

Master's Dissertation/
Trabajo Fin de Máster

**LEARNING THROUGH CLIL
WITH SPECIFIC LANGUAGE
IMPAIRMENT, SLI**

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1.ABSTRACT

The aim of this dissertation is to present a teaching proposal for the subject Natural Science, specifically designed for a group of students in the 2nd year of Primary Education. Despite practitioners' general belief that there is a myriad of difficulties in designing teaching units attending to diversity through CLIL, we consider this situation as a great opportunity for inclusion-oriented practices. Through the design of activities that respect the different rhythms in mixed-ability groups, based on CLIL-related methodologies that foster cognitive development and language competence improvement, students may reach the maximum development of their learning, experimenting and discovering the environment around them. In this teaching unit different dynamics and a variety of audio-visual resources are offered to support language development with a view to facilitating the teaching and learning process for those students who have more difficulties in language skills, such as Specific Language Impairment.

2.KEYWORDS

SLI, inclusion, CLIL, bilingualism, Science

3.INTRODUCTION

“Procurad que salgan con más curiosidad que deberes”. Although I am not lucky enough to know who the author of this sentence is, it summarizes almost perfectly the essence of learning that we propose through this teaching unit. Since the subject of Natural Sciences offers us the possibility of experiencing knowledge and learning from it in a more meaningful way, we want to give a real meaning to what students learn throughout the development of the proposed teaching unit. In addition, we have decided to take the best of the CLIL approach and bring it into our classrooms, so that students are able to develop their language skills based on real concepts that are fully contextualized in their daily lives and learn to communicate through the foreign language.

However, our great challenge is even more exciting. We want to propose a proposal of a didactic unit in which all the students of our 2nd grade class can feel totally involved and manage to adapt to all the needs and learning rhythms of each one of our students. In

particular, we are going to focus our attention on the hopeful possibility that a student with Specific Language Impairment can be part of the same significant learning as the rest of their classmates, offering them a wide variety of necessary resources so that the student can enjoy all the sessions with the least possible obstacles related to their linguistic communication skills and thus facilitate their access to the Natural Sciences curriculum.

4.PROJECT JUSTIFICATION

4.1. Diagnosis of the situation: areas of improvement detected and delimitation of the issue to be addressed

In order to intervene favourably in the learning development of the group of students with whom we are going to work, we have previously studied the situation and the environment in which the students live, since they are totally influential factors in their education, and we have based all the teaching processes on the different learning styles presented by these students. Considering that the group of students we are going to work with belongs to the 2nd grade of Primary Education, we are going to present the areas of improvement detected and the delimitation of the issues, with the aim of offering our students an inclusive quality education:

- The school in which the group of students is located is a private bilingual school for Early Childhood Education, Primary and Secondary Education, with 3 lines in each year.
- In general, students in 2nd grade of Primary Education present a good academic level, but they need to develop their learning with dynamic methodologies that allow them to be motivated and have an active attitude towards what they are learning.
- Although since the Early Childhood Education, students have been very stimulated in the learning of English as a foreign language, this group of students still presents very varied levels in the development of the four English language skills. Therefore, we believe it is necessary that the Content and Language Integrated Learning (CLIL) approach plays an essential role in the teaching and learning methodology designed; by accessing new content using the English language as a vehicle, they will learn to develop the four language skills in a more natural and contextualised way.

- Beyond the learning styles that each student may display, one of the students has greater difficulty in understanding and reproducing written messages, since he or she has Specific Language Impairment. Therefore, the inclusion of this student in the classroom, with the clear message that all students can learn from all the riches that characterize each of the students, is a fundamental factor on which the design and elaboration of the unit's activities has been based.
- The student who presents SLI, needs to learn in an environment of active methodologies and guided learning that supports his insecurity at the time of carrying out the tasks that require more effort. Especially, in those tasks in which he needs to develop written skills, offering him audiovisual resources as facilitators of written knowledge and cooperative learning activities, as facilitators of the development of a positive interdependence, interpersonal skills and stimulating interactions.
- Finally, we can mention that the participation in the school by the students' families is high, maintaining a very active collaboration between the teachers and the families, which pleasantly favours the students' learning.

Therefore, with this work we aim to propose the possibility of elaborating a didactic unit from the needs found in the group of students, adapting ourselves to the learning rhythms of each one, offering them the time and space they need to build knowledge by themselves in a meaningful, social and experimental way.

5. THEORETICAL FRAMEWORK

5.1. Importance of inclusive education

More and more teaching professionals are defending inclusion as one of the basic and necessary steps to advance in children's education and to adapt as much as possible to the needs they demand as citizens of our current society.

Inclusive education benefits not only learners with special needs when they are given the opportunity to participate in the same activities as their peers, but all learners in the class. Emphasizing the importance of teaching values in class, it is vital to teach students that every human being is unique and that each person has different skills and abilities to solve a problem. This is not an easy task, since such an inclusive education must involve other actors

such as the families of students, which leads to maintaining constant coordination and very fluid and positive communication between family and school.

If we had to locate the origins of inclusive education, we could say that they are marked by two key Conferences:

➤ Jomtien (1990) in Thailand: Education for All

Delegates from one hundred and fifty-five states met. According to the UNESCO document (1990), this Conference constitutes a renewed commitment to ensure that the basic learning needs of all, boys and girls, young people and adults, are effectively met in all countries. The Conference started from a premise that demonstrated that there was no inclusion in global education, giving data about the lack of schooling or access to good education. Therefore, according to the World Declaration on Education for All (1990), among others:

- Everyone should be able to take advantage of the educational opportunities offered to meet his or her basic learning needs.
- Basic education must be provided to all children, youth and adults.
- It accepts the possibility of schooling in other forms where access to formal schooling is limited, but adds that these should cover the same levels of learning.
- It authoritatively rejects learning in isolation and promotes all possible assistance to obtain maximum physical and emotional support.

➤ Declaration of Salamanca (1994):

Over three hundred participants representing ninety-two governments met. The World Declaration on Education for All (1994) aims to promote the approach of inclusive education, giving schools the resources they need to educate students with specific educational support needs. It explains the document written by UNESCO (1994) that there is a need to act in order to achieve "schools for all", that is, institutions that include everyone, celebrate differences, support learning and respond to the needs of each person. He then adds a point that clearly marks the goal of achieving inclusion: education systems must be designed and programmes

implemented to take into account the full range of these different characteristics and needs. People with special educational needs must have access to mainstream schools.

After the brief explanation of the two Conferences (1990, 1994) that gave way to inclusion, we went into the concept more deeply.

According to Sebba (1996), inclusion is a process by which a school attempts to respond to all students as individuals by reconsidering the organization of its curriculum and delivery.

On the other hand, Stainback and Stainback (1999) tell us that inclusion means welcoming everyone with open arms in our schools and communities.

According to UNESCO (2008), inclusion is the process of identifying and responding to the diversity of people's unique needs, through encouraging greater and more open participation in all life activities; and involves changes or modifications in content, approaches, structures and strategies, based on a common vision. To this end, inclusion proposes the recognition and valorization of diversity as a reality and a human right and proposes a common model in which adaptations are implicitly incorporated for one and others as they are applied. However, such a postulate should not be understood as the possibility that everyone learns or does something, but rather that they learn or do it differently, achieving similar results. The main characteristics that inclusive classrooms should have are those that would be according to Stainback and Stainback (1999):

- Classroom as a basic unit of attention in which classes are organized so that all students collaborate.
- Diversity is taken as a privilege within the class, since it is something that can enrich everyone.
- The rights of each student must be made explicit, as it helps to ensure fair and equal treatment among classmates.
- Teaching is adapted to the needs of students with specific educational support needs.
- The help or support is received in ordinary classes.
- Natural support networks" are encouraged, that is, peer tutoring.

- To take advantage of the resources that the student with needs has for the whole class, that it is not something exclusive to him, but that it is generalized to everyone who can take advantage of it.
- It changes the role of the teacher from being a simple source of knowledge and problem solver to be a trainer of students capable of helping each other to build up learning.
- Projects and activities are carried out that focus on understanding diversity. This will increase fair treatment, self-esteem, support...
- Creativity is encouraged because you cannot encourage the fact that there is only one answer to things.

As for the effects of inclusion on students, teachers and families, we will present those proposed by Cardona (2006) following a study carried out. Various studies such as Odom (1984), Sharpe, York and Knight (1994) and Hollowood (1994) show that the classmates of a student with needs are not affected. These studies have concluded that they do not decrease their performance, are not less well served and therefore maintain a normal pace. These studies add that they benefit from interaction with students with specific educational support needs, since they improve in different capacities such as self-concept and acceptance of differences (Cardona, 2006). Various effects, both positive and negative, have been found in teachers. The class tutor improves their self-confidence when dealing with a greater diversity and being able to educate students with Specific Educational Support Needs, increases the collaboration between teachers, since the work groups are key to the different proposals. On the other hand, since it involves much more elaborate work, there is a fear of not having sufficient resources or knowledge, of not having the time required to provide the contents with the depth required for all, (Cardona, 2006). Finally, other different effects also arise in families. From the beginning, the family wants the student to be treated the same as the others, offering him or her the necessary opportunities, giving him or her importance within the "micro-society" that is a school. Therefore, they are also afraid of being left out of a class, of being rejected by their peers and, finally, of being something more negative than positive, (Cardona, 2006).

"Inclusive education is not a methodology, a principle or a value. Inclusive education is a human right to live, learn and develop with all the people who make up our

community, including, primarily, the school, without forgetting the other routes that make up the right to lifelong learning" (Galván, 2019).

5.2. What is Specific Language Impairment, SLI?

In recent years, there have been many studies on the learning difficulties that students may have in the classroom and there is much research that has further determined the difficulties that students may have in relation to language. Thanks to the various studies carried out throughout history and the great variety of contributions from different authors, language difficulties are defined more precisely and specifically in the classification of their types. Consequently, the greater the specific knowledge about language problems, the higher the quality of education and the necessary support for children with language difficulties to develop them in the best possible way.

Particularly, within the difficulties of language, in this project we are going to focus on Specific Language Impairment, (SLI, from now on).

What is Specific Language Impairment, SLI? The answer to this question is highly controversial because of the very opposing contributions of different authors. After researching this term, we can say that SLI is a very difficult disorder to define, very difficult to diagnose and very challenging to treat. In fact, there are opposing views on the definition as a disorder because it is not considered as such.

In any case, many authors have studied the term trying to create a concrete definition of SLI, being aware of how important it is to know it in order to be able to understand the difficulties of the students and to attend properly to their needs.

Considering the historical framework that encompasses each study from the different medical, pedagogical, psychological and social points of view, we will now present different contributions that have been offered to the concept of SLI throughout history.

Following the research carried out by Mas (2019), at the beginning of the 19th century, the first descriptions of SLI in children appear, highlighting a possible specific language problem without other alterations. Due to the difficulty that presents the study of the infantile language, the studies crossed a phase of investigation: first, in relation to the "*infantile aphasia*" or "*congenital aphasia*"; and later, it is possible to distinguish the different

difficulties from expression and understanding of the language with terms like *"delayed development of the speech"*, *"congenital auditory verbal agnesia"* or *"congenital deafness of words"*.

In the 1980s, the term Specific Language Impairment (SLI) appeared in the English-speaking medical literature to describe children who had a language impairment without demonstrable cause. Progressively, nativist and psycholinguistic theories appeared, which offered a modular vision of the functioning of the structures of the central nervous system, considering that language acquisition is a process independent of others. Therefore, they were understood to be psycholinguistic causes, as isolated defects in the *"cerebral language systems"*, and not neurobiological ones.

With the widespread use of psychometric tests as a measure, a person's language ability could be compared to that which was appropriate for his or her age, so the terminology was gradually developed from *"deviant language"*, *"language disorder"*, *"delayed language"*, *"developmental language disorder"* to the terms *"specific language deficit"* and *"specific language disorder"*.

Today, we could say that all the definitions provided for the term SLI, agree that there is a difficulty of the development of the language produced in absences of other deficiencies of the neurodevelopment. However, continuing with the research of Mas (2019), we can say that there is still no consensus in relation to:

- The level of discrepancy considered between language skills and other cognitive skills.
- The threshold level of language ability above which a deficit is considered to exist.

According to the definition proposed by the American Speech Language Hearing Association (1980), SLI is an *"abnormal acquisition, understanding or expression of spoken or written language. The problem may involve all, one or some of the phonological, morphological, semantic, syntactic or pragmatic components of the language system. Individuals with language disorders often have problems processing language or abstracting meaningful information for storage and retrieval by short or long-term memory"* (ASHA, 1980, p. 317-318).

The National Institute on Deafness and Other Communications Disorders defines SLI as *"a communication disorder that interferes with the development of language skills in children"*

who do not have a hearing loss or intellectual disability. The specific language disorder can affect children's speech, listening, reading, and writing" (NIDCD, 2019, No. 11-7751).

Therefore, we can say that children who present SLI, show *"difficulties in acquiring and managing the skills of decoding (understanding) and coding (expression) of the language system. It is specific, because it does not depend on a sensory, neuromotor, cognitive or socio-emotional deficit, but is an intrinsic problem of language processing"* (Crespo-Eguílaz & Narbona, 2006, S193-S200).

Mendoza (2001), states that the problem is currently approached from the heterogeneity of the SLI population, since it is a disorder that affects a number of children ranging from 0.6% to 7.4%, these differences being due to the criteria for classifying them and the age of the children themselves (2001, p. 45-66.).

Regarding the classification of language disorders, Rapin and Allen (1987) offer us one of the most accepted and demanded:

A.- Trastornos específicos del lenguaje	-Dispraxia verbal -Déficit de programación fonológica
B.- Trastornos del lenguaje expresivo y receptivo	-Agnosia auditivo-verbal -Déficit fonológico sintáctico
C.- Trastornos del procesamiento de orden superior	-Déficit léxico-sintáctico -Déficit semántico-pragmático

Table 1: Classification of types of language disorders

Source: Rapin, I., Allen, D. A. (1987). Developmental language disorders: nosologic Considerations.

On the other hand, the World Health Organization (WHO) offers us a taxonomy of specific language development disorders in a very differentiated way, excluding disorders that are acquired and/or have a known neurological cause.

Specific developmental disorders of speech and language	
F80.0	Specific speech articulation disorder
F80.1	Expressive language disorder
F80.2	Receptive language disorder
F80.3	Acquired aphasia with epilepsy [Landau-Kleffner syndrome]
F80.8	Other developmental disorders of speech and language
F80.9	Developmental disorder of speech and language, unspecified

Table 2: Specific developmental speech and language disorders

Source: World Health Organization (1994). Pocket Guide to the ICD-10 Classification of Mental and Behavioural Disorders. Churchill Livingstone, p. 180

In order to go deeper into the concept of SLI, we will also refer to the most updated classification offered by Mas (2019). The author distinguishes two types of SLI:

- **Predominantly expressive SLI:** children have a normal memory that allows them to recognize phonemes and words by understanding their meaning; however, they express themselves poorly, since they are unable to find the right word for what they want to say and are slow to form sentences.
- **SLI with expressive-receptive impairments:** children have difficulty recognizing phonemes and words, since their phonetic memory is limited. However, their expression is somewhat better than that of children belonging to the first group.

According to the National Institute on Deafness and Other Communications Disorders (2019), although the exact cause of SLI is unknown, there are recent findings that suggest a strong genetic link. Specifically, the NIDCD advocates and publishes that *"children with specific language disorder are more likely to have parents and siblings who have also had speech difficulties and delays, compared to children without this disorder. In fact, 50% to 70% of children with specific language disorder have at least one family member with this disorder. Learning more than one language at a time does not cause the specific language disorder. However, the disorder can affect both multilingual children and children who speak only one language"* (NIDCD, 2019, No. 11-7751 S).

Beyond the possible causes and the great contributions shared by so many authors throughout history, all professionals and researchers agree on the clear need to treat children with SLI as soon as they are diagnosed. Despite the fact that the treatment of SLI represents a great challenge for specialized professionals and families of children, there are many resources and

guidelines that offer children the possibility of accessing knowledge and information in an easier way and provide them with tools so that children with SLI are able to develop autonomously in the society in which they live.

In the educational field that concerns us, inclusion is presented as a basic pillar in the education of students with SLI. Adequate coordination between the educational team (teachers, guidance team, speech therapist...) and the family is fundamental to jointly support the task of carrying out any programme of language development stimulation, correction or compensation. We can also indicate some requirements which, according to Moran Alvarado et al (2017), would be ideal for the optimum development of students with SLI:

- Make the curriculum flexible without renouncing standardization in curriculum adaptations.
- To use diverse resources that generate increasingly complex communicative situations, technological educational products, games, drawings, photographs and reproductions.
- To take advantage of the spaces to achieve the insertion of the child in equal conditions and rights.
- To promote participation in decision-making and involvement in the child's educational process by families and the educational community.
- To design and offer methodological strategies to children so that they can stimulate the learning of their language and establish meaningful relationships with the world and expand the possibilities of relationships with other people.
- Educational programmes should promote the stimulation of language development so that children can grow up with independence and autonomy.

To conclude, we believe it is necessary to emphasize that *"attention to language difficulties in schools must therefore be conceived as an integral, inclusive, totalizing action that deploys all the possibilities of the pedagogical process and of the teams of educators to provide the means that favour the development of the child and, at the same time, generate feelings of affection, tenderness, understanding, patience and tolerance, so as not to renounce the commitment to offer preventive and specialized attention to those who have a certain special educational need associated with them"* (Moran Alvarado et al, 2017, pp. 191-197).

5.3. Bilingual children with Specific Language Impairment, SLI

At this point, we believe it is necessary to analyse two important issues in relation to bilingualism and children with Specific Language Impairment:

- a) Is it more complex to diagnose children with SLI if they live in an environment where society demands them to be bilingual or is it the same as if they were monolingual?
- b) Is it appropriate for students with SLI to participate in school-sponsored bilingual programs?

In addition to the complexity of the speech-language testing process to diagnose possible signs of SLI, the process can be even more complicated if the child being tested lives in a bilingual environment. *"It is difficult to distinguish between children who have difficulty learning a new language and children who have a true language disorder"* (NIDCD, 2019, No. 11-7751).

In this type of situation, diagnostic tests of dual language have been developed to identify language disorders in bilingual children and tests of intervention programs to find the most appropriate way to help bilingual children with a language disorder achieve academic success. Many professionals are currently conducting these studies in education, as is being developed by a group of researchers funded by the NIDCD.

After careful research on the benefits of bilingual education and the possibilities it offers students, beyond the difficulties they may present, we can highlight the variety of conflicting opinions that offer conflicting answers as to whether or not it is appropriate for students presenting SLI to participate in the bilingual programs promoted by schools.

Analysing in a general way the possibilities that bilingual education can offer us, Alonso (2017) defends that bilingual children have their cognitive capacities enhanced, showing variations in their memory, values and even personality depending on the language in which it is being spoken; as if the brain of a bilingual child contained two different minds.

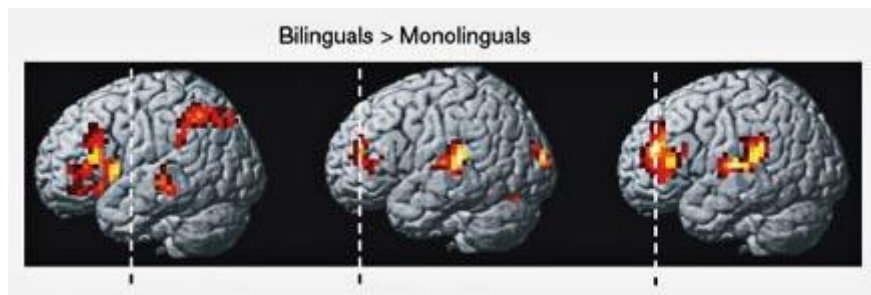


Figure 1: Better cognitive efficiency in bilingual brains.

Source: Barac & Bialystok (2011). Language Teaching, pp. 36–54.

In addition, Rubio-Fernandez & Glucksberg (2012) publish that bilingual children can better develop executive skills so that they can temporarily put aside what they already know and focus on understanding something else. This capacity also favours the possibility of better developing empathy and understanding someone else's position in a given situation (2017, pp. 211–217).

In an article published on the "Fundación Querer" website, Lombardo (2017) firmly states that bilingualism does not cause any kind of disorder and that a child suffering from a language disorder can be stimulated in two different languages.

"Those children with language disorders who are exposed to two languages usually recover the language function more satisfactorily (which is not the same as faster). Why is this? For the simple reason that bilingualism creates more varied and richer neural connections, which enhances a child's cognitive development" (Lombardo, 2017).

However, not all studies demonstrate the benefits that bilingual education can bring to SLI students. At the University of the Balearic Islands, the Research in Development, Education and Language (Y+DEL) group studies the process of language acquisition, the possible language disorders that can occur and, in turn, investigates the influence that bilingualism has. In one of their recent publications in the scientific journal *"Frontiers in Psychology"*, Aguilar-Mediavilla et al (2019) confirm the effects that SLI has on the academic performance of bilingual children throughout the Primary Education stage. The results of their research indicated that the academic performance of children with SLI was lower than that of their peers without language difficulties.

Despite the great cognitive development that can enhance bilingualism in children, Medina (2015) argues that if the acquisition of a second language occurs later than age 6, the process

of consolidation of the mother tongue becomes more complicated for those children who have a language disorder.

After lengthy research processes, authors such as Ebert, Kohnert, Pham, Disher and Payesteh (2014) find that children with SLI have obvious difficulties in all languages (pp. 172-186). We found papers that compare the linguistic and cognitive skills of bilingual children with SLI and monolingual children with SLI and the conclusions state that they find equivalent results in both groups with regard to:

- To the type of errors (Jacobson & Schwartz, 2005)
- To the difficulties in some non-linguistic processing tasks (Ebert et al., 2014)
- In morphosyntactic competition (Paradis, 2007).

Nonetheless, the results may not be entirely consistent, since we have also found studies that show inferior results for bilinguals with TEL (Orgassa & Weerman, 2008, pp. 333-364.).

In any case, research continues to be carried out from different educational perspectives with a common objective: to offer a quality education with sufficient resources, support and necessary adaptations so that students with SLI can have access to the bilingual curriculum, therefore, they can develop autonomously in the society in which they live. As Lombardo (2017) suggests, the question would be how we as education professionals can contribute to enabling children with SLI to achieve and maintain bilingualism.

According to the “Boletín Oficial del Estado de la Ley Orgánica 2/2006, de 3 de mayo, de Educación”, article 72 states that *"schools shall have the proper school organization and shall make the necessary curricular adaptations and diversifications to facilitate the achievement of the established goals by all students"*.

In its publication "Common Conclusions on Bilingualism and Attention to Diversity" (2013), the Education Clustering Program (ARCE) establishes some general principles aimed at children with special educational needs:

- The right of all pupils to receive bilingual education and the obligation of bilingual schools to provide it, using the personal, material and organisational resources necessary to do so.

- Guarantee and legislative regulation of attention to diversity in bilingual centres
- Common theoretical framework for attention to diversity in the bilingual education project.
- Promote bilingualism.

In addition, the “Programa de Agrupaciones de Centros Educativos” (ARCE, 2013) publishes some specific aspects for SLI students that should be considered:

- ✓ Degree of affectation and type of TEL.
- ✓ Profile of language skills for adjusting educational response.
- ✓ Use of adaptations and common resources for the development of the two languages.

5.4. CLIL, a facilitating approach

Throughout history, many educational currents have tried to create a space in the school so that language learning is not a mere transmission of grammatical structures with a forced and unnatural use of the foreign language.

In the Order of 28 June 2011, which regulates bilingual education in schools in the Autonomous Community of Andalusia, we find Article 9, concerning teaching methods, which provides that in bilingual education there must be *"strategies that promote the learning of content in foreign languages, within the framework of the curricular objectives established generally for learning them"*.

At the moment, one of the most advocated currents by different education professionals as a learning facilitator is the Content and Language Integrated Learning (hereinafter CLIL). That is why the CLIL current will be the basic pillar where the teaching and learning methodology proposed in this project is based, in order to help students with SLI to access in an easier way to some specific contents, through the English language as a linguistic vehicle.

Due to the vital importance that CLIL has for this project, we find it necessary to briefly explain the singularity of notions that make up this current, highlighting some of the authors that have been part of the process of formation of the term CLIL.

It was in 1994 that Marsh gave his name to the proposal of an applied linguistic stream, which argued that greater success in learning a foreign language was achieved if it was learned through other common subjects. Subsequently, UNICOM, the University of Jyväskylä (Finland) and the Dutch European Platform for Education launched the term CLIL, and from the end of the 1990s until now, there has been no end to the endless educational possibilities provided by this current for the optimum development of foreign language learning.

Since many professionals have been involved in the modelling of the term CLIL, we show some of the definitions given:

"CLIL refers to situations where subjects, or parts of subjects, are taught through a foreign language with dual-focused aims, namely the learning of content, and the simultaneous learning of a foreign language" (Marsh, 1994).

"Integrated Learning of Foreign Languages and other Curriculum Content involves studying subjects such as history or natural sciences in a language other than one's own. CLIL is very beneficial both for learning other languages (French, English, ...) and for subjects taught in those languages. CLIL's emphasis on "problem solving" and "know-how" motivates learners to be able to solve problems and do things even in other languages." (Navés & Muñoz, 2000).

Roldán Tapia (2012) understands that the CLIL approach *"involves a change of instructional medium and a change of instructional method: the new medium is the foreign language through which content is learned, while the new method refers to collaborative, interactive and discovery learning"* (2012, , p. 239-249).

According to Graddol (2006) CLIL could be understood as *"...an approach to bilingual education in which both curriculum content (such as science or geography) and English are taught together. It differs from simple English-medium education in that the learner is not necessarily expected to have the English proficiency required to cope with the subject before beginning study"* (p. 86). In this sense, this idea reinforces our commitment to support students with SLI in bilingual education, so that they can enjoy during the development of the sessions designed from the CLIL approach and with the appropriate adaptation measures.

The fact that the CLIL approach has been developed, shaped and refined over time by different education professionals makes the term increasingly alive and means more than just an educational approach. In the webinar "Ideas for doing CLIL in the ELE classroom", San

Isidro (2018) mention that *"CLIL is not a methodology, because doing CLIL also depends on the methodology of the subject itself to be taught...CLIL is a teaching philosophy"*.

It was Coyle (2007), who based the CLIL approach on four concepts known as the 4 Cs framework:

- Content: Knowledge is learned and specific content of an area is understood.
- Communication: The foreign language is used as a vehicle for communication.
- Cognition: Cognitive skills are developed that relate knowledge formation and language.
- Culture: An approach is made to a cultural context that allows for a broader perspective of the environment and of oneself. (pp. 543-562.)

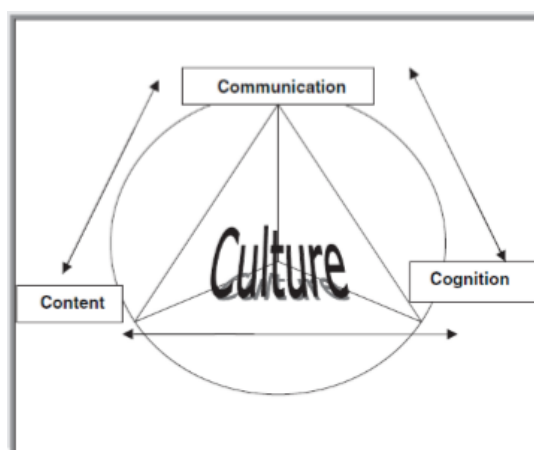


Figure 2: The 4Cs Framework for CLIL

Source: Coyle, D. 2007. Content and Language Integrated Learning: Towards a connected research agenda for CLIL pedagogies. International Journal of Bilingual Education and Bilingualism 10(5): 543-562.

In relation to the 4Cs framework for CLIL proposed by Coyle, D. (2007), we find it interesting and enriching to briefly mention an adaptation made by Del Río & San Isidro (2016) of that 4Cs proposal for the teaching of Spanish as a foreign language, since it can help us to understand a broader perspective of the CLIL approach.

¿CUATRO CES?



Figure 3: Adaptación de las 4Cs para la Enseñanza del Español como Lengua Extranjera

Source: San Isidro, X. (2018) Webinars. Ideas para hacer CLIL en el aula de ELE - Para aprender y enseñar español como lengua extranjera.

Many bilingual education professionals emphasize that the techniques of "Scaffolding" (initially created by W. Bruner in the 70s of the 20th century) are basic tools during the teaching and learning process framed by a CLIL approach. The teacher provides the student with a support from which he can gradually build his own learning and progressively approach new skills, concepts or levels of understanding. Since the learning of contents is carried out through the foreign language, the students require great visual and auditory support, new technologies, ... to achieve an optimal development of the knowledge of contents. Particularly and as far as we are concerned, this support considerably favours the learning of students with SLI, since it helps them to overcome many obstacles related to linguistic competence.

Since the CLIL approach aims to develop students' communicative competence and offer them contexts as close as possible to their reality so that they learn to make use of the foreign language in any situation of their daily lives, teachers must create these spaces and educational resources following a pedagogical practice. According to Scott & Beadle (2014), some conditions for the successful introduction and use of CLIL could be:

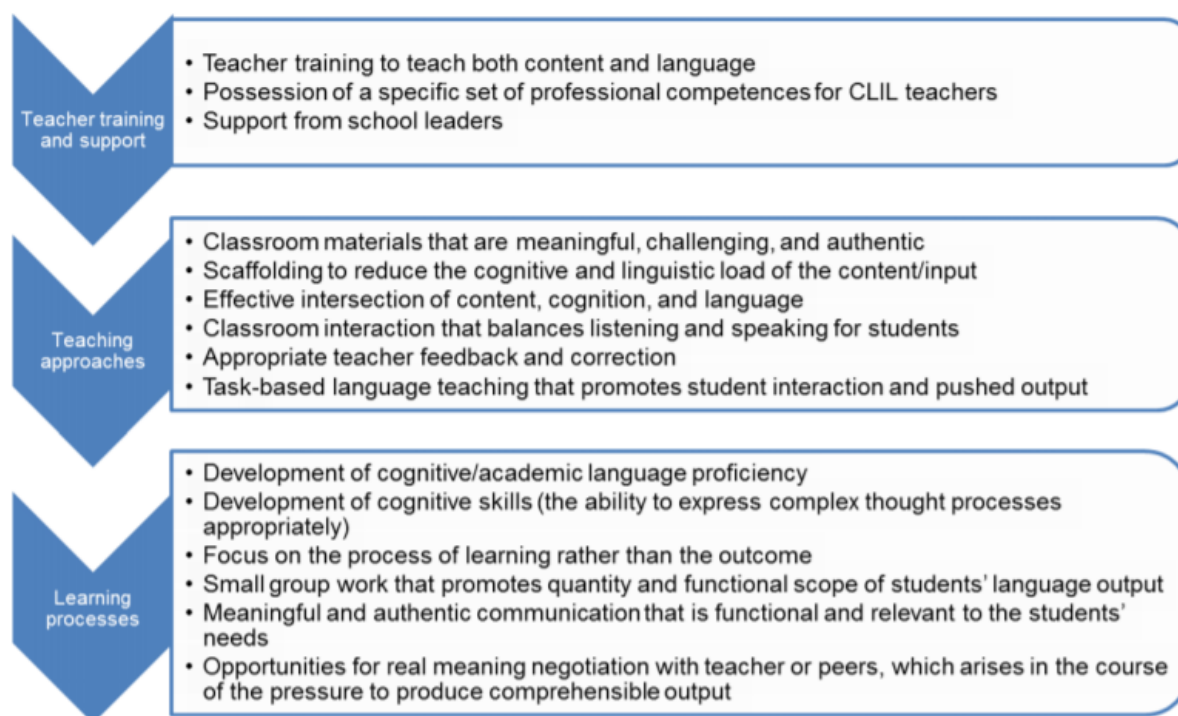


Figure 4: The conditions for the successful introduction and use of CLIL.

Source: Scott, D. & Beadle, S. (2014). *Improving the effectiveness of language learning: CLIL and computer assisted language learning*. European Commission. Education and Training, p.17

As for the great benefits of the CLIL approach, many authors argue that its pedagogical use offers students endless possibilities that enrich them integrally. Gende (2017) points out some advantages of offering pedagogical methodologies within the framework of the CLIL approach:

- ❖ Following the CLIL pedagogical approach, students will simultaneously learn new knowledge about the culture of the foreign language as well as the use of the language itself.
- ❖ The design of the CLIL sessions favours the development of a more fluent intercultural communication due to the new multicultural knowledge they are acquiring.
- ❖ The design of more dynamic activities promotes the motivation of the students and encourages them to make use of their oral and written skills.

- ❖ CLIL activities involve students learning in a completely meaningful context.
- ❖ The pedagogical practices in the CLIL sessions favour the capacity of concentration and the development of critical thinking of the students.
- ❖ The fact of learning contents through a foreign language makes the students develop an enormous spontaneity when expressing themselves orally.

However, creating the necessary spaces and resources to develop CLIL sessions with our students is a great challenge and presents some obstacles along the way that make our educational practice somewhat difficult. Some of the pitfalls perceived and contributed by Pérez Cañado (2013) could be the following:

- ❖ Potential barriers to CLI are mainly faced by teachers, but at the same time they influence students, the overall curriculum, materials, methodology and assessment.
- ❖ CLIL involves a considerable pedagogical investment in innovative teaching practices which have not been experienced by teachers as students, so that they themselves may not be familiar with them. Being a novel project, teachers can apply little of the previous knowledge of others about CLIL.
- ❖ Language qualification by teachers is another obstacle, as there is a lack of support and a shortage of training programmes for teachers.
- ❖ The heavy workload and time involved in developing CLIL materials can make it difficult for teachers to take the effort and initiative to work cooperatively and in an integrated way with other colleagues involved in the project.
- ❖ The own development of materials is a lot of work for the teachers and there may be poor development of teaching resources.
- ❖ As far as evaluation is concerned, there may still be doubts as to the best way of monitoring the student in bilingual subjects, particularly the value given to the language in relation to the content.

In conclusion, we believe it is important to point out a very comforting contribution that encourages us to continue working so that those students who have some kind of language

difficulty, SLI in our case, can enjoy the CLIL classes and manage to learn the foreign language in an integrated way, having at their disposal a wide range of alternative resources:

“In turn, socially, CLIL affords all students, regardless of social class and economic consideration, the opportunity to learn additional languages in a meaningful way. It thus promotes social inclusion and egalitarianism, as the introduction of this approach in mainstream education provides a greater range of students with opportunities for linguistic development which they were previously denied. It can also have a positive impact on at-risk learner types”. Pérez Cañado (2013, p. 17-18).

6. DIDACTIC PROPOSAL

6.1. Justification

Today, Science is a vital tool for understanding the society in which we live and developing responsible attitudes in our relationship with other living beings and the environment.

Through the subject of Natural Sciences we can help students to understand the world around them and to develop the necessary skills to be able to cope with an increasingly technological and scientific changing reality.

In this didactic unit we will work on the materials and their properties, the concept of force, the knowledge of magnetism, the importance of recycling and the responsible use of materials. In the design of each one of the activities, the development of critical thinking skills has been considered indispensable, so that with them spaces and times are created for research and creation of their own learning.

The development of the didactic unit through the CLIL approach allows us to offer to the students the opportunity to learn in a more autonomous and meaningful way, since we make available a great variety of resources totally contextualized in the students' daily life.

6.2. Contextualization

With the main objective of adapting to the different learning styles presented by students in the 2nd year of Primary Education, we have developed each of the activities of the teaching unit based on the following:

- One of the strengths of the class could be its great ability to work as a team. We see in them a great opportunity to learn together from each other and, therefore, collaborative and cooperative work has an important role in the methodology of the activities.
- Consequently, the learning style of the students determines the learning spaces of the class: The arrangement of the tables will be as follows:
 - Students will be seated in groups (six groups of four students each).
 - The teacher's table will be placed at the side of the class, so that the teacher can be among the students and experience the students' learning more closely.
- In order to achieve the maximum development of the student who presents a Specific Language Impairment, a Non-Significant Curricular Adaptation will be made in the subject, so that some non-basic elements of the curriculum are modified. Although this type of adaptation implies changes in the times, activities, methodology, technique and evaluation instruments, it is important to emphasize that the methodology designed in this didactic unit allows the student with SLI to access the curriculum in an easier way. That is to say, the activities have been designed with the main objective that each and every one of the students in the class, with their particular needs, can achieve the objectives.
- The activities establish learning spaces in which the students are the main protagonists of their process, respecting the rhythms of each one of them.
- The design of the activities allows great methodological flexibility to adapt to all the needs that the students may have.
- The student who presents SLI will always be accompanied by the teacher, having at his disposal a wide variety of digital resources that facilitate access to the curriculum.
- Since the didactic unit is developed through the CLIL approach, the vehicle language for learning the content will be English (L2). However, since language should not be a stumbling block to learning, learners with more difficulties will

be allowed to express themselves in their mother tongue when they do not feel confident to communicate through the foreign language.

- Since this is the subject of Natural Sciences, we believe that the presence of more practical than theoretical content is necessary. That is, we will offer students the opportunity to learn from real practical cases and to experience the knowledge itself for themselves. Given the importance that this section deserves, we believe it is interesting to show the following illustration mentioned by Esborn, M. (2017) In it, we can see very clearly that we intend to create spaces in the classroom where students can debate, experiment, analyse, create and apply real knowledge, and subsequently reach a deeper understanding.

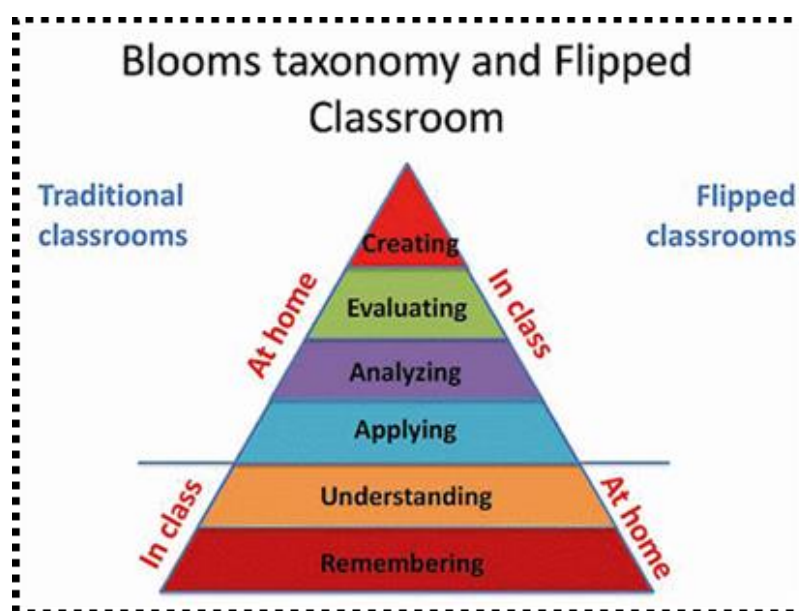


Figure 5: Jan Gulliksen's inverted classroom

Source: Esborn, M. (2017). *Aprendiendo para el futuro: perspectiva. Innovación digital en sociedad y escuela.*

6.3. Objectives

Within the area objectives pertaining to the teaching of Natural Sciences in the Primary Education curriculum, in accordance with the provisions of Decree 97/2015, of 3 March, which establishes the organisation and teaching corresponding to Primary Education in the Autonomous Community of Andalusia, in this unit we will work with the following:

O.CN.1. To use the scientific method to plan and implement simple projects, devices and appliances through observation, hypothesis-building and practical research, in order to draw conclusions that, at the same time, allow reflection on their own learning process.

O.CN.2. To analyse and select information about the elementary properties of certain materials, substances and objects and about environmental facts and phenomena, in order to establish various hypotheses, checking their development through the planning and implementation of projects, experiments and everyday experiences.

O.CN.6. To participate in work groups putting into practice values and attitudes typical of scientific thought, encouraging the entrepreneurial spirit, developing one's own sensitivity and responsibility in the face of individual and collective experiences.

6.4. Competences

In the Order of 17 March 2015, which develops the curriculum for Primary Education in Andalusia, we find that Article 3 states that learning by competencies *"implies that the teaching-learning process based on competencies must be addressed from all areas of knowledge and by the various bodies that make up the educational community. The interdisciplinary and multidisciplinary vision of knowledge highlights the connections between different areas and the contribution of each one of them to the global understanding of the phenomena studied"*.

Since we must create activities through which the students have the possibility of developing each one of the key competencies, the development of them carried out in the most integral and globalized way possible plays a priority roll along the design of the different didactic proposals.

In this way, we analyse the DECREE 97/2015, of 3 March, which establishes the organisation and teaching corresponding to Primary Education in the Autonomous Community of Andalusia, and we relate the achievement indicators worked on in the proposed unit with the different key competences that we want our students to achieve.

ACHIEVEMENT INDICATORS	KEY COMPETENCES							
	CMT	CFL	MST	DIG	LTL	SOC	AUT	CULT
CN.1.5.1 Notes, identifies and describes some materials by their elementary properties: shape, condition, origin, odour, flavour, texture, colour, etc.	X	X	X					
CN.1.5.2 Relates some of the elemental properties of the materials to their uses.	X	X	X					
CN.1.6.4 Conducts simple experiments and prepares texts, presentations and communications as a technique for recording a work plan, communicating the conclusions orally, in writing and in audio-visual format.	X	X	X		X		X	
CN.1.7.2. Identifies, values and shows responsible behaviours of saving, reusing and recycling materials at school, at home and in the environment.	X	X	X		X	X		
CMT - Competence in linguistic communication in the mother tongue CFL - Competence in linguistic communication in foreign languages MST - Competence in mathematics, science and technology DIG - Competence in the use of new technologies	LTL - Competence in learning to learn SOC - Competence in social awareness and citizenship AUT - Competence in autonomous learning and personal initiative CULT - Competence in artistic and cultural awareness							

On the other hand, we also illustrate in a more concrete way how the key competences will be developed through each of the learning standards:

LEARNING STANDARDS	KEY COMPETENCES							
Pupils will be able to:	CMT	CFL	MST	DIG	LTL	SOC	AUT	CULT
Explain the properties of materials.	X	X	X					X
Relate the properties of materials with the uses we make of them.	X	X	X		X			X
Carry out experiments to study the behaviour of materials when exposed to heat or cold.	X	X	X		X			
Identify if changes are reversible or irreversible.	X	X	X		X			
Understand which materials mix together well and which ones do not.	X	X	X					
Observe and understand the concept of force in relation to changes in shape of different objects.	X	X	X					
Observe, identify and explain changes in movement of objects for the application of different forces.	X	X	X	X				
Understand how to recycle and reuse different objects.	X	X		X	X	X	X	X
CMT - Competence in linguistic communication in the mother LTL - Competence in learning to learn								

tongue	SOC - Competence in social awareness and citizenship
CFL - Competence in linguistic communication in foreign languages	AUT - Competence in autonomous learning and personal initiative
MST - Competence in mathematics, science and technology	CULT - Competence in artistic and cultural awareness
DIG - Competence in the use of new technologies	

6.5. Contents

Having chosen the topic of "Materials and forces", the contents that will be worked on throughout the proposed didactic unit are the following:

- Study and classification of some materials by their properties.
- Usefulness of some advances, products and materials for human progress
- Observation of the relationship between forces and movements.
- Reduction of waste, reuse and recycling of objects and substances.

6.6. Timing and planning

The development of the proposed didactic unit is scheduled to be developed for 5 weeks, more precisely, from April 13 to May 13, 2020. Below, we provide the actual temporization integrated in the schedule of the 2nd grade class of Primary Education.

 WEEK 1	MONDAY 13 - April	TUESDAY 14 - April	WEDNESDAY 15 - April	THURSDAY 16 - April	FRIDAY 17 - April
9:00 – 10:00	SPANISH	PHYSICAL EDUCATION	SPANISH	SPANISH	SPANISH
10:00 – 10:45	SOCIAL SCIENCE	RELIGION	SOCIAL SCIENCE	SPANISH	SPANISH
10:45 – 11:30	NATURAL SCIENCE SESSION 1	ART	NATURAL SCIENCE SESSION 2	RELIGION	MUSIC
11:30 – 12:00	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME
12:00 – 13:00	MATHS	MATHS	MATHS	MATHS	PHYSICAL EDUCATION
13:00 – 14:00	ENGLISH	ENGLISH	PHYSICAL EDUCATION	ENGLISH	MATHS

 WEEK 2	MONDAY 20 - April	TUESDAY 21 - April	WEDNESDAY 22 - April	THURSDAY 23 - April	FRIDAY 24 - April
9:00 – 10:00	SPANISH	PHYSICAL EDUCATION	SPANISH	SPANISH	SPANISH
10:00 – 10:45	SOCIAL SCIENCE	RELIGION	SOCIAL SCIENCE	SPANISH	SPANISH
10:45 – 11:30	NATURAL SCIENCE SESSION 3	ART	NATURAL SCIENCE SESSION 4	RELIGION	MUSIC
11:30 – 12:00	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME
12:00 – 13:00	MATHS	MATHS	MATHS	MATHS	PHYSICAL EDUCATION
13:00 – 14:00	ENGLISH	ENGLISH	PHYSICAL EDUCATION	ENGLISH	MATHS

 WEEK 3	MONDAY 27 - April	TUESDAY 28 - April	WEDNESDAY 29 - April	THURSDAY 30 - April	FRIDAY 1 - May
9:00 – 10:00	SPANISH	PHYSICAL EDUCATION	SPANISH	SPANISH	SPANISH
10:00 – 10:45	SOCIAL SCIENCE	RELIGION	SOCIAL SCIENCE	SPANISH	SPANISH
10:45 – 11:30	NATURAL SCIENCE SESSION 5	ART	NATURAL SCIENCE SESSION 6	RELIGION	MUSIC
11:30 – 12:00	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME
12:00 – 13:00	MATHS	MATHS	MATHS	MATHS	PHYSICAL EDUCATION
13:00 – 14:00	ENGLISH	ENGLISH	PHYSICAL EDUCATION	ENGLISH	MATHS

 WEEK 4	MONDAY 4 - May	TUESDAY 5 - May	WEDNESDAY 6 - May	THURSDAY 7 - May	FRIDAY 8 - May
9:00 – 10:00	SPANISH	PHYSICAL EDUCATION	SPANISH	SPANISH	SPANISH
10:00 – 10:45	SOCIAL SCIENCE	RELIGION	SOCIAL SCIENCE	SPANISH	SPANISH
10:45 – 11:30	NATURAL SCIENCE SESSION 7	ART	NATURAL SCIENCE SESSION 8	RELIGION	MUSIC
11:30 – 12:00	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME
12:00 – 13:00	MATHS	MATHS	MATHS	MATHS	PHYSICAL EDUCATION
13:00 – 14:00	ENGLISH	ENGLISH	PHYSICAL EDUCATION	ENGLISH	MATHS

 WEEK 5	MONDAY 11 - May	TUESDAY 12 - May	WEDNESDAY 13 - May	THURSDAY 14 - May	FRIDAY 15 - May
9:00 – 10:00	SPANISH	PHYSICAL EDUCATION	SPANISH	SPANISH	SPANISH
10:00 – 10:45	SOCIAL SCIENCE	RELIGION	SOCIAL SCIENCE	SPANISH	SPANISH
10:45 – 11:30	NATURAL SCIENCE SESSION 9	ART	NATURAL SCIENCE SESSION 10	RELIGION	MUSIC
11:30 – 12:00	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME	BREAKTIME
12:00 – 13:00	MATHS	MATHS	MATHS	MATHS	PHYSICAL EDUCATION
13:00 – 14:00	ENGLISH	ENGLISH	PHYSICAL EDUCATION	ENGLISH	MATHS

We will now describe the development of each of the sessions in further detail:

❖ **1ª SESSION (45 minutes):**

- CONTENTS:
 - ✓ Study and classification of some materials by their properties.
- LEARNING STANDARD:
 - ✓ Explain the properties of materials.
- KEY COMPETENCES:
 - ✓ Competence in linguistic communication in the mother tongue
 - ✎ Competence in linguistic communication in foreign languages
 - ✎ Competence in mathematics, science and technology
 - ✎ Competence in the use of new technologies
 - ✎ Competence in learning to learn
 - ✎ Competence in social awareness and citizenship
 - ✎ Competence in autonomous learning and personal initiative
- MATERIALS:
 - ✓ ICT equipment
 - ✓ School supplies
 - ✓ 2 Hangers
 - ✓ 2 balloons
 - ✓ 12 hula hoops
 - ✓ 6 baskets with a variety of objects
- DEVELOPMENT:
 - 1) As introduction of the new topic, we will start the first session with the “folio giratorio” technique in groups of 4 students.

We played it twice. The first time, each kid on the team will have to write one thing which they believe that it is material. We share all together and discuss them.

Then, each team member will have to write something which they believe that it is immaterial. We share all together and discuss them.
 - 2) Next, we will propose the following question: *“Is the air material or immaterial?”*
“Does it weigh and take up space?”

- 3) After listening to what the students think about the question proposed, we will do the following experiment in groups:

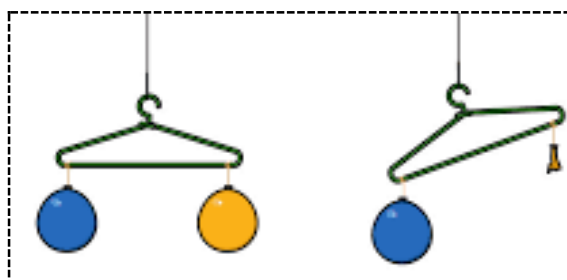


Figure 6: Does the air weigh and take up space?

Source: Aptus. *Comportamiento de la materia y su clasificación*, p. 23

- 4) Subsequently, we will ask the questions above again, with the purpose of receiving different answers related to what students have experienced about the case study and all together will build the new knowledge.
- 5) Before learning the properties of the material and the names of the different materials, we propose the students to do the following activity:

We will give each group 2 hula hoops and a basket with a variety of objects. The students should place the hula hoops on the tables in the proposed shape and try to classify the objects in "soft", "hard" or "both". As a support, the following images will be projected:

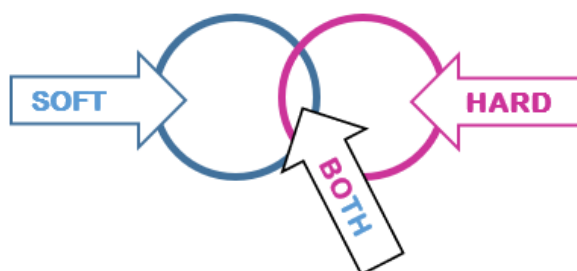


Figure 7: Analysis of soft and hard things

Source: Self-made resource



Figure 8: Soft and hard

Source: © Blueringmedia - Dreamstime.com. Ilustración 63434118. Adjetivos opuestos suaves y difícilmente.

- 6) Finally, we will share the analysis and the classification of the objects carried out by each group.

❖ **2ª SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Study and classification of some materials by their properties.

➤ LEARNING STANDARD:

- ✓ Explain the properties of materials.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ✎ Competence in linguistic communication in foreign languages
- ✎ Competence in mathematics, science and technology
- ✎ Competence in the use of new technologies
- ✎ Competence in learning to learn
- ✎ Competence in social awareness and citizenship
- ✎ Competence in autonomous learning and personal initiative

➤ MATERIALS:

- ✓ ICT equipment
- ✓ School supplies
- ✓ A bowl
- ✓ Water
- ✓ Variety of objects

- ✓ Self-produced visual presentation of the content developed with PowerPoint software

➤ DEVELOPMENT:

- 1) After the introduction of the topic (through the above-described activity), we will carry out the following experiment: we will prepare a bowl of water and experiment whether some objects float or not. In this way, we will explain to the students that each object has different characteristics.
- 2) We will explain the characteristics of the materials: smooth / rough; soft / hard; transparent / opaque; rigid / flexible; waterproof / absorbent; float / sink. As a support, we will make use of a self-produced visual presentation of the content, developed with PowerPoint software (APPENDIX I).
- 3) We will project images of different objects and, in pairs, students will have to discuss the characteristics of each object in relation to those learned. In addition, students will also have the visual support of these terms.
- 4) To finish, we will play a game all together:

“Float or sink?”: http://www.bbc.co.uk/schools/digger/5_7entry/8.shtml

❖ **3ª SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Materials: Properties and characteristics
- ✓ Study and classification of some materials by their properties.

➤ LEARNING STANDARD:

- ✓ Explain the properties of materials.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ✎ Competence in linguistic communication in foreign languages
- ✎ Competence in mathematics, science and technology
- ✎ Competence in learning to learn
- ✎ Competence in social awareness and citizenship
- ✎ Competence in autonomous learning and personal initiative

➤ MATERIALS:

- ✓ ICT equipment
- ✓ School supplies
- ✓ 6 envelopes
- ✓ Flash cards with of objects
- ✓ Material classification worksheet

➤ **DEVELOPMENT:**

- 1) We will listen and learn a song about the materials:
“Materials Song”. <https://www.youtube.com/watch?v=WinXpFTempo>
- 2) Students will be divided into groups of 4. Each group will receive 12 flash cards, with pictures of different objects and 6 envelopes. In each envelope, students should write the name of each group of materials (paper, plastic, metal, wood, fabric and glass) and then classify each of the flash cards inside the corresponding envelopes. Each group will then give their envelopes to the group on the right to open and evaluate whether the peers have been able to analyse each object well.
- 3) The students will then work individually and autonomously:
 Students should think of objects that they use in their daily lives and they will write them down on a material classification worksheet (APPENDIX II).
 Once finished, we will share among all the answers and the students will correct their card with red pencil.
- 4) At the end of the session, we will play to a guessing game in pairs: "I spy something made of..."

4ª SESSION (45 minutes):

➤ **CONTENTS:**

- ✓ Changes and transformations in materials

➤ **LEARNING STANDARD:**

- ✓ Carry out experiments to study the behaviour of materials when exposed to heat or cold.

➤ **KEY COMPETENCES:**

- ✓ Competence in linguistic communication in the mother tongue
- ↗ Competence in linguistic communication in foreign languages

- ✍ Competence in mathematics, science and technology
- ✍ Competence in learning to learn
- ✍ Competence in social awareness and citizenship
- ✍ Competence in autonomous learning and personal initiative

➤ MATERIALS:

- ✓ ICT equipment
- ✓ School supplies
- ✓ A Plate
- ✓ A candle
- ✓ Water
- ✓ Textbook: ByMe - NATURAL SCIENCE 2 / PUPIL'S BOOK

➤ DEVELOPMENT:

- 1) We will explain to students that matter can be in a solid, liquid or gaseous state and that in order to pass from one state to another it is necessary to be hot or cold. We will give some examples related to real life situations of the students, using the following picture as a visual support.

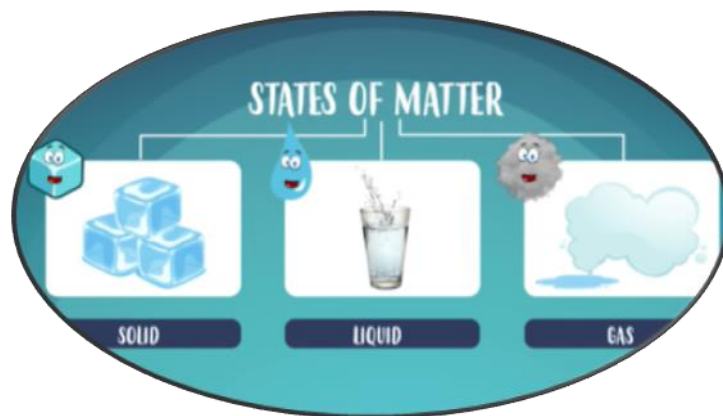


Figure 9: States of water

Source: Happy Learning English. States of Matter | Educational Videos for Kids (2019)

- 2) Once we know the main concept, we will watch the following video about the states of matter.

States of Matter | Educational Videos for Kids:

<https://www.youtube.com/watch?v=DE3LCPfP8N8>

3) We will encourage students to complete activities 1 and 2 on page 74 of the textbook (ByMe - NATURAL SCIENCE 2 / PUPIL'S BOOK): Students will do activity 1 in pairs and activity 2, first individually, and then they will correct the activity in pairs (APPENDIX III).

4) Once they finished, we will do the following experiment:

How water changes from a liquid to a vapor state: We will put a candle on a plate with water. Then, we will light the candle and quickly put the glass on the top. The candle will probably go out because it has no oxygen, so it will take all the oxygen in the water and evaporate.

❖ **5ª SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Changes and transformations in materials
- ✓ Observation of the relationship between forces and movements.

➤ LEARNING STANDARD:

- ✓ Identify if changes are reversible or irreversible.
- ✓ Observe and understand the concept of force in relation to changes in shape of different objects.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ↪ Competence in linguistic communication in foreign languages
- ↪ Competence in mathematics, science and technology
- ↪ Competence in the use of new technologies
- ↪ Competence in learning to learn
- ↪ Competence in autonomous learning and personal initiative

➤ MATERIALS:

- ✓ ICT equipment
- ✓ Textbook: ByMe - NATURAL SCIENCE 2 / PUPIL'S BOOK
- ✓ School supplies
- ✓ Variety of objects
- ✓ 6 swimsuits

- ✓ 6 tennis balls
- ✓ 6 Marble balls
- ✓ 6 paper clips

➤ DEVELOPMENT:

- 1) We will explain to the students that we can make things change their shape by using force. Then, we will give a little demonstration:

We will use force with different objects and show that we can bend, stretch or squeeze. As we apply the force, we will ask students if they think the changes are reversible or irreversible.

- 2) Next, we will offer each group 4 objects (swimsuit, tennis ball, marble ball and paper clip) so that they can experience together the consequences of applying force to each of them and we will encourage them to carry out the activity proposed in the textbook individually (Textbook: ByMe - NATURAL SCIENCE 2 / PUPIL'S BOOK - page 75, activity 1).
- 3) Once they have finished, we will correct the activity all together with the support of the digital board.

Match the words to the pictures.

squeeze
does not change
bend
stretch









✓ Check answers
↺ Try again
✓ Check
🔍 See all

Figure 10: States of water

Source: Digital Textbook: ByMe - NATURAL SCIENCE 2 / PUPIL'S BOOK

❖ **6^a SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Observation of the relationship between forces and movements.

➤ LEARNING STANDARD:

- ✓ Observe, identify and explain changes in movement of objects for the application of different forces.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ✎ Competence in linguistic communication in foreign languages
- ✎ Competence in mathematics, science and technology
- ✎ Competence in the use of new technologies
- ✎ Competence in learning to learn
- ✎ Competence in social awareness and citizenship
- ✎ Competence in autonomous learning and personal initiative
- ✎ Competence in artistic and cultural awareness

➤ MATERIALS:

- ✓ ICT equipment
- ✓ School supplies
- ✓ White magnetic board
- ✓ Box with magnetic letters

➤ DEVELOPMENT:

- 1) We will start the session by explaining to the students that pull and push are forces: we pull thing towards us and push them away from us to make them move.
- 2) We will encourage students to play a game in pairs to experience the power of the forces:
 - i. PUSHING:
 - Pairs will squat on their backs and push each other until one knocks the other down.
 - Face to face, the students will push the partner by the palms of the hands and try to take him/her to a certain place. First standing and then squatting.
 1. PULL:
 - Face to face, holding hands, the students will try to pull towards each other, standing or squatting.
- 3) Next, we will explain to students that there is another type of force called magnetism: some objects can move through a magnet.

- 4) To better understand how a magnet works, we will watch the following video:
Magnetism | The Dr. Binocs Show | Educational Videos For Kids:
<https://www.youtube.com/watch?v=yXCeuSiTOug>
- 5) To finish, we will make a quiz to learn some of the objects that are attracted by a magnet: Each team will be given a white magnetic board and a box with magnetic letters. On the board, pictograms will be projected with the names of the objects that are attracted by the magnets and the first team that manages to form the name of 3 objects with the letters is the winner.

❖ **7^a SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Observation of the relationship between forces and movements.
- ✓ Changes and transformations in materials
- ✓ Mixtures

➤ LEARNING STANDARD:

- ✓ Observe, identify and explain changes in movement of objects for the application of different forces.
- ✓ Understand which materials mix together well and which ones do not.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ↪ Competence in linguistic communication in foreign languages
- ↪ Competence in mathematics, science and technology
- ↪ Competence in learning to learn
- ↪ Competence in social awareness and citizenship
- ↪ Competence in autonomous learning and personal initiative

➤ MATERIALS:

- ✓ Worksheet “LET’S EXPERIMENT IN GROUP!”
- ✓ School supplies
- ✓ 24 clear plastic cups
- ✓ Vinegar
- ✓ Oil

- ✓ Salt
- ✓ Sesame
- ✓ Magnet
- ✓ 6 bowls
- ✓ Water
- ✓ Plastic
- ✓ Wood
- ✓ Cloth
- ✓ Iron
- ✓ Glass
- ✓ Cork

➤ DEVELOPMENT:

2) We will go over everything we've learned before: We will encourage students to share what they have enjoyed learning in previous sessions, asking questions to capture their interest and desire to continue participating.

3) In groups, we will carry out some experiments and the students will write down the results of the mixing, the magnet and the floatability on the worksheet “LET'S EXPERIMENT IN GROUP!” (APPENDIX IV).

Every two teams will work on one of the experiments and after a while, we will change them. The teams will rotate the following experiments:

- A. The students will mix the following substances with water, using each child a clear plastic cup so they can see what is happening: vinegar, oil, salt, and sesame. They will do this one at a time.
- B. They will approach a magnet with different objects and write down which ones are attracted by the magnet and which ones are not.
- C. Floatability: They will put the following materials in a bowl with water and write down if they float or sink: plastic, wood, cloth, iron, glass, cork.

4) Once finished, we will ask the students questions about the experiments carried out and we will correct the worksheet they must have filled in as a group.

❖ **8ª SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Reduction of waste, reuse and recycling of objects and substances.
- LEARNING STANDARD:
 - ✓ Understand how to recycle and reuse different objects.
- KEY COMPETENCES:
 - ✓ Competence in linguistic communication in the mother tongue
 - ✎ Competence in linguistic communication in foreign languages
 - ✎ Competence in mathematics, science and technology
 - ✎ Competence in learning to learn
 - ✎ Competence in social awareness and citizenship
 - ✎ Competence in autonomous learning and personal initiative
- MATERIALS:
 - ✓ ICT equipment
 - ✓ School supplies
 - ✓ 24 images of garbage products with a magnet
- DEVELOPMENT:
 - 1) We see a video about the importance of recycling:
Reduce, Reuse and Recycle, to enjoy a better life | Educational Video for Kids:
https://www.youtube.com/watch?v=OasbYWF4_S8
 - 2) We will project the images of 4 containers on the digital blackboard (glass, plastic, paper and organic) and give each student an image of garbage products with a magnet.
We will encourage the students to participate and share in which container they would like to throw their garbage, followed by the phrase: "*The newspaper goes in the blue container*", for example.
 - 3) We will listen and learn the following song ---Reduce Reuse Recycle Song for Kids | Earth Day Songs for Children | The Kiboomers:
<https://www.youtube.com/watch?v=AOvcW8l3RzE>

❖ **9ª SESSION (45 minutes):**

- CONTENTS:
 - ✓ Usefulness of some advances, products and materials for human progress
 - ✓ Reduction of waste, reuse and recycling of objects and substances.

➤ LEARNING STANDARD:

- ✓ Understand how to recycle and reuse different objects.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ↪ Competence in linguistic communication in foreign languages
- ↪ Competence in mathematics, science and technology
- ↪ Competence in the use of new technologies
- ↪ Competence in learning to learn
- ↪ Competence in social awareness and citizenship
- ↪ Competence in autonomous learning and personal initiative
- ↪ Competence in artistic and cultural awareness

➤ MATERIALS:

- ✓ ICT equipment
- ✓ School supplies

➤ DEVELOPMENT:

- 1) We will start this session listening and singing the song learnt in the last session:

Reduce Reuse Recycle Song for Kids | Earth Day Songs for Children | The Kiboomers: <https://www.youtube.com/watch?v=AOvcW8l3RzE>

- 2) As a cooperative work, we will propose the following challenge to the students:

“Are you able to create a real game with recycled materials?” How would you do it?”

...

- a) We will give some minutes to the students to think (in groups) the best way to build a game and the main materials which they consider necessary.
- b) After that little time, we will propose to the students: *“Would you like to make a game with recycled materials?”*
- c) We will project some pictures on the whiteboard (APPENDIX V) in which the students will see different games made from recycled materials. Each group should take the decision of choosing which game want to make.
- d) Once all the group members agree about the game they want to make, the students should take note of the following details:
 - Our game is called...
 - The types of materials that we use are... (plastic, paper, metal, wood...)

- Some characteristics of the materials are... (smooth/ rough; soft/ hard; transparent/ opaque; rigid / flexible; waterproof / absorbent; float / sink)
- This game has got recycled materials like... (bottle of water, card, newspapers, lid, cork...)
- List of recycled materials they need and the student responsible of bringing each one for the next session (13 of May)
- School supplies

All the students' work will be supervised by the teacher at all times, with the purpose of guiding the students in their learning, help them with anything they need and give a piece of advice about the most effective elaboration of the game. On the other hand, the teacher will make sure that the choice of each group will be different to the rest ones.

- e) Students will have to collect all the recycled materials from home, so that the next session (13 of May) they can have everything ready to make their game chosen.

❖ **10ª SESSION (45 minutes):**

➤ CONTENTS:

- ✓ Usefulness of some advances, products and materials for human progress
- ✓ Reduction of waste, reuse and recycling of objects and substances.

➤ LEARNING STANDARD:

- ✓ Explain the properties of materials.
- ✓ Relate the properties of materials with the uses we make of them.
- ✓ Identify if changes are reversible or irreversible.
- ✓ Observe and understand the concept of force in relation to changes in shape of different objects.
- ✓ Observe, identify and explain changes in movement of objects for the application of different forces.
- ✓ Understand how to recycle and reuse different objects.

➤ KEY COMPETENCES:

- ✓ Competence in linguistic communication in the mother tongue
- ↪ Competence in linguistic communication in foreign languages

- ✍ Competence in mathematics, science and technology
- ✍ Competence in the use of new technologies
- ✍ Competence in learning to learn
- ✍ Competence in social awareness and citizenship
- ✍ Competence in autonomous learning and personal initiative
- ✍ Competence in artistic and cultural awareness

➤ **MATERIALS:**

- ✓ ICT equipment
- ✓ Relaxing instrumental music
- ✓ Recycled materials

➤ **DEVELOPMENT:**

From the very beginning of the session, each group will start to create the game with the recycled materials, having pictures of how to make their games as support. All the students' work will be supervised by the teacher at all times.

When all the groups have finished, each of them will show and explain the game to the rest of the class. On the whiteboard, the students will have a guide to support their oral presentation.

As the group is integrated by 4 members, one of each will say a sentence:

- MEMBER 1: Our game is called...
- MEMBER 2: The types of materials that we use are... (plastic, paper, metal, wood...)
- MEMBER 3: Some characteristics of the materials are... (smooth/ rough; soft/ hard; transparent/ opaque; rigid / flexible; waterproof / absorbent; float / sink)
- MEMBER 4: This game has got recycled materials like... (bottle of water, card, newspapers, lid, cork...)
- ALL MEMBERS: We show you how to play... (brief demonstration of the game)

❖ **10ª SESSION (45 minutes):**

Students will work the writing test of the unit individually. (APPENDIX VI).

6.7. Methodology

As for the methodology used to carry out the proposed teaching unit, we can say that throughout the development of the topic, we will take into account a set of essential

educational practices in the classroom, which favours all students to extract the best fruit of the CLIL approach and create the best learning environment for them. Some of these could be:

- The student will be understood as the main protagonist of his own learning. In this way, the student will be building his learning through a wide range of dynamic activities and games that will help him reach his maximum potential.
- The transmission of motivation to the students will always be present, so that they can actively and continuously participate in each of the proposed activities and enjoy the process of their own learning.
- Since each student has his or her own learning style, the teacher will be completely flexible, adapting to the needs of the students at all times and transmitting the desire to learn without demanding more from the students than they are capable of giving.
- The use of audio-visual material will be key to facilitating access to content throughout the students' learning process. This resource will especially benefit students with SLI.
- Although the vehicle language is English, it will be possible to use Spanish in those moments when the student with SLI finds it very difficult to access the developed content.
- Since cooperative work is highly conducive to learning progress and gives rise to natural communication situations between them, activities involving cooperative learning will be designed.
- The methodology focused from a cognitive aspect will be based on the construction of meanings through thinking and reasoning.
- Scaffolding activities will be designed in which different structures and support strategies are developed so that the student can build autonomously and gradually his own learning.
- During the development of the different sessions, the teacher will create circumstances that encourage students to think and be creative in their own answers to specific questions related to the topic. In other words, students' curiosity about the subject will always be aroused.
- Throughout the development of the didactic unit, a continuous evaluation will be carried out, in order to make small modifications as adapted as possible to the students, in case the teacher considers it appropriate.

6.8. Materials and resources

During the development of each of the sessions, we will make use of a wide variety of educational materials and resources with the aim that the students manage to build their own learning, respecting their capacity for autonomy as much as possible.

The material resources involved in this didactic proposal can be of various types:

- Printed resources:
 - ✓ Educational magazines
 - ✓ Book "Natural Science 2 Learn Together. ByME. MacMillan Education. Edelvives. (2019)
 - ✓ Review of documents:
 - Orden del 28 de junio de 2011, por la que se regula la enseñanza bilingüe en los centros docentes de la Comunidad Autónoma de Andalucía. Boletín Oficial de la Junta de Andalucía. Sevilla, 12 de julio de 2011, núm. 135, pp. 6-19.
 - Orden del 5 de abril de 2000, por la que se aprueba el Currículo Integrado para la Educación Infantil y la Educación Primaria previsto en el Convenio entre el Ministerio de Educación y Cultura y el Consejo Británico en España. Boletín Oficial del Estado.
 - DECRETO 97/2015, de 3 de marzo, por el que se establece la ordenación y las enseñanzas correspondientes a la Educación Primaria en la Comunidad Autónoma de Andalucía.
- Audio-visual Resources:
 - ✓ Explanatory videos
 - ✓ Educational songs related to the topic
 - ✓ Variety of images associated with the unit's vocabulary
 - ✓ Digital flash cards
- Computer Resources:
 - ✓ Review of websites as a source of information
 - ✓ Using the PowerPoint program

- ✓ Communication networks
- ✓ Interactive Whiteboard
- ✓ Computer
- Others:
 - ✓ English - Spanish/ Spanish - English dictionary
 - ✓ Basic school materials
 - ✓ Art education materials

Particularly, some of the resources which could be offered throughout the development of the didactic unit to facilitate the process of teaching and learning of children with Specific Language Impairment, SLI, will be:

- ✓ Mental maps (popplet, gocongr)
- ✓ Text readers (Irakurle, Textloud. Claroread)
- ✓ Flashcards (gocongr)
- ✓ Speech recognition / voice typing (Google, Microsoft)
- ✓ Organize ideas (padlet, Genial.ly)
- ✓ Learning tools (starfall, h5p, quizlet, kahoot)

6.9. Cross-curricular topics

Since the activities developed throughout the unit are characterized by a very practical value and remain closely linked to real situations that students may experience in their day-to-day lives, we find it important to work in a transversal way on aspects of ethics and values that can facilitate the development of "Competence in Social Awareness and Citizenship".

In this sense, through the different proposals we invite our students to:

- Develop the capacity for criticism.
- Be responsible with the reuse of materials and recycling.
- How can we take care of the things we have.
- Understand the importance of reusing and recycling for the well-being of the environment and human beings.

This transversal learning could lead us to another one that requires a greater commitment: students will have the opportunity to develop their entrepreneurial capacity, creating proposals of ideas and their own solutions to problems of real-world situations.

On the other hand, respect, equal opportunities and fellowship will be key values throughout the development of the unit. Students will not only experience the importance of the above-mentioned values when they have to work in groups and need to work cooperatively, but the simple existence of diversity in the classroom will help students to learn from each other, to develop empathy, patience, friendship and respect for others and for each other's learning rhythms.

6.10. Curricular integration: interdisciplinary approach

In order to develop a proposal for an Integrated Curriculum, we have carried out some research related to it and have considered the Order of April 5, 2000, approving the Integrated Curriculum for Pre-school and Primary Education foreseen in the Agreement between the Ministry of Education and Culture and the British Council in Spain.

TIMING-PLANNING: 13 APRIL – 13 MAY 2020					GRADE 2
TOPIC: MATERIALS AND FORCES					
NATURAL SCIENCE	CONTENTS			COMMUNICATIVE ASPECTS	
	• Study and classification of some materials by their properties. • Usefulness of some advances, products and materials for human progress • Observation of the relationship between forces and movements. • Reduction of waste, reuse and recycling of objects and substances.			 READING  SPEAKING  WRITING  LISTENING  BODY LANGUAGE	
	COGNITIVE TASKS			CULTURAL ASPECTS	
	Knowledge	X	Analysis	X	Ways of recycling in Spain.
	Comprehension	X	Evaluation	X	
	Application	X	Creativity	X	
	Synthesis	X			
	OBJECTIVES			OTHER COMPETENCES	
	- Reutilizar materiales para construir juguetes u otros objetos de utilidad.			CMT; CFL; MST; DIG; SOC; AUT; CULT; LTL	
	DIVERSITY: Non-significant Curricular Adaptation applied to the student with SLI: The appropriate modifications will be made in times, activities, methodology, techniques and evaluation instruments.				
TASK: Create a game with recycled materials.					
ASSESSMENT	APPRAISAL CRITERIA		Feedback Direct observation		
	ASSESSMENT CRITERIA		To know the properties of the materials and to be able to compare some materials with others. Appreciating the importance of recycling.		

ENGLISH		CONTENTS	COMMUNICATIVE ASPECTS																
		- VOCABULARY: Wood, plastic, clay, Straw, bricks, paper, fibres, glass, leather, cotton, and metals. - Recognise vocabulary and structures for speaking English. - Story of "The Three Little Pigs"	 READING  SPEAKING  WRITING  LISTENING  BODY LANGUAGE																
		COGNITIVE TASKS	CULTURAL ASPECTS																
		<table border="1"> <tr> <td>Knowledge</td><td>X</td><td>Analysis</td><td>X</td></tr> <tr> <td>Comprehension</td><td>X</td><td>Evaluation</td><td></td></tr> <tr> <td>Application</td><td>X</td><td>Creativity</td><td>X</td></tr> <tr> <td>Synthesis</td><td></td><td></td><td></td></tr> </table>	Knowledge	X	Analysis	X	Comprehension	X	Evaluation		Application	X	Creativity	X	Synthesis				Folktales as a learning experience.
Knowledge	X	Analysis	X																
Comprehension	X	Evaluation																	
Application	X	Creativity	X																
Synthesis																			
		OBJECTIVES	OTHER COMPETENCES																
		- To reinforce the concepts related to the didactic unit of Natural Science. - Practice oral and written vocabulary related to types of materials, adjectives and comparatives along with expressions related to recycling.	CMT; CFL; MST; DIG; SOC; AUT; CULT; LTL																
DIVERSITY: Non-significant Curricular Adaptation applied to the student with SLI. The appropriate modifications will be made in times, activities, methodology, techniques and evaluation instruments.																			
TASK: To recreate the scenes and tell the story of "The Three Little Pigs".																			
ASSESSMENT	APPRAISAL CRITERIA	Feedback Direct observation																	
	ASSESSMENT CRITERIA	Understand the global sense of history and the value of work well done as a moral of history. Perform the final task satisfactorily and clearly set out with a proper pronunciation.																	

SPANISH		CONTENTS	COMMUNICATIVE ASPECTS																
		- Story of "The Three Little Pigs" - Basic rules for writing an essay.	 READING  SPEAKING  WRITING  LISTENING  BODY LANGUAGE																
		COGNITIVE TASKS	CULTURAL ASPECTS																
		<table border="1"> <tr> <td>Knowledge</td><td>X</td><td>Analysis</td><td>X</td></tr> <tr> <td>Comprehension</td><td>X</td><td>Evaluation</td><td></td></tr> <tr> <td>Application</td><td>X</td><td>Creativity</td><td>X</td></tr> <tr> <td>Synthesis</td><td></td><td></td><td></td></tr> </table>	Knowledge	X	Analysis	X	Comprehension	X	Evaluation		Application	X	Creativity	X	Synthesis				Folktales as a learning experience.
Knowledge	X	Analysis	X																
Comprehension	X	Evaluation																	
Application	X	Creativity	X																
Synthesis																			
		OBJECTIVES	OTHER COMPETENCES																
		- To develop linguistic and non-linguistic strategies - To reinforce the concepts related to the didactic unit of Natural Science. - To promote the understanding of oral texts using illustrations and oral expression. - To expand vocabulary related to environmental care and knowledge of the materials used in our daily lives.	CMT; CFL; MST; DIG; SOC; AUT; CULT; LTL																
DIVERSITY: Non-significant Curricular Adaptation applied to the student with SLI. The appropriate modifications will be made in times, activities, methodology, techniques and evaluation instruments.																			
TASK: To invent, write and tell an alternative ending for the story of "The Three Little" Pigs.																			
ASSESSMENT	APPRAISAL CRITERIA	Feedback Direct observation																	
	ASSESSMENT CRITERIA	Understand the global sense of history and the value of work well done as a moral of history.																	

PHYSICAL EDUCATION	CONTENTS				COMMUNICATIVE ASPECTS		
	- VOCABULARY: Wood, plastic, clay, Straw, bricks, paper, fibres, glass, leather, cotton, and metals. - Performing the play: working on the intonation, body expression and preparation of the scenery necessary for the performance. - Story of “The Three Little Pigs”					READING	
						SPEAKING	
						WRITING	
						LISTENING	
						BODY LANGUAGE	
	COGNITIVE TASKS				CULTURAL ASPECTS		
	Knowledge	X	Analysis	X	Folktales as a learning experience		
	Comprehension	X	Evaluation	X			
	Application	X	Creativity	X			
	Synthesis						
	OBJECTIVES				OTHER COMPETENCES		
	- To reinforce the concepts related to the didactic unit of Natural Science. - Participate in dialogues, games and role-plays				CMT; CFL; MST; DIG; SOC; AUT; CULT; LTL		
DIVERSITY: Non-significant Curricular Adaptation applied to the student with SLI: The appropriate modifications will be made in times, activities, methodology, techniques and evaluation instruments.							
TASK: To create a theatre and perform in groups the story of "The Three Little Pigs".							
ASSESSMENT	APPRAISAL CRITERIA		Feedback Direct observation				
	ASSESSMENT CRITERIA		Perform the play with proper intonation and pronunciation.				

ART EDUCATION	CONTENTS				COMMUNICATIVE ASPECTS	
	- VOCABULARY: Wood, plastic, clay, Straw, bricks, paper, fibres, glass, leather, cotton, and metals. - Types of materials - Physical properties of materials - Steps to follow to make a pop-up book. - Story of “The Three Little Pigs”				 READING  SPEAKING  WRITING  LISTENING  BODY LANGUAGE	
	COGNITIVE TASKS				CULTURAL ASPECTS	
	Knowledge	X	Analysis	X	Folktales as a learning experience.	
	Comprehension	X	Evaluation			
	Application	X	Creativity			
	Synthesis					
	OBJECTIVES				OTHER COMPETENCES	
	To reinforce the concepts related to the didactic unit of Natural Science.				CMT; CFL; MST; DIG; SOC; AUT; CULT; LTL	
	DIVERSITY: Non-significant Curricular Adaptation applied to the student with SLI: The appropriate modifications will be made in times, activities, methodology, techniques and evaluation instruments.					
	TASK: Create a pop-up book with recycled materials about some scenes of the story of "The Three Little Pigs".					
ASSESSMENT	APPRAISAL CRITERIA			Feedback Direct observation		
	ASSESSMENT CRITERIA			Perform the final task satisfactorily and explain clearly with proper pronunciation.		

6.11. Evaluation

In order to develop a comprehensive and equitable evaluation process, we take into account the Order of June 28, 2011, which regulates bilingual education in schools in the Autonomous Community of Andalusia. Particularly, section b of article 8 (organisation and requirements for access) mentions:

“En la evaluación de las áreas, materias o módulos profesionales no lingüísticos primarán los currículos propios del área, materia o módulo profesional sobre las producciones lingüísticas en la L2. Las competencias lingüísticas alcanzadas por el alumnado en la L2 serán tenidas en cuenta en la evaluación del área, materia o módulo profesional no lingüístico, en su caso, para mejorar los resultados obtenidos por el alumnado, de acuerdo con los criterios de evaluación definidos en el proyecto educativo”.

Henceforth, we provide a table summarizing the characteristics of the evaluation we will carry out and the evaluation instruments used in the process.

EVALUATION	TYPE	WHEN	HOW
ASSESSMENT	FORMATIVE	During the teaching and learning process	✓ Daily recording of direct observations ✓ Application activities ✓ Continuous feedback ✓ Self- assessment rubric ✓ Teacher assessment rubric ✓ Cooperative work rubric (student) ✓ Cooperative work rubric (teacher)
	SUMMATIVE	At the end of the didactic unit	✓ Writing test ✓ Oral test for the student with SLI, if necessary
EVALUATION			Final Student's Learning rubric

On the other hand, some specific aspects to be considered during the assessment process of the student with Specific Language Statement could be:

- Give the student's family the minimum objectives and work collaboratively with them.
- Offer to the student a summary sheet which integrates all the contents we would like him to know.
- Consider the notebook or daily task as a tool to evaluate the knowledge that the student is acquiring.
- In all those activities which must be carried out in cooperative work, make sure the student feels comfortable with his peers and the group is suitable to boost the student's learning.
- Add visual clues, like drawings and pictograms, in those writing activities which must be done individually, such as the worksheets and the unit test.
- In case of spelling errors in the writing activities, do not subtract marks for that reason.
- Adapt the unit test statements to L1.
- In case of the student gets block because he does not feel comfortable doing the writing task, we should offer him the possibility of adapted oral activities at any times.

Then, we provide the self- assessment rubrics, the teacher assessment rubrics, the cooperative work rubric (for the student) and cooperative work rubric (for the teacher). All these rubrics will be completed at the end of the session in which the learning has been worked and the teacher will always guide the way to the assessment process.

EVALUATE YOUR LEARNING!				
STUDENT	I know the properties of materials and the uses we make of them.			
TEACHER	The student knows the properties of materials and the uses we make of them.			

EVALUATE YOUR LEARNING!				
STUDENT	I know which materials mix together well and which ones do not.			
TEACHER	The student knows which materials mix together well and which ones do not.			

EVALUATE YOUR LEARNING!				
STUDENT	I know if changes are reversible or irreversible.			
TEACHER	The student knows if changes are reversible or irreversible.			

EVALUATE YOUR LEARNING!				
STUDENT	I know what happens when things get hot and cold.			
TEACHER	The student knows what happens when things get hot and cold.			

EVALUATE YOUR LEARNING!				
STUDENT	I know materials that change or do not change shape.			
TEACHER	The student knows materials that change or do not change shape.			

EVALUATE YOUR LEARNING!				
STUDENT	I know about the changes in movement of objects when I apply different forces.			
TEACHER	The student knows about the changes in movement of objects when I apply different forces.			

EVALUATE YOUR LEARNING!				
STUDENT	I know how to recycle and reuse different objects.			
TEACHER	The student knows how to recycle and reuse different objects.			

EVALUATE YOUR COOPERATIVE LEARNING!				
SELF-EVALUATION	I worked well with my group.			
	I waited my turn to speak.			
	I listened to the rest of the group members.			
	I asked for help when I needed it.			

EVALUATE YOUR COOPERATIVE LEARNING!				
GROUP EVALUATION	We all contributed to the project.			
	We shared our ideas and listened to each other.			
	We respected each other's opinions.			
	We solved any problems we had effectively.			
	We all helped to make the game with the recycled materials.			
	We finished our task on time.			
	We all enjoyed working together.			

On the other hand, we provide a proposal for a rubric to evaluate the “final student's learning”. For the elaboration of the same, we have thought it important to frame the evaluation criteria in the classical knowledge that is integrated within the competence-based learning approach proposed by Carrillo, A. and Alvarado, J. A. (2017).

FINAL STUDENT'S LEARNING RUBRIC				
Competences	EVALUATION CRITERIA	ALWAYS	SOMETIMES	NEVER
“SABER HACER”	Observe, identify, differentiate and classify some materials according to their properties. (14,3%)			
	Plan and carry out simple experiments to study the behaviour of materials when exposed to heat. (14,3%)			

	Make simple mixtures with everyday components. (14,3%)			
	Recognise the visible effects of forces on objects and materials. (14,3%)			
“SABER PENSAR”	Understand the importance of recycling in order to protect the environment. (14,3%)			
“SABER SER”	Show responsibility for personal work. (14,3%)			
“SABER CONVIVIR”	Show responsibility for teamwork. (14,3%)			

6.12. Reinforcement and extension activities

Throughout the development of the session, the teacher will always accompany the student with SLI and guide him in the learning process. Since the student with SLI has difficulties in understanding and writing, the student will have a tablet which will facilitate the understanding of the knowledge through pictograms and programs developed for the stimulation of written language. In view of the difficulties of reading in a foreign language, we will make available a program of text readers, such as Irakurle, Textlou and Claroread.

In addition, some audio-visual resources will be offered to families, in order to work collaboratively in the student's learning.

Other resources that can facilitate the learning of the student with Specific Language Impairment, can be:

- Flashcards (gocongr)

- Mental maps (popplet, gocongr)
- Speech recognition / voice typing (Google, Microsoft)
- Learning tools (starfall, h5p, quizlet, kahoot)
- Organize ideas (padlet, Genial.ly)

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9. APPENDICES

APPENDIX I

POWERPOINT PRESENTATION: CHARACTERISTICS OF THE MATERIALS:

SLIDE 1:

Smooth or rough?



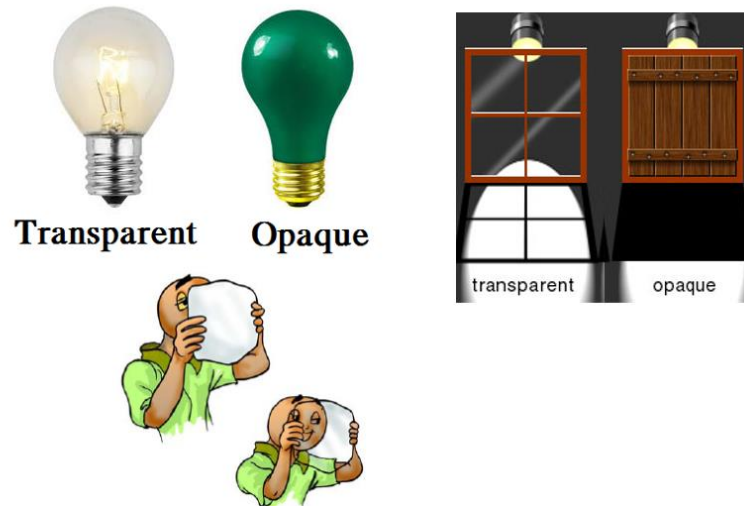
SLIDE 2:

Hard or soft?



SLIDE 3:

Transparent or opaque?



SLIDE 4:

Rigid or flexible?



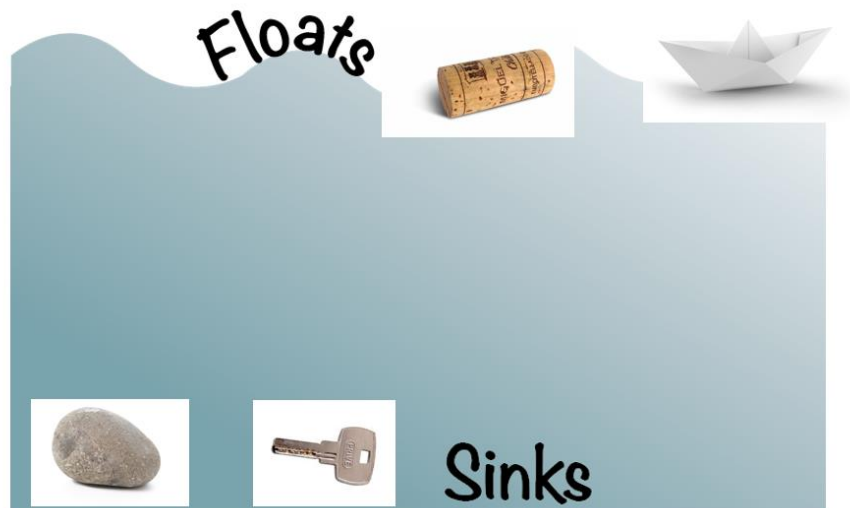
SLIDE 5:

Waterproof or absorbent?



SLIDE 6:

Floats or sinks?



APPENDIX II

MATERIAL CLASSIFICATION WORKSHEET:

Name: _____ Number: _____

What's made of...?

Glass

Metal

Wood

Fabric

Paper

Plastic

MATERIAL CLASSIFICATION WORKSHEET (ADAPTED MATERIAL):

Name: _____ Number: _____

What's made of...?



Glass **CRISTAL**



Metal **METAL**



Wood **MADERA**



Fabric **TELA**



Paper **PAPEL**



Plastic **PLÁSTICO**

APPENDIX III

Heating and cooling things

Some materials or objects change when we heat or cool them. These changes can be reversible or irreversible.

☐ What is happening to Danny's ice cream?



1   How does it change? Discuss with your partner. Draw.



→
heat



→
cool



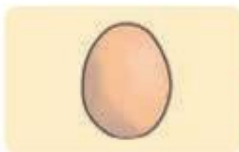
2 How does it change? Find the stickers. Tick the reversible change.



→
heat



→
cool



→
heat



→
cool



→
heat



→
cool



APPENDIX IV

LET'S EXPERIMENT IN GROUP!

Is it floating or is it sinking?

	Wood	Iron	Cork	Plastic	Glass	Screen
Float						
Sinks						



Does it dissolve?

	Oil	Vinegar	Salt	Rice
Dissolves				
It doesn't dissolve				



Are they attracted to a magnet?

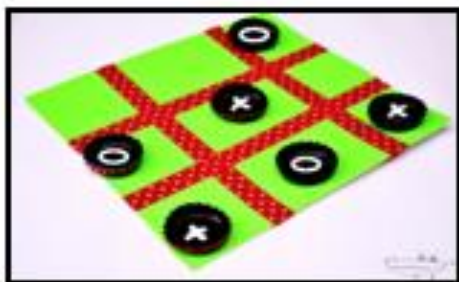
ATTRACTED OBJECTS:



OBJECTS NOT ATTRACTED:



APPENDIX V



APPENDIX VI

NATURAL SCIENCE

UNIT 5 – MATTER AND FORCES

Name: _____ Number: _____

1) Write the name of the object in the correct box:



doll



book



shirts



jar



hat



door



trumpet



notebook



pan



bottle

It's made of wood.

It's made of glass.

It's made of fabric.

It's made of plastic.

It's made of metal.

It's made of paper.

2) Write PUSH or PULL:





3) Draw an object. Write a description.



It's made of _____

It's _____

4) Write the properties of these objects:

Is it soft or hard?	 <u>soft</u>	 _____	 _____
Is it transparent or opaque?	 _____	 _____	 _____
Is it flexible or rigid?	 _____	 _____	 _____
Is it rough or smooth?	 _____	 _____	 _____
Is it absorbent or waterproof?	 _____	 _____	 _____

5) Match the garbage with the corresponding container:



ORGANIC



PAPER



PLASTIC



GLASS

(ADAPTED MATERIAL)

NATURAL SCIENCE

UNIT 5 – MATTER AND FORCES

Name: _____ Number: _____

1) Write the name of the object in the correct box:

ESCRIBE EL NOMBRE DE LOS OBJETOS EN LA CASILLA CORRECTA

 doll	 book	 shirts	 jar	 hat
 door	 trumpet	 notebook	 pan	 bottle
MADERA It's made of wood. door 	CRISTAL It's made of glass. 	TELA It's made of fabric. 		
PLÁSTICO It's made of plastic. 	METAL It's made of metal. 	PAPEL It's made of paper. 		

2) Write PUSH or PULL:

ESCRIBE EMPUJAR O TIRAR





3) Draw an object. Write a description.

DIBUJA UN OBJETO. ESCRIBE UNA DESCRIPCIÓN.

	It's made of It's
---	--

4) Write the properties of these objects:

ESCRIBE LAS PROPIEDADES DE ESTOS OBJETOS

BLANDO DURO	Is it soft or hard?	 soft	 	
TRANSPARENTE OPACO	Is it transparent or opaque?	 	 	
FLEXIBLE RÍGIDO	Is it flexible or rigid?	 	 	
RUGOSO LISO	Is it rough or smooth?	 	 	
ABSORBENTE IMPERMEABLE	Is it absorbent or waterproof?	 	 	

5) Match the garbage with the corresponding container:

UNE LA BASURA CON EL CONTENEDOR CORRESPONDIENTE



ORGANIC



PAPER



PLASTIC



GLASS