSAA5, CE1.

achieves the requirements of the project and suggesting possible challenges to the future projects.	collection and analysis of information and data, communication of results and conclusions…).		
4.4. To critically value the social habits related to the health, the consumption, the care, the empathy and the respect to the living beings and the environment, contributing to its conservation, maintenance and improvement.	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).	In the implementation of some changes that would improve this issue at the school.	CPSAA1, CPSAA2, CC3.
5.3. To value, protect and show attitudes of conservation and improvement of the natural heritage through proposals and actions that reflect commitments	**A. Scientific culture** − Scientific practices (observations, formulation of questions and predictions, planification and	In the put in practice of the possible changes at the school, for example recycling, reusing, switch off the lights…	STEM1, STEM5, CC4, CCEC1.

and behaviours in favor of the sustainability.	fulfilment of experiments, collection and analysis of information and data, communication of results and conclusions…).		
2.1. To say orally short and easy texts, previously prepared about daily matters and that are relevant for the students, using verbal and non-verbal resources in a guided way and using forms and basic structures of common use that are typical of the foreign language.	**A. Communication** **-** Basic strategies for the comprehension, planification and production of oral, written and multimodal texts, that are short, easy and contextualized.	In the exposition of the causes to their classmates, in the exposition of the changes in the society or in the school and in the exposition that takes place at the end of the project to their families.	CCL1.
3.1. To plan and participate in short and simple interactive situations about daily matters, personal relevance and near their experiences, through	**A. Communication** -Basic and interesting vocabulary for the students, related to the health and healthy lifestyle	In the group work in which they have to search for information, and they have to share their opinions and knowledges, and they have to discuss	CCL5, CPSAA3.

different supports, supported in resources such as the repetition, the measured rhythm or the non-verbal language, showing empathy and respect about the linguistic politeness and the digital label as the different needs, ideas and motivations of the interlocutors.	habits, environment, sustainability and climate.	about what animal they chose to do the project.	
4.2. To select and apply, in a guided way, basic strategies that help to create bridges and facilitate the comprehension and production of information and the communication, suitable to the communicative intentions, using with help resources and physic and digital supports according to the needs of every moment.	**A. Communication** - Resources to the learning and strategies for the guided search for information in analogue and digital media.	In the search for information to complete the lapbook, and in the explanations of the teacher about the different concepts.	CCL5.

The last part of the project is the assessment, there are three types of assessment in this project: the initial evaluation, the summative evaluation and the continuous evaluation.

Regarding to the initial evaluation, this is going to be assessed in the brainstorming that the students are going to do at the beginning of the project, and in the KWL chart when they complete the part of what they know about endangered species.

In relation with the summative evaluation, there are four different assessments. All the parts are going to be done at the end of the project. There is the evaluation of the contents, in which they have a reading about endangered species and they have to asked six questions about the reading activity, that are: Why are so many animals endangered?, Are they taking care of the world?, Why are animals in the ocean dying?, Why can not animals in the forest live?, Why people cut down the trees? And Is safe for animals to eat chemicals? There are also two questions, in the first one they have to write two examples of endangered animals, and in the second one they have to explain some ways to help them (see Appendix G). There is also a self-evaluation of the students in which they have to evaluate themselves writing a cross in the correct place of the table (see Appendix H). There is an evaluation of the teaching process too, in which they have to write what is the part that the like most and least of the project (see Appendix I). Finally, there is a self-assessment for the teacher in which evaluates their own teaching process (see Appendix J).

In the part of the continuous evaluation, I am going to evaluate the lapbook that the students are going to make, using a checklist (see Appendix K). This evaluation is going to be individual and continuous, because is going to be evaluated all the process of making the lapbook. Apart from this assessment tool, I am going to use the observation during all the project, in which I am going to pay attention to some aspects, such as the collaboration, the participation, the effort, the respect to the others and the attitude to learn. I am going to evaluate also the experiment using the observation. The last assessment tool that I am going to use is the portfolio, in which they have to collect all the worksheets that they have done, that are: the KWL chart, the scientific method worksheet, the questions of the experiment and the thought routine of what they used to think, and what they think now. To evaluate all this tasks, I am going to use another checklist (see Appendix L).

6. CONCLUSION AND PERSONAL ASSESSMENT

I think that doing this project has helped me to improve my English language, because I have learned a lot of new vocabulary and expressions related to the education field and Second Language Acquisition theories. But sometimes I find it difficult, because I did not know how to express myself in an adequate way, how to use connectors to connect all the parts of the project or to concentrate, because it was demanding for me to to pay attention a long period of time reading and understanding, and then writing the information. Sometimes I got stuck and I took a break, or I continued doing it another day. I was afraid of not reaching the minimum words that I need to do it, because I do not have the same fluidity as in Spanish and sometimes, I do not know how to make a detailed explanation of a concept, because it was hard for me to think of some synonymous to change the words given in the articles.

Regarding to Second Language Acquisition, I have learned and increase my knowledge about some authors and their theories.

In relation to the project, I have reviewed my contents about the different methodologies. And I think that my project about endangered species is very interesting for the children, because the students usually like animals and they can be motivated making the project in groups. I consider that can be very entertaining, because the students are going to carry out an experiment, they have to search for information using a laptop or a tablet, they have to make some handicraft, for example the lapbook, the posters or the rubbish bins. I believe that this project can be put in practice in a real class of a primary school, because I think that is an amazing way to work with climate change and animals, and you can relate the English subject with the Natural Science subject.

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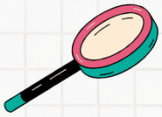
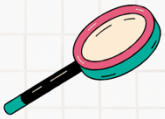
8. APPENDIXES

APPENDIX A: PRESENTATION OF THE ENDANGERED SPECIES PROJECT



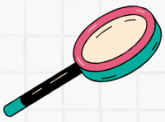
ENDANGERED SPECIES

There are some species that they are going to dissapear in the future, because of different causes that you are going to investigate later, and this species are called endangered species, because they are in danger.
https://www.youtube.com/watch?v=7k8CcAU2Lt0



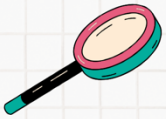
ENDANGERED SPECIES

You have to join in groups of four people, and then you have to search for an endangered species on the internet. Because then you are going to do a project about this animal, that is going to be a lapbook.



EXAMPLES OF ENDANGERED SPECIES

- Green turtle.
- Black rhino.
- Tiger.
- Giant panda.
- Chimpanzee.
- Orangutan.
- Hippopotamus.
- Lion

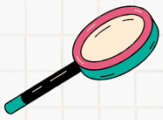


EXTINCT SPECIES

There are some species that have dissapeared and they are not alive now. These species are called extinct species. An example are the dinosaurs.

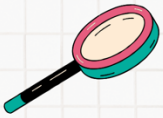
EXAMPLES OF EXTINCT SPECIES

- Pyrenean ibex
- Allosaurus
- Mammuthus primigenius
- Dodo
- Baji dolphin



CAUSES

In your groups you have to investigate about the causes of this extintion and to be in danger to extinction.



CAUSES

The causes of this extintion and to be in danger to extinction are:

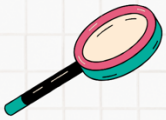
- Destruction of natural habitats.
- Pollution.
- Uncontrolled hunt and fishing.
- Recollection of species to zoos, museums or research investigations.
- Introduction of exotic species.
- Climate changes.

ANIMAL CHOOSEN

Now you have to find information about the animal that you have choosen and you have to start your lapbook, and you have to write down about the animal, and the causes of the extintion.

https://www.worldwildlife.org/species/directory?sort=extinction_status&direction=desc

https://www.iucnredlist.org/es

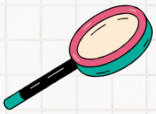


ANIMAL CHOOSEN

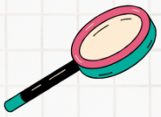
Characteristics of the animal:

- Habitat
- Food
- Why is endangered?
- What are they doing to save the animal?
- Population of the animal

You have to put a photo of the animal and the continent in which lives and then you can draw the animal if you want.



WHAT CAN WE DO TO CHANGE THIS IN OUR SOCIETY OR OUR HOME?



CHANGES

We have to reduce the emissions of carbon dioxide from the atmosphere.
For example:

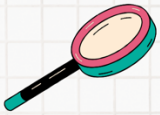
- We can reduce the use of the cars, and instead of this we can use the public transport.
- We can use less electricity, and the consumed is better if comes for renewable sources.
- We can plant trees in the forest.

CLIMATE CHANGE

The climate change is the increase of the average temperature of the earth and the oceans, mainly for the carbox diocide emissions that increase the greenhouse effect.

CONSEQUENCES OF THE CLIMATE CHANGE

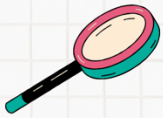
- The rising of the global temperatures.
- Large-scale melting of snow and ice (poles, glaciers, eternal snows).
- Longer and more frequent droughts.
- Changes in rainfall intensity and timing.
- Increase in extreme weather events (hurricanes, tornadoes).
- Changes in the calendar of the seasons.
- The rising of the sea level.
- Acidification of marine environments.



WHAT WE CAN DO TO CHANGE THIS IN THE SCHOOL?

CHANGES AT THE SCHOOL

- We can recycle the rubbish.
- We can switch off the lights, and raise the blinds.
- We can not open the windows, and do not waste heating.



EXPLANATION OF THE PROJECT TO THE FAMILIES

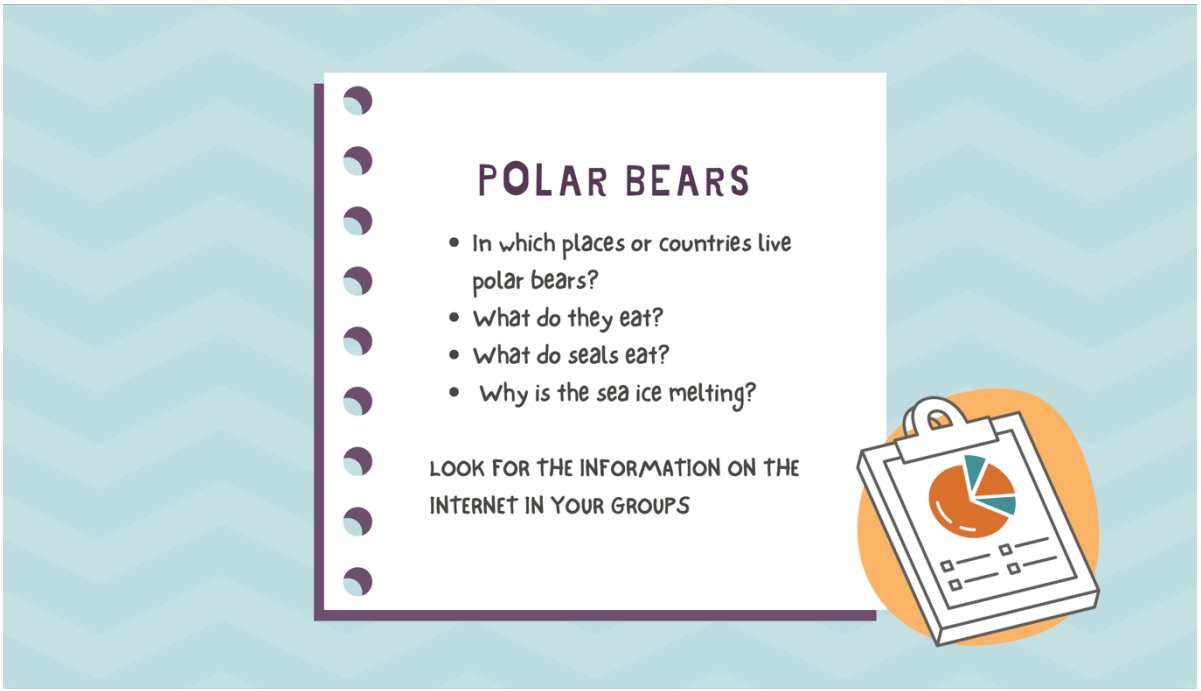
You have to explain to your families what have you done in this project, and what have you learnt

APPENDIX B: KWL CHART

TOPIC: NAME:

WHAT I KNOW?  WHAT I WANT TO KNOW?  WHAT I LEARNT? 

APPENDIX C: PRESENTATION OF THE EXPERIMENT OF THE POLAR BEARS AND SEA ICE



EXPLANATION OF THE EXPERIMENT

In this experiment we are going to make our own sea ice. For this, we use a container to put the water and then we put in a freezer one day.
Secondly, we are going to make two polar bears with modelling clay or with plasticine.
When the ice was frozen, we slip the ice out and we break into pieces using a hammer, then we add some water to the container and we put our polar bears on the ice and we leave them some hours in a place with sunlight, and we can use a hairdryer sometimes.

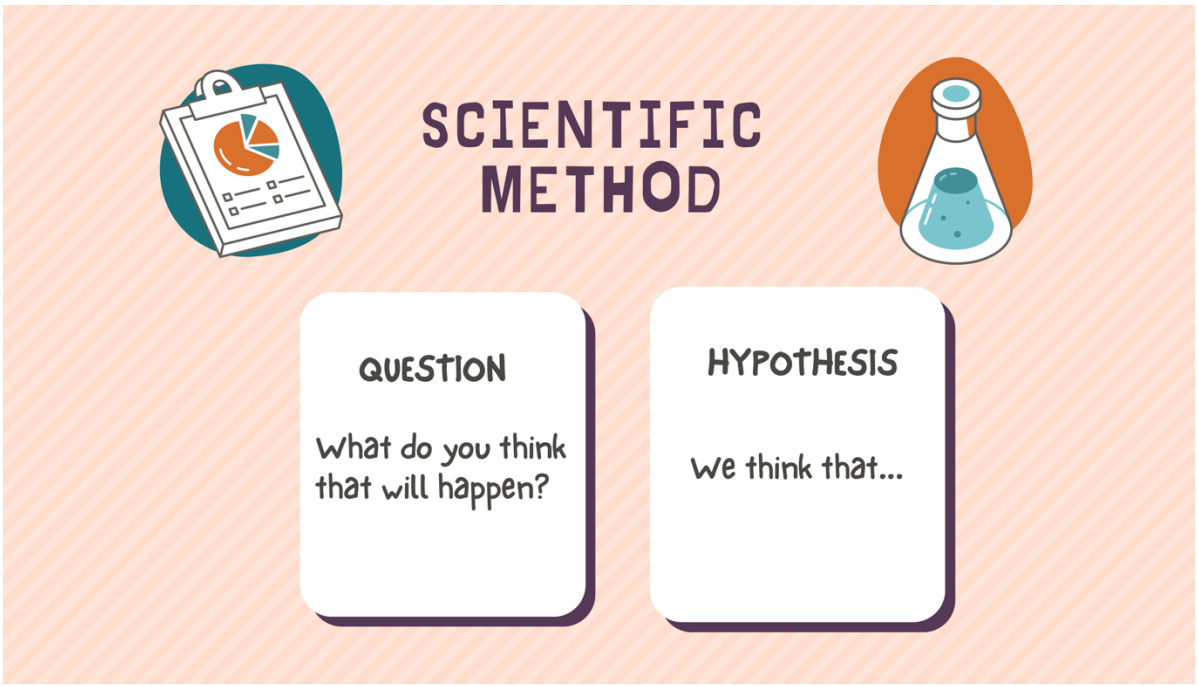
EXPERIMENT: MATERIALS

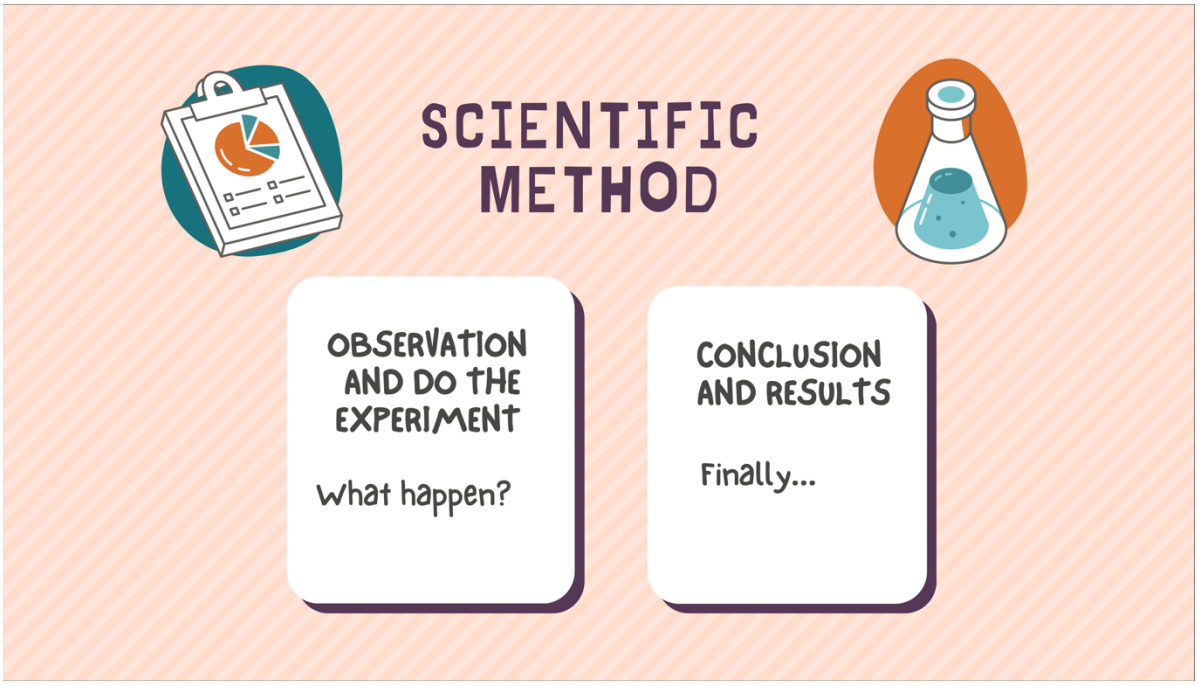
For each group:

- Low sided container
- Water and ice
- Modelling clay or plasticine (or polar bear toys)
- A hairdryer
- A hammer

For the whole class:

- A freezer


SCIENTIFIC METHOD
QUESTION
What do you think that will happen?
HYPOTHESIS
We think that...


SCIENTIFIC METHOD
OBSERVATION AND DO THE EXPERIMENT
What happen?
CONCLUSION AND RESULTS
Finally...

STEPS TO FOLLOW

ONE

Put some water in a container and put it inside the freezer.

TWO

Make two polar bears using modelling clay or plasticine

THREE

Slip the ice out of the container and use a hammer to break the ice into pieces.

FOUR

Then, we add some water and we put each polar bear in one piece of ice.

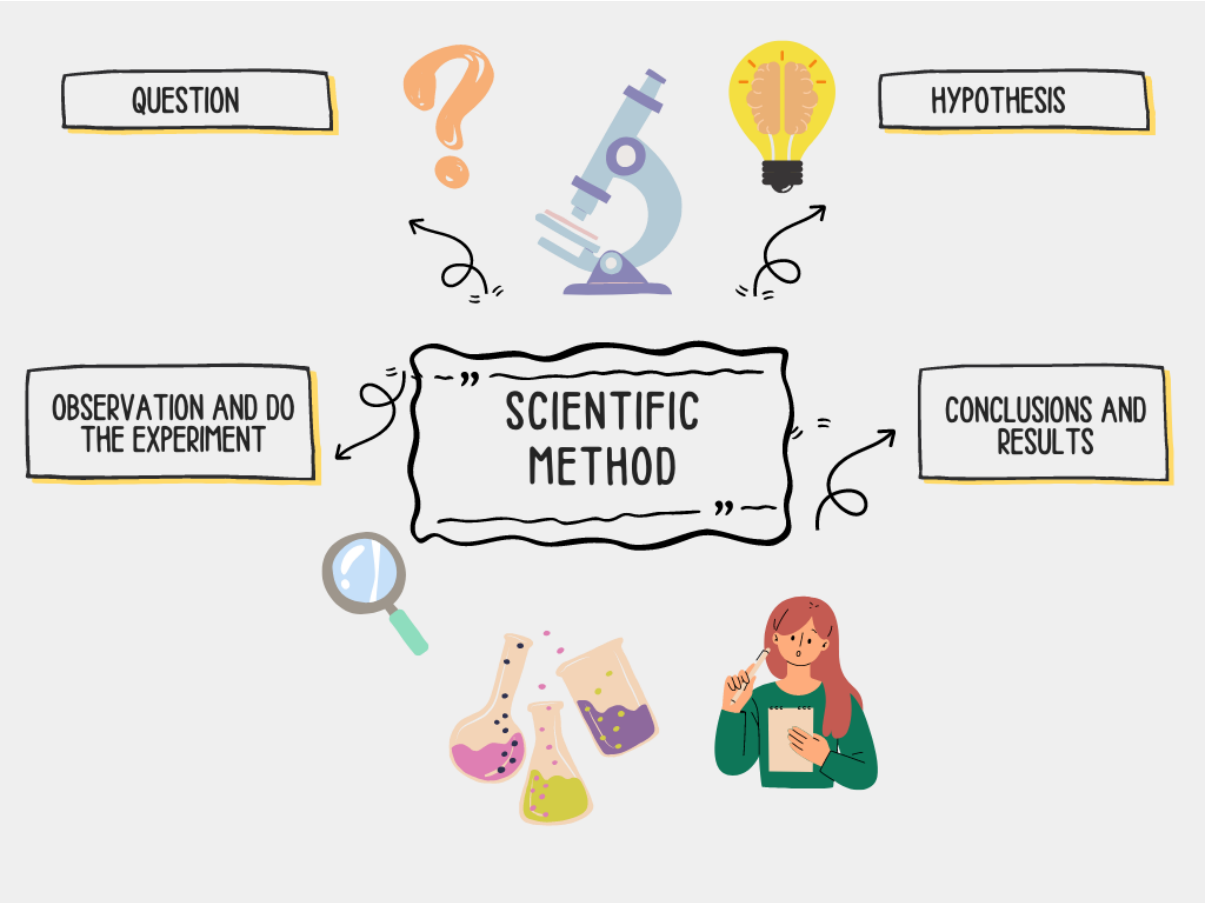
FIVE

Finally, we leave the container in a place with sunlight or we can use sometimes a hairdryer. And we see what happen.

QUESTIONS

1. Why is sea ice so important to polar bears?
2. What do polar bears need to survive? What do polar bears eat?
3. Why are seals on the sea ice?
4. How might less ice impact polar bears' ability to hunt for seals?
5. What other reason is sea ice important for polar bears?
6. Why is the sea ice melting?
7. How can we help polar bears, seals and ice sea?

APPENDIX D: WORKSHEET OF THE SCIENTIFIC METHOD



APPENDIX E: QUESTIONS OF THE EXPERIMENT

EXPERIMENT ABOUT THE POLAR BEARS AND THE IMPACT OF MELTING SEA ICE

QUESTIONS TO BE ANSWERED AFTER DOING THE EXPERIMENT:

1. **What do polar bears need to survive? What do polar bears eat?**

2. **Why are seals on the sea ice?**

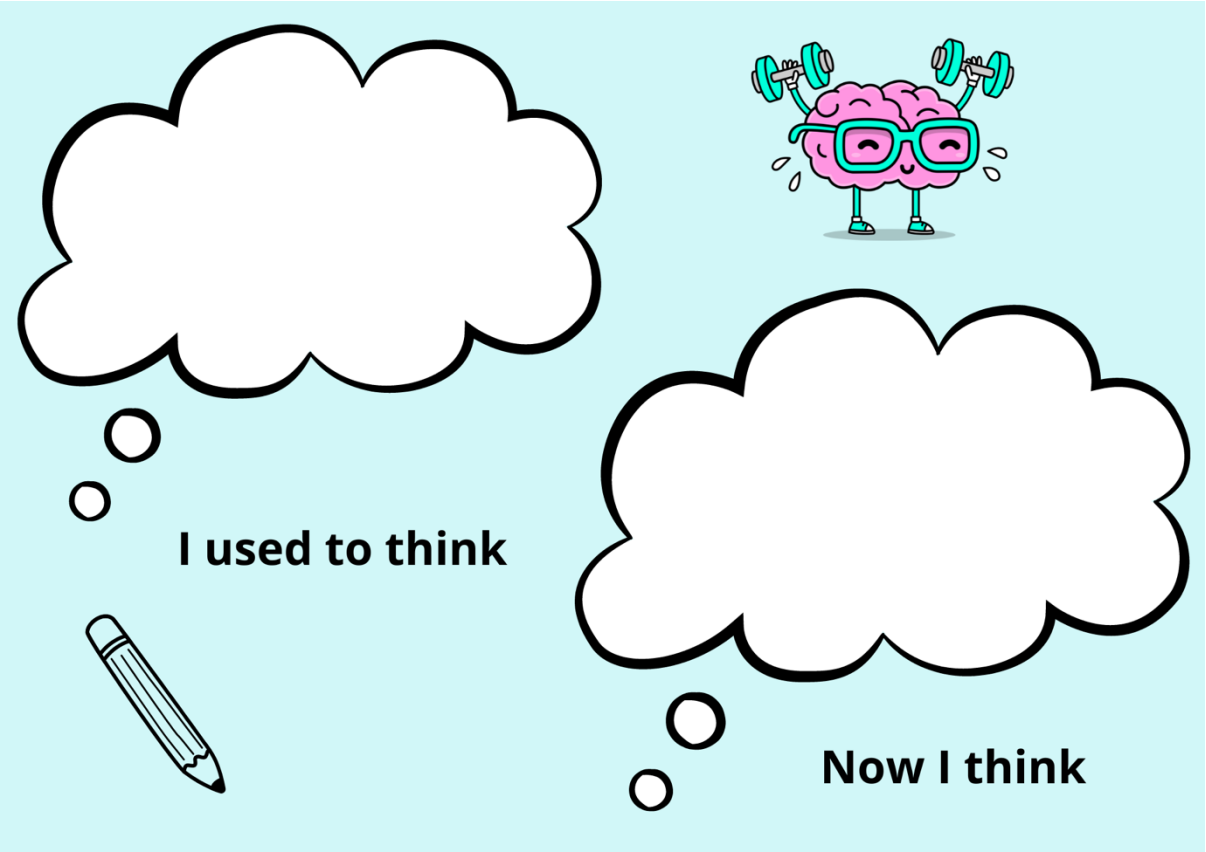
3. **How might less ice impact polar bears' ability to hunt for seals?**

4. **What other reason is sea ice important for polar bears?**

5. **Why is the sea ice melting?**

6. **How can we help polar bears, seals and sea ice?**

APPENDIX F: THOUGHT ROUTINE I USED TO THINK… AND NOW, I THINK…



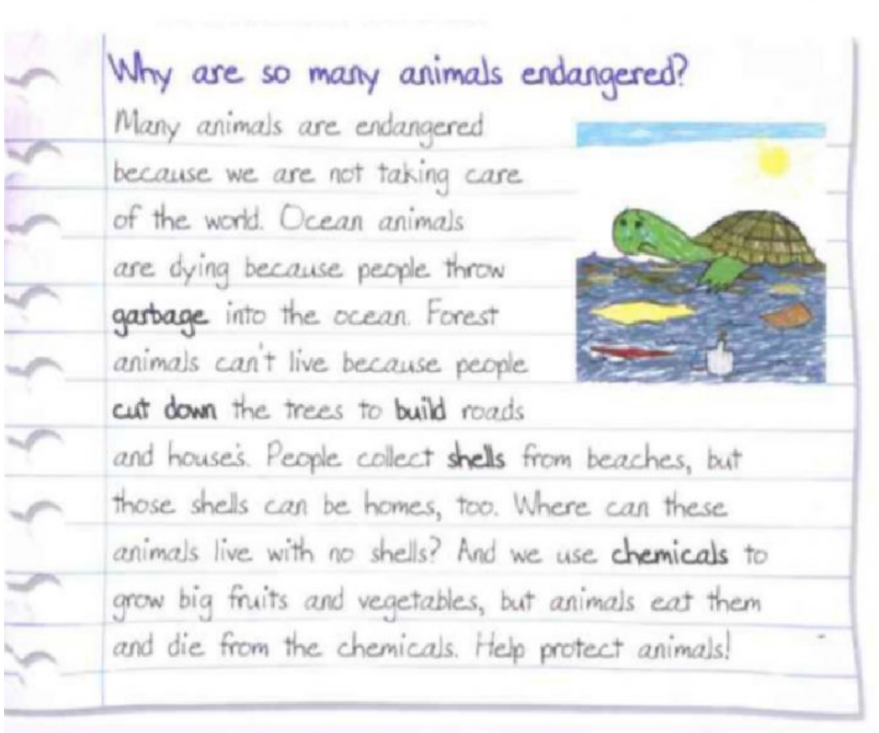
APPENDIX G: CHILDREN'S ASSESSMENT OF CONTENTS

ASSESMENT

NAME:

1. **EVALUATION OF CONTENTS**

1. **Read the text and answer the questions:**



Why are so many animals endangered?

Many animals are endangered because we are not taking care of the world. Ocean animals are dying because people throw **garbage** into the ocean. Forest animals can't live because people **cut down** the trees to **build** roads and house's. People collect **shells** from beaches, but those shells can be homes, too. Where can these animals live with no shells? And we use **chemicals** to grow big fruits and vegetables, but animals eat them and die from the chemicals. Help protect animals!

- **Why are so many animals endangered?**

- **Are they taking care of the world?**

- **Why are animals in the ocean dying?**

- **Why can not animals in the forest live?**

- **Why people cut down the trees?**

- **Is it safe for animals to eat chemicals?**

2. **Write two examples of endangered animals.**

3. **Can you explain some ways to help them?**

APPENDIX H: SELF EVALUATION OF THE CHILDREN

2. SELF EVALUATION

You have to write a cross in the correct place. **1 = disagreement** **2 = I do not agree and disagree** **3 = agreement**	**1** 	**2** 	**3** 
1. I have learnt new contents about the endangered species.			
2. I have made an effort to do all the activities.			
3. I did all the activities.			
4. I am interested in this topic.			
COMMENTS:			

APPENDIX I: EVALUATION OF THE TEACHING PROCESS

3. EVALUATION OF THE TEACHING PROCESS

1. What do you like most about the project?

2. What do you like least about the project?

APPENDIX J: SELF ASSESSMENT OF THE TEACHER

You have to write a crossin the correct place. **1 = disagreement** **2 = I do not agree and disagree** **3 = agreement**	**1** 	**2** 	**3** 
The students have understood the contents that I explained.			
The students had completed the tasks planed.			
The explanations of the teacher are clear for the students.			
The teacher help the students when they do not know how to do something.			
The teacher engages the interest and motivation of the students			
The teacher is respectful with the students.			
The teacher enhances them to learntnew content.			
The tasks are enjoyable.			
The methodology is accurate.			

APPENDIX K: CHECKLIST OF THE LAPBOOK

LAPBOOK	Proficient	Competent	Needs improvement
The student is able to search for information that is secure and reliable			
The student is able to cooperate in a respectful way with the other members of the group, respecting other people's ideas			
The student is able to participate doing the activities			
The student is able to write information correctly about the habitat			
The student is able to write information correctly about the food			
The student is able to write information correctly about the population			
The student is able to write information correctly about the causes of being			

endangered of the animal			
The student is able to write information correctly about the ways to protect them			
The student is able to stick some photos of the animal in the cardboard			
The student is able to express the changes that we can do to help them			
The student is able to present a clean project and with good handwriting			
The student is able to explain the project using the words suitable to the topic			

APPENDIX L: CHECKLIST OF THE PORTFOLIO

PORTFOLIO	Proficient	Competent	Needs improvement
The student is able to reflect on their ideas related to endangered species, and the knowledges that they have acquired			
The students is able to use the steps provided in the scientific method			
The student is able to think about climate change and the consequences that it has in our daily lives			