

An integrated project based on linguistic competence: water cycle and use of resources

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Abstract

This article presents an integrated project that was implemented in October and November 2021 in the Manuel de Falla school in Jerez de la Frontera (Cadiz, Spain), specifically in 3rd grade of Primary School. The aim here is that students, from a globalizing perspective and taking linguistic competence as a cross-cutting issue, acquire didactic knowledge about the water cycle and the use of resources, respecting the environment. For this purpose, a didactic proposal was designed following the types of integrated projects established by Zabala (2000). Therefore, students will build their knowledge by researching, being the protagonists in the teaching-learning process, using ICTs.

Keywords: Integrated project. Linguistic competence. Education

Um projeto integrado baseado na competência linguística: o ciclo da água e a utilização de recursos.

Resumo

Este artigo apresenta um projeto integrado que foi implementado em outubro e novembro de 2021 na escola Manuel de Falla em Jerez de la Frontera (Cádiz, Espanha), especificamente no 3º ano da Escola Primária. O objetivo aqui é que os alunos, a partir de uma perspectiva globalizante e tomando a competência lingüística como uma questão transversal, adquiram conhecimentos didáticos sobre o ciclo da água e o uso dos recursos, respeitando ao mesmo tempo o meio ambiente. Para este fim, foi elaborada uma proposta didática seguindo os tipos de projetos integrados estabelecidos por Zabala (2000). Portanto, os alunos construirão seus conhecimentos pesquisando, sendo protagonistas no processo de ensino-aprendizagem, utilizando as TIC...

Palavras-chave: Projeto integrado. Competência lingüística. A globalização. Educação.

Un proyecto integrado desde la competencia lingüística:ciclo del agua y aprovechamiento de recursos

Resumen

En este artículo se presenta un proyecto integrado que se implementó en octubre y noviembre de 2021 en el colegio Manuel de Falla de Jerez de la Frontera (Cádiz, España), concretamente en 3º de Primaria. Aquí se pretende que los alumnos, desde una perspectiva globalizadora y tomando la competencia lingüística como cuestión transversal, adquieran conocimientos didácticos sobre el ciclo del agua y el aprovechamiento de recursos, respetando el medio ambiente. Para ello, se diseñó una propuesta didáctica siguiendo los tipos de proyectos integrados establecidos por Zabala (2000). Por lo tanto, los alumnos construirán sus conocimientos investigando, siendo protagonistas en el proceso de enseñanza-aprendizaje, utilizando las TIC...

Palabras clave: Proyecto integrado. Competencia lingüística. Globalizador. Educación

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1 Description and justification of the integrated project

The present curricular integration project consists of working not only on the water cycle (a very recurrent theme), but to go beyond it, since it will take into account that there are very polluting energies that must be progressively substituted by other cleaner energy sources such as hydraulic or wind energy, among others; therefore, students must know the water cycle very well beforehand.

This will allow us to carry out group research projects in which students will have to gather information about what energy is, what it is for, which are the renewable and non-renewable energies, the most and least polluting ones, etc.

On the other hand, this project aims to work on the use of resources in the least harmful way possible for our planet, something that to some extent is closely linked to the previous block on energy sources, but also taking into account the sectors of work, as we can deal with how from the primary sector to the service sector we are affecting the planet, either with intensive or extensive agriculture or livestock, fishing with certain practices harmful to the marine environment or the service sector such as transportation using oil.

Finally, health will be discussed; how we can improve it, diet, exercise, and the influence of what has been said in the primary sector, since natural food without



chemicals are healthier for our health, as well as animals that have been raised in extensive and not intensive farms.

The whole project is designed to be carried out in the 3rd year of Primary Education, and throughout the project the students will be the protagonists of the sessions, since they will be the ones to investigate, carry out their own water cycle, experiment, use ICT, etc., so they are actively involved at all times and the role of the teacher is as a guide and in charge of providing materials, bibliography, etc. In short, in the words of Romero, Heredia and Rivera (2021, p.4): "In education, teachers are expected to seek innovative methodologies so that students are integrated in the classroom and, in this way, all can participate regardless of their strengths and difficulties in learning".

2 Elements that make up the integrated project

2.1. Stage objectives

The stage objectives that arise, according to the Royal Spain Decree 126 of February 28, 2014, are:

"b) To develop habits of individual and team work, effort and responsibility in the study, as well as attitudes of self-confidence, critical sense, personal initiative, curiosity, interest and creativity in learning, and entrepreneurial spirit" (SPAIN, 2014,p.7).

"e) Know and use appropriately the Castilian language and, if any, the co-official language of the Autonomous Community and develop reading habits". (SPAIN, 2014,p.7)

"h) To know the fundamental aspects of the Sciences of Nature, Social Sciences, Geography, History and Culture" (SPAIN, 2014,p.7).

"i) To be initiated in the use, for learning, of the Information and Communication Technologies developing a critical spirit before the messages they receive and elaborate." (SPAIN, 2014,p.7)





"(k) Value hygiene and health, accept one's own body and that of others, respect differences and use physical education and sport as means to favor personal and social development". (SPAIN, 2014,p.7)

"l) Know and value the animals closest to the human being and adopt modes of behavior that favor their care"(SPAIN, 2014, p.7)

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2.2. Objectives of the subjects

The objectives of the subjects, according to theAndalusia,Order of March 17, 2015 are.:

Natural Sciences

"O.CN.1. To use the scientific method to plan and carry out simple projects, devices and apparatus, through observation, hypothesis posing and practical research, in order to draw conclusions that, at the same time, allow reflection on their own learning process". (ANDALUSIA, p.20)

"O.CN.2. Analyze and select information about the elementary properties of some materials, substances and objects and about facts and phenomena of the environment, to establish various hypotheses, checking their evolution through planning and carrying out projects, experiments and daily experiences". (ANDALUSIA, p.20)

"O.CN.3. Recognize and understand basic aspects of the functioning of the human body, establishing a relationship with the possible consequences for individual and collective health, valuing the benefits of acquiring healthy daily habits such as physical exercise, personal hygiene and balanced nutrition for an improvement in the quality of life, showing an attitude of acceptance and respect for individual differences". (ANDALUSIA, p.20)

"To interpret and recognize the main components of ecosystems, especially of our autonomous community, analyzing their organization, their characteristics and their interdependence relationships, seeking explanations, proposing solutions and acquiring behaviors in everyday life for defense, protection, recovery, etc ecological balance and





responsible use of energy sources, through the promotion of values of commitment, respect and solidarity with the sustainability of the environment". (ANDALUSIA, p.20)

"O.CN.6. To participate in work groups putting into practice values and attitudes of scientific thinking, encouraging the entrepreneurial spirit, developing their own sensitivity and responsibility towards individual and collective experiences". (ANDALUSIA, p.20)

"O.CN.7. To understand the importance of scientific progress, in order to value its incidence and transcendence in the improvement of the daily life of all people and in the progress of society as a whole". (ANDALUSIA, p.20)

"O.CN.8. Use information and communication technologies to obtain information, as a learning tool and to share knowledge and assess their contribution to improving the living conditions of all people, as well as prevent risk situations arising from their use" (ANDALUSIA, p.20).

Social Sciences

"To develop habits that favor or enhance the use of strategies for individual and group work in a cooperative way, in close contexts, presenting a responsible attitude, effort and perseverance, self-confidence, critical sense, personal initiative, curiosity, interest and creativity in the construction of knowledge and entrepreneurial spirit, in order to plan and manage projects related to everyday life". (ANDALUSIA, p.78)

"O.CS.2. Initiate in the knowledge and implementation of strategies for information and communication, developing information processing strategies for the implementation of the implicit competences in the performance of daily tasks, through different methods, sources and texts". (ANDALUSIA, p.78)

"Knowing how to define problematic situations in the environment close to their reality, as well as in more distant environments, estimating possible solutions to achieve an adequate knowledge and application of the elements of the landscape, the universe, climate and geographical diversity of the community of Andalusia, Spain and the European Union, where students design small research, analyze and communicate results using measuring tools, scales, tables or graphical representations." (ANDALUSIA, p.78)





"O.CS.5. Know and value the natural and cultural heritage of Andalusia and Spain and actively contribute to its conservation and improvement, showing a responsible and civic human behavior, collaborating in the reduction of the causes that generate pollution, climate change, sustainable development and responsible consumption, through the search for alternatives to prevent and reduce them". (ANDALUSIA, p.78)

"O.CS.8. Identify the activities of each of the economic and production sectors of Andalusia, Spain and Europe, developing entrepreneurial skills and the study of companies in their environment, taking a responsible attitude towards consumption, savings, occupational health and road safety education". (ANDALUSIA, p.79)

Spanish Language and Literature

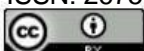
"O.LCL.1. Use language as an effective tool for expression, communication and interaction, facilitating the representation, interpretation and understanding of reality, the construction and communication of knowledge and the organization and self-regulation of thought, emotions and behavior". (ANDALUSIA, p.157)

"O.LCL.2. Understand and express oneself orally in an adequate way in diverse socio-communicative situations, participating actively, respecting the rules of communicative exchange". (ANDALUSIA, p.157)

"O.LCL.3. Listen, speak and dialogue in communication situations proposed in the classroom, arguing their productions, showing a receptive attitude and respecting the approaches of others". (ANDALUCÍA, p.157)

"O.LCL.4. Read and understand different types of texts appropriate to their age, using reading as a source of pleasure and personal enrichment, approaching relevant works of literary tradition, especially Andalusian, to develop reading habits." (ANDALUSIA, p.157)

"O.LCL.5. Reproduce, create and use different types of oral and written texts, according to the characteristics of the different genres and the rules of the language, in real communicative contexts of students and close to their tastes and interests." (ANDALUSIA, p.157)





"O.LCL.6. Learn to use all available means, including new technologies, to obtain and interpret oral and written information, adjusting it to different learning situations". (ANDALUSIA, p.157)

"O.LCL.7. To value language as a cultural wealth and means of communication, expression and social interaction, respecting and valuing the linguistic variety and enjoying literary works through their reading, to expand their linguistic skills, imagination, affectivity and worldview". (ANDALUSIA, p.157)

Mathematics

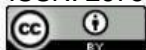
"O.MAT.1. To pose and solve individually or in groups problems from everyday life, from other sciences or from mathematics itself, choosing and using different strategies, justifying the resolution process, interpreting results and applying them to new situations in order to act more efficiently in the social environment". (ANDALUSIA, p.228)

"O.MAT.2. To use mathematical knowledge to understand, value and reproduce information and messages about facts and situations of everyday life, in a creative environment, research and cooperative projects and to recognize its instrumental character for other fields of knowledge". (ANDALUSIA, p.228)

"O.MAT.3. Use numbers in different contexts, identify the basic relationships between them, the different ways to represent them, developing strategies of mental and approximate calculation, leading to make reasonable estimates, thus reaching the ability to successfully face real situations that require elementary operations". (ANDALUSIA, p.228)

"O.MAT.4. Recognize the measurable attributes of objects and the units, system and processes of measurement; choose the most relevant measuring instruments in each case, making reasonable forecasts, expressing the results in the most appropriate units of measurement, explaining orally and in writing the process followed and applying it to problem solving". (ANDALUSIA, p.228)

"O.MAT.7. Appreciate the role of mathematics in everyday life, enjoy its use, and recognize the value of exploring different alternatives, the desirability of the precision, the



perseverance in the search for solutions and the possibility of contributing our own criteria and reasoning". (ANDALUSIA, p.228)

Digital culture and practice

"O.CPD.2 To value the importance of digital identity and to reflect on the adoption and establishment of norms and measures necessary for a correct and safe use of information and communication technologies in general and the Internet in particular, valuing the benefits it brings us and promoting reflection and the consensual adoption of ethical, individual and collective behaviors". (ANDALUSIA, p.624)

"O.CPD.3 Identify and establish the necessary criteria for the search, selection and analysis of information and resources available on the network, recognizing the value of the work of authors in their contribution to the common culture and valuing the importance of respect for intellectual property". (ANDALUSIA, p.624)

"O.CPD.4 Use applications and virtual environments, selecting and using them appropriately for the enrichment of the personal learning environment and as a means of personal, social and cultural expression by sharing published content through the appropriate use of virtual spaces and platforms". (ANDALUSIA, p.624)

"O.CPD.5 Produce own digital materials developing proposals based on teamwork and cooperation." (ANDALUSIA, p.624)

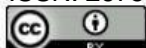
2.3. Didactic objectives

The didactic objectives to be achieved are as follows:

- To consolidate the knowledge about the expository text and its characteristics.
- To understand the concept of money and the currency system we use (euro).
- To know the uses of energy.
- To know the type of livestock.
- To know the difference between the quality of products depending on the type of livestock and agriculture.
- To know the functions of the primary sector.



- To know the different methods of obtaining energy.
- To know the different methods used in livestock and fishing.
- To know what is the water cycle.
- To know what energy is.
- To know what an argumentative text is and its characteristics.
- To know what an expository text is and identify some of its characteristics.
- To know what an instructive text is and identify its characteristics.
- To distinguish the noun from other grammatical categories.
- To distinguish between extensive and intensive livestock farming.
- To distinguish the different ways of obtaining energy.
- Distinguish organic products from the rest.
- Carry out the instructions of an instructive text.
- To elaborate a water cycle with simple materials.
- Express themselves adequately orally and in writing.
- Identify activities in which energy is required.
- Read and understand the text.
- Carry out conversion processes between units of volume measurement.
- Keep track of and write about what happens each day in the experiment.
- Hypothesize what would happen if there were no water cycle.
- Present the project in language appropriate to the subject matter.
- To be able to calculate how many liters of water we can consume daily and monthly.
- To be able to carry out information searches.
- To be aware of the need to respect the breeding cycles of marine species.
- Be aware of the impact of the primary sector on the environment.
- To become aware of how our actions affect our health.
- Work cooperatively while respecting their peers.
- Use ICT in a responsible way.

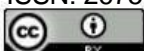




- Properly use the gender and number of nouns.
- Correct use of the dictionary.

2.4. Key competencies

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- a) Competence in linguistic communication (CCL): It is present in each and every one of the sessions, from brainstorming to research projects, in which they must communicate effectively with their peers and even explain to their peers what they have learned.
- b) Mathematical competence and basic competences in science and technology (CMCT). We can see that this competence is present in almost all sessions, since the scientific component is present in almost every moment when learning about energy sources, but also the mathematical component in session 2 when calculating how much water we consume with our daily activities.
- c) Digital competence (CD) involves research by students (session 5 and 6), students must use electronic devices responsibly.
- d) Learning to learn competence (CAA). The learning to learn competence involves autonomous and effective learning. This is one of the main purposes of the project itself, and we can see it in sessions such as 3 in which they themselves must build the water cycle following instructions or in the sessions in which they must carry out a research project following guidelines and with the teacher as a guide.
- e) Social and civic competences (CSC). This competence is divided into two, on the one hand, the social and on the other hand, the civic. In this project the social competence is present, since it is sought that students are aware that we must seek our welfare and that of others, and this is present, for example, in session 6 in which students must research on the various methods used in livestock or fishing, and the impact that each of these methods have.





f) Sense of initiative and entrepreneurship (SIEE). This consists of transforming ideas into actions and the most obvious session in which we can find it is in the session 3, in the students should create the water cycle with a water bottle, sand, stones, etc.

2.5 Learning contents

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The learning contents, according to the ANDALUCIA, Order of March 17, 2015 are.:

Natural Sciences

"2.4. Identification and adoption of certain habits: varied diet, personal hygiene, regulated physical exercise without excesses or daily rest" (ANDALUSIA, p.69).

"3.2. Classification of living and inert beings following simple scientific criteria". (p.69)

"3.3. Classification of animals according to their basic characteristics". (ANDALUSIA, p.69)

"3.7. Assessment of the importance of water for plants (photosynthesis) and for all living things. The water cycle." (ANDALUSIA, p.70)

"3.11. Identification of natural resources that can be depleted and curiosity about the need for a rational use of them." (ANDALUSIA, p.70)

"4.3. Raw materials: their origin." (ANDALUSIA, p.70)

"4.12. Valuing the responsible use of the planet's energy sources and individual responsibility in energy saving." (ANDALUSIA, p.70)

Social Sciences

"1.2. Gathering of information on the subject to be treated, using different sources (direct and indirect)". (ANDALUSIA, p.139)

"1.3. Use of Information and Communication Technologies to search and select information and present conclusions". (ANDALUSIA, p.139)

"1.9. Use of strategies to enhance group cohesion and cooperative work." (ANDALUSIA, p.139)





"1.11. Planning and management of projects in order to achieve objectives. Entrepreneurial initiative" (ANDALUSIA, p.139).

"1.12 Strategies for conflict resolution, use of the rules of coexistence and valuation of peaceful and tolerant coexistence" (ANDALUSIA, p.139).

"2.4. The human being and the natural environment: use of the territory and exploitation of natural resources" (ANDALUSIA, p.139).

"Impact of human activities on the environment: organization and transformation of the territory" (ANDALUSIA, p.139).

"2.6. The hydrosphere: characteristics of inland and marine waters. The main rivers of Spain, Andalusia and the near environment"(ANDALUSIA, p.139).

"3.6. The population according to the occupational structure: working population and non-working population"(ANDALUSIA, p.139).

"3.7. Economic activities in the three sectors of production in Spain and Andalusia" (ANDALUSIA, p.139).

"3.8. The production of goods and services" (ANDALUSIA, p.139) "3.9.)

Spanish Language and Literature

"1.1. Communication situations, spontaneous or directed, using an orderly and coherent discourse: assemblies, conversations and real or simulated dialogues, as well as colloquiums on school topics". (ANDALUCÍA, p.215)

"Expression, interpretation and differentiation of verbal and non-verbal messages. Use of strategies for understanding oral messages: attention, retention, anticipation of content and situation through context, identification of main and secondary ideas, speaker's intention, formulation of hypotheses about meaning, content and context from the analysis of significant linguistic and paralinguistic elements (modulation and tone of voice, gestures, body language and posture)."(ANDALUSIA, p.215)."(ANDALUSIA, p.215)

"1.3. Strategies and rules for communicative exchange: listening attentively, looking at the interlocutor, respecting the interventions and rules of courtesy, feelings and experiences of others."(ANDALUSIA, p.215)





"1.4. Expression and reproduction of literary and non-literary oral texts: narrative (situations or personal experiences, anecdotes, jokes, stories, tongue twisters, accounts of events), descriptive (descriptions of people, animals, objects, places, images, etc.), expository (formulation of questions for interviews, definition of concepts, presentations of topics worked on in class); instructive (rules of games, instructions to carry out work, to orient oneself on a map, how to operate devices, as well as to solve problems); argumentative (discussions, debates, assemblies); predictive, etc." (ANDALUCÍA, p.215)
"Reading texts in different media (printed, digital and multimodal) both in the school and social environment. Reading silently and aloud with correct pronunciation and appropriate intonation and rhythm, according to punctuation marks." (ANDALUSIA, p.215)

"2.6. Construction of knowledge and critical appraisal from information from different documentary sources (books, press, television, webs... according to their age) and search, directed location and reading of information in different types of texts and documentary sources: dictionaries, popularization books, magazines... to expand knowledge and apply it in personal works."(ANDALUSIA, p.215)

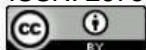
"2.9. Use of digital search and visualization tools in ICT devices to locate and treat information in a responsible way, making use of websites according to their age". (ANDALUSIA, p.216)

"3.1. Individual or collective writing and rewriting of creative texts, copied or dictated, with different intentions both in the school and social environment with appropriate handwriting, order and cleanliness and with a vocabulary in line with the educational level. Writing plan". ANDALUSIA, p.216)

"3.2. Text planning: inclusion of the most appropriate linguistic resources to write narrative, descriptive, predictive, argumentative and explanatory texts." (ANDALUSIA, p.216)

"3.6. Application of spelling rules and punctuation marks". (ANDALUSIA, p.216)

"3.8. Evaluation, self-evaluation and co-evaluation of written productions, both their own and others', comparing models and exchanging impressions". (ANDALUSIA, p.216)





"4.1. The word. Recognition of homonymy, polysemy, lexical families, primitive and derived words, prefixes and suffixes. The noun and its classes. Articles. Determining and qualifying adjectives. Personal pronouns. Verbs: regular conjugation of the indicative, non-personal forms, roots and verbal endings. Person, gender and number agreement. Rules for the formation of comparatives and superlatives."

"4.2. Identification and reflexive explanation of the parts of speech: subject and predicate. Order of the elements of the sentence. Types of sentences according to the intentionality of the sender." (ANDALUSIA, p.216)

"4.3. Vocabulary: Dictionary structure. Different meanings of words. Online dictionaries. Abbreviations and acronyms."(ANDALUSIA, p.216).

"4.4. Differentiation between sentence, paragraph and text. Mechanisms of textual cohesion and coherence." (ANDALUSIA, p.216)

"4.6. Spelling: use of spelling rules in own productions. General rules of accentuation."(ANDALUSIA, p.216).

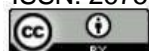
"4.7. Positive attitude towards the use of languages, avoiding and denouncing any kind of discrimination based on gender, culture or opinion. Identification of the main characteristics of the languages of Spain, awareness of the linguistic variants of the different languages present in the social and school context, and, recognition of the popular linguistic traditions of Andalusia." (ANDALUSIA, p.216)

"4.8. Use of ICT to increase the knowledge of the language". (ANDALUSIA, p.216)

Mathematics

"1.1. Identification of problems of daily life in which one or more of the four operations are involved, distinguishing the possible relevance and applicability of each of them". (ANDALUSIA, p.301)

"1.2. Solving problems involving different magnitudes and units of measurement (lengths, weights, money...), with addition, subtraction, multiplication and division, and referring to real situations of change, comparison, equalization, repetition of measures and simple scalars". (ANDALUSIA, p.301)





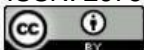
"1.4. Approaches and strategies to understand and solve problems: oral, graphical and written problems, group, pair, individual, mental, calculator and algorithm solving. Problems with missing and excess data, with several solutions, systematic counting. Invention of problems and communication to classmates. Oral explanation of the process followed in solving problems". (ANDALUSIA, p.301)

"1.5. Resolution of open problem situations: simple mathematical investigations on numbers, calculations, measurements, geometry and information processing, approaching small work projects. Application and interrelation of different mathematical knowledge. Cooperative work. Approach to the method of scientific work and its practice in situations of everyday life and the immediate environment, through the study of some of its characteristics, with hypotheses, collection, recording and analysis of data, and drawing conclusions. Heuristic strategies: trial-and-error approach, reformulating the problem. Development of personal strategies to solve problems and research and small work projects". (ANDALUSIA, p.301)

"1.6. Oral expositions, detailing the research process carried out from close experiences, providing details of the phases and assessing results and conclusions. Elaboration of simple guided reports and digital documents for the presentation of the conclusions of the project carried out". (ANDALUSIA, p.301)

"Use of technological tools and means in the learning process to obtain, analyze and select information, perform numerical calculations, solve problems and present results, develop shared mathematical projects. Integration of Information and Communication Technologies in the mathematical learning process". (ANDALUSIA, p.301)

"1.8. Development of basic attitudes for mathematical work: effort, perseverance, flexibility, personal strategies of self-correction and spirit of self-improvement, confidence in one's own possibilities, personal initiative, curiosity and positive disposition to reflect on the decisions taken and to reasoned criticism, raising questions and searching for the best answer, applying what has been learned in other situations and in different contexts, interest in active and responsible participation in cooperative teamwork". (ANDALUSIA, p.301)





"2.1. Meaning and usefulness of natural numbers and fractions in everyday life. Roman numeration". (ANDALUCIA, p.301)

"2.4. Use of numbers in real situations: reading, writing, ordering, comparison, representation on the number line, decomposition, composition and rounding to the hundredth of a thousand." (ANDALUSIA, p.301)

"2.8. Meaning of the operations of multiplying and dividing and their usefulness in everyday life. Oral and written mathematical expression of operations and calculation: addition, subtraction, multiplication and division." (ANDALUSIA, p.301)

"2.19. Oral explanation of the process followed in performing written calculations". (ANDALUCÍA, p.301)

3.12. Monetary systems: The monetary system of the European Union. Main unit: the euro. Value of the different coins and banknotes (ANDALUSIA, p.302).

Digital culture and practice

"1.1. Possibilities and limitations of the knowledge society". (ANDALUSIA, p.634)

"1.2. Responsible use of social networks." (ANDALUSIA, p.634)

"1.4. Intellectual property, copyright and creative commons." (ANDALUSIA, p.634)

"2.2. Web 2.0 applications: Virtual communities. Blog. Wikis. Social networks". (ANDALUSIA, p.634)

2.6 Sequence of activities

For the elaboration of the sessions we based ourselves on the design proposed by Romero, Heredia and Trigo (2020):

SESSION Nº1 October 25, 26, 27, 28, 2021	TITLE: Let's get to know the water cycle!	Area objectives
Specific objectives. <ul style="list-style-type: none"> To know what the water cycle is. To know what an expository text is and identify some of its characteristics. 		O.CN.1., O.CN.2., O.CN.6. O.LCL.1., O.LCL.2., O.LCL.3. O.LCL.4. O.LCL.5.
		Key competencies





- Distinguish nouns from other grammatical categories.
- Properly use the gender and number of nouns.
- Be able to read and understand the text.

CCL, CMCT, CD, SIEE and CAA.

Description of session routines

Dynamics and spaces

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Starting the session from previous knowledge

First, I will ask the students whether water always remains static in a liquid state or whether it can change its state depending on the circumstances..

Presentation of the subject

I will tell you that in the next few weeks we will be working on the subject of water to learn more about it, since it is a precious and scarce resource and, therefore, we must take care of it.

Development of activities

On the first day, we will review the states of matter, and for this purpose a workshop will be held in groups. The class will be organized into 4 groups of 5 students each. Two groups will experience the states of matter by themselves, as we will modify the state of water. First I will provide them with a glass of ice and ask them what is its state (solid); subsequently, I will show them a glass of water and tell them that if the ice melts it remains in this liquid state, what has happened to it? (it has melted); then, I will put the glass of water in a microwave provided by the school and I will tell one of the students to put a mirror on top of it, so they will see that water droplets remain on it once it has evaporated and cooled, which is called condensation; and finally, that condensation can turn into a liquid state and solidify.

On the other hand, the other groups are will provide them with laminated cards and red and blue arrows, so that they can make a outline of the

Dynamics: Communicative approach.

Space: Classroom.





discussed in the experiment; the blue arrows correspond to cold (solidification and condensation) and the red arrows to heat (evaporation and melting).

On the second day, we will deal with the water cycle, because I think it was important to first deal with the states of matter, which will facilitate the understanding of this cycle.

To understand the water cycle, I will first hand out a card on the water cycle, and behind it there will be a didactic exploitation on the name (noun).

First you will be asked questions related to the text and then the following type of activities:

1. Point out the words that express living things or things.
2. Complete the following sentences with a person, animal or thing.
3. Construct a sentence using the following words.
4. From the following sentence add an animal, a person and an object and create a short story.
5. Tell your partner 4 animals you like, 4 people you love, and 4 objects you use every day.

8. What is it?

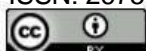
-Students will be shown objects, natural phenomena, living beings, etc., on the digital whiteboard and they will have to name them, so that they will know that nouns are used to name things and to communicate.

Complete the following definition:

-Nouns are words that serve to to living beings or

Two didactic exploitations could be carried out would be this one for them to know what a noun is and the second one would be for gender and number. In this project we will only focus on the first one.

On the other hand, this project





	<p>seeks to This session is a good opportunity to work on the different types of texts, so this session is a good opportunity to work on the expository text, identifying some of its characteristics from the text that I will provide about the water cycle. Once the name card has been completed and the expository text has been dealt with, they will be shown an e-learning video that explains in a summarized and playful way what has been dealt with.</p>	
		Resources
Closing of the session and anticipation of the next session	<p>To close the session, I will comment that water is a fundamental resource in our lives, and that in addition to using it for drinking or showering, it can be useful for livestock, agriculture or to obtain energy, and ... what is energy? We will work on this later when we finish the water cycle.</p>	Microwave, glasses, ice, chip provided by me, computer and projector.
Procedimientos de evaluación	Evaluation instruments	
<ul style="list-style-type: none"> • Observation 	<p>Observation sheet. Didactic exploitation sheet. Teacher's diary. Rubric.</p>	

SESSION Nº2 October 29, and November 2, 3 and 4, 2021	TITLE: Why do we need water?	Area objectives
<p>Specific objectives.</p> <ul style="list-style-type: none"> • Express themselves adequately orally and in writing. • To hypothesize about what would happen if there were no water cycle. • To be able to calculate how many liters of water we can consume daily and monthly. • To be able to carry out conversion processes between units of volume measurement. 		<p>O.CN.1.O.LCL.1., O.LCL.2., O.LCL.3., O.LCL.5.O.MAT.1., O.MAT.2.,O.MAT.3.,O.MAT.4. O.MAT.7.</p>
		Key competencies
		CCL, CMCT and CAA.





Description of session routines		Dynamics and spaces
Starting the session from previous knowledge	We will begin the session by recalling what we worked on in the previous session on the water cycle in order to review and remember what we have learned.	<p>Dynamics: Communicative approach.</p> <p>Space: Classroom.</p>
Presentation of the subject	Once at this point, I will comment that as we all know water is very important and we use it for various daily activities, and this is what we are going to focus on in this session.	
Development of activities	<p>First, we will brainstorm about the different uses of water.</p> <p>I will write down on the board the ideas that the students come up with.</p> <p>Then, we will think about what activities we consume water on a daily basis, in order to calculate how much water we consume per day and per month.</p> <p>To do this, I will provide the students with a card with a template of activities or appliances with the liters consumed to serve as a guide for students to calculate consumption.</p> <p>The calculations will initially be done in liters, but we will use this opportunity to work on volume conversion (from liters to ml or ml to dl).</p> <p>Finally, the students will have to write a text in which they hypothesize what could happen if there were no water cycle.</p> <p>Subsequently, there will be a common sharing.</p>	
Closing of the session and anticipation of	At the end of the session i will ask	Resources





the next session	yes believe that we can make our own water cycle, and that is what we will do in our next session.	25 cards with template of activities or household appliances with liters consumed.
Evaluation procedures	Evaluation instruments	
<ul style="list-style-type: none"> • Observation 	Observation sheet. Teacher's journal. Rubric.	

SESSION Nº3 November 5, 8 and 9, 2021	TITLE: Let's make our water cycle!	Area objectives
Specific objectives.		O.CN.1., O.CN.6.O.CS.1., O.CS.4.O.LCL.1., O.LCL.5.
<ul style="list-style-type: none"> • To know what an instructive text is and identify its characteristics. • To elaborate a water cycle with simple materials. • To carry out a follow-up and write what happens each day in the experiment. • To be able to carry out the instructions of an instructive text.. 		Competencias clave
		CCL, CMCT, SIEE and CAA.
Description of session routines		Dynamics and spaces
Starting the session from previous knowledge	To begin the session I will ask the students what we do when we don't know how to assemble a piece of furniture, a toy or make a meal. In this way, I will be able to introduce the instructional text.	Dynamics: Communicative approach. Space: Classroom and playground.
Presentation of the subject	To introduce the topic I will tell you that we are going to create our own water cycle in a bottle, so we can see how it rains and a plant grows inside it, but to do so we have to follow some instructions, so first we must know what instructions are, what they are for, what their characteristics are, etc.	





<p>Development of activities</p>	<p>The first two days of the session we will work on the instructive text using as an example the same text that we are going to use to carry out the experiment (among others), since in addition to carrying out this experiment, we will work on another type of text, the instructive text, since in order to carry out the experiment we will give the instructions in written form so that they can execute them themselves, so before carrying out the experiment we will work on what the instructive text is, comment on its characteristics and what it is used for.</p> <p>The third day will be used to carry out the experiment, and for a week there will be a daily follow-up.</p> <p>Now, for the experiment on the water cycle, a 5-liter bottle will be needed, and the students will have to break it in half, then add pebbles, sand, and finally compost.</p> <p>Then, a small plant is planted and a glass of water is placed next to it.</p> <p>Finally, the soil is watered and the bottle is completely closed.</p> <p>For this only one session is needed, but this does not stop here, because daily the students should observe the changes that are taking place and write them down in a kind of diary.</p> <p>The idea for this session was given to me by a teacher at the center where I am doing my internship, who in turn obtained it from PALACIOS (2016), whose publication is on the blog of educación primaria.es (referenced at the end of the project).</p>	
<p>Development of activities next session</p>	<p>Finally, to conclude the session and</p>	<p>Resources</p>



	introduce the next one I will tell the students that with water we can obtain energy, which is necessary to have light, electricity, etc., but really ... what is energy?	5 l bottle, sand, stones, compost, water glass and small plant.
Evaluation procedures	Evaluation instruments	
<ul style="list-style-type: none"> • Observation • Activities 	Observation sheet. Teacher's journal. Rubric. Diaries elaborated by the students in which they write down the evolution of the experiment.	

SESSION Nº4 November 10 and 11, 2021	TITLE: What is energy?	Area objectives
Specific objectives. <ul style="list-style-type: none"> • To consolidate the knowledge about the expository text and its characteristics. • To know what energy is. • To distinguish the different ways of obtaining energy. • Identify activities in which energy is required. • To use the dictionary correctly.. 		O.CN.7.O.CS.2. O.LCL.4., O.LCL.6., O.LCL.7.
		Key competencies
		CCL, CMCT and CAA.
Description of session routines		Dynamics and spaces
Starting the session from previous knowledge	To start the session, I will ask students if they know what energy is and what we need it for, since almost every activity we do every day requires energy use.	Dynamics: Communicative approach. Space: Classroom.
Presentation of the subject	Once we have discussed some of the uses of energy, I will tell you that there are different ways of obtaining it, and that is what we are going to discover in this session, since depending on the way of obtaining it,	



	we can use it in different ways we will be having an impact on the planet to a greater or lesser extent.	
Development of activities	<p>On the first day, the activity will consist of knowing what energy is. For this, first I will explain it to them in the simplest possible way; and later, I will give them a text in which I will comment on what energy is, and some types of energy (wind, hydraulic, solar, etc.); as they will not know what some of these names are, a school dictionary will be provided to each one, but not without first explaining to them how to search in a dictionary.</p> <p>In addition, taking advantage of the fact that in the text there will be words that they do not understand, I will make a didactic exploitation for the use of the dictionary.</p> <p>Finally, I will use this text to review the expository text already worked on in the first session.</p>	
Closing of the session and anticipation of the next session	<p>To conclude the session, I will introduce the project that we are going to carry out in the next few days.</p> <p>The energy sources we have known superficially have their pros and cons, and we will focus on these aspects in the project.</p>	Resources
Evaluation procedures	Evaluation instruments	25 energy worksheets, dictionaries and 25 worksheets with didactic exploitation on the dictionary.
<ul style="list-style-type: none"> • Observation 	<p>Observation sheet. Cards of the didactic exploitation on the dictionary. Teacher's journal. Rubric.</p>	





SESSION Nº5 November 12, 15, 16, 17, 18, 2021	TITLE: Research Project on Energy Sources	Area objectives
Specific objectives. <ul style="list-style-type: none"> • To know what an argumentative text is and its characteristics. • To know the different methods of obtaining energy. • To know the uses of energy. • To present the project with a language appropriate to the subject matter. • To know what energy is. • To be able to carry out information searches. • Work cooperatively respecting their peers. • Use tics in a responsible way. 		<p>O.CN.1., O.CN.2., O.CN.6., O.CN.7., O.CN.8.O.CS.1., O.CS.2., O.CS.4.O.LCL.1., O.LCL.2.,O.LCL.3., O.LCL.4., O.LCL.5., O.LCL.6.O.CPD.2, O.CPD.3,O.CPD.4, O.CPD.5.</p> <p>Key competencies</p> <p>CCL, CMCT, CD, SIEP, CAA.</p>
Description of session routines		Dynamics and spaces
Starting the session from previous knowledge	To find out their prior knowledge, I will ask them if they have ever done research on any topic, and if so, how they did it..	<p>Dynamics: Communicative approach.</p> <p>Space: Classroom.</p>
Presentation of the subject	I will introduce this session by asking the students if they would like to investigate more about energy sources, and for this we will make working groups, and among all of them they will have to inform themselves and tell their colleagues what they have learned.	
Development of activities	<p>The class will be divided into 5 groups of 4 students each.</p> <p>First, I will explain what the project will be about and the points it should contain.</p> <p>Afterwards, I will provide them with bibliographic sources with reliable information.</p> <p>Afterwards, each student will have to look for specific information on one point, i.e. there will be 4 experts who will have to share with their classmates what they have learned so that everyone knows everything, even if they are more "experts on a</p>	



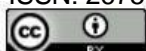


	<p>particular point" and finally, on the third day, they will present what they have learned in groups.</p> <p>The sections to be included in the project are:</p> <ol style="list-style-type: none"> 1. What is energy? 2. What is it used for? 3. What are the most used energy sources in Spain? 4. 4. Which energy sources are renewable and which are non-renewable? 5. Which energy sources are the most harmful to the environment, and which are the cleanest? 6. Do you think we should change our way of obtaining energy towards a cleaner model (non-polluting renewable energies), why? <p>Once this project has been completed, I will take advantage of the fact that the students have read documents in which certain energy sources are defended to work on the argumentative text and its characteristics.</p> <p>I think it is better to work on the argumentative text once the research project is finished, because doing it at the same time can be difficult for the students to have several tasks at the same time, besides the fact that in this way they will have already read several documents and will have superficial ideas on which we will be able to go deeper.</p>	
<p>Closing of the session and anticipation of</p>		<p>Resources</p>



<p>the next session</p>	<p>With this session we finished the first block which consisted of the water cycle and through the water cycle to work on energy sources such as hydraulics.</p> <p>Once we have finished this first block of the project I will introduce the second block related to obtaining other resources in a responsible way with the planet, such as agriculture, livestock and fishing.</p>	<p>Computers or tablets, digital whiteboard, worksheets to work on the argumentative text.</p>
<p>Evaluation procedures</p>	<p>Evaluation instruments</p>	
<ul style="list-style-type: none"> • Observation 	<p>Observation sheet. Teacher's journal. Rubric. The students' project and the presentation. The card on the argumentative text.</p>	

<p>SESSION Nº6 november 19, 22, 23, 24, 2021</p>	<p>TITLE: Do our actions have an impact on the environment?</p>	<p>Area objectives</p>
<p>Specific objectives.</p> <ul style="list-style-type: none"> • To know the functions of the primary sector. • To know the type of livestock. • To know the different methods used in livestock farming and fishing. • To distinguish extensive and intensive livestock farming. • To present the project in a language appropriate to the subject matter. • To be able to carry out information searches. • Be aware of the impact of the primary sector on the environment. • Work cooperatively respecting their peers. • Use tics in a responsible way. 		<p>O.CN.1., O.CN.4., O.CN.6., O.CN.7., O.CN.8.O.CS.1., O.CS.2., O.CS.4., O.CS.5., O.CS.8.O.LCL.1., O.LCL.2., O.LCL.3.,O.LCL.4., O.LCL.5., O.LCL.6.O.CPD.2, O.CPD.3, O.CPD.4, O.CPD.5.</p> <p>Key competencies</p> <p>CCL, CMCT, CD, SIEP, CAA and CSC.</p>
<p>Description of session routines</p>		<p>Dynamics and spaces</p>
<p>Starting the session from previous knowledge</p>	<p>In order to know your knowledge about this new topic, I will ask you if you remember which were the work sectors (content of the previous course), and if you think that the actions of these sectors have a direct or indirect impact on the environment.</p>	<p>Dynamics: Communicative approach.</p> <p>Space: Classroom.</p>





<p>Presentation of the subject</p>	<p>On this occasion we will work on the primary sector, since we can consider that we have previously dealt with the secondary sector with energy sources.</p> <p>Having said that, we are going to carry out a new research project, this time on the actions of the primary sector.</p>	
<p>Development of activities</p>	<p>In this session, the class will again be divided into groups, this time the groups will be modified so that they do not always work with the same classmates, but always trying to help each other.</p> <p>I will explain that the primary sector is formed, among other activities, by agriculture, livestock and fishing, and that this sector is very necessary, but depending on how these activities are carried out, the environment may be more or less damaged, both on the land and sea surface.</p> <p>Having said this, they will be provided with a bibliography and a sheet with summarized information on the type of livestock in livestock farming and how it is raised (intensive or extensive) and they should learn more through the bibliography provided.</p> <p>Regarding fishing, they should look for information on whether it is good to fish for small fish during the breeding season, what trawling consists of and whether it is harmful or not, what is purse seine fishing, gill net fishing, etc.</p> <p>Once they have gathered information on what type of livestock farming is more harmful to animals, whether small fish should be caught during the breeding season, and they know the impact of different types of fishing on the marine environment, should explain to them</p>	





	to their classmates about what they have learned, thus making a common sharing among all of them. Finally, an explanatory video will be shown to reinforce the knowledge acquired.	
Closing of the session and anticipation of the next session	We will conclude this session by commenting that in addition to the impact of the type of livestock farming on the animals, it also has an impact on our health, and that depending on the type of agriculture carried out, plant products will be more or less healthy, and that this is what we will discuss in the next session.	Resources Laptops or tablets, digital whiteboard and information sheets for students.
Evaluation procedures	Evaluation instruments	
<ul style="list-style-type: none"> • Observation 	Observation sheet. Teacher's journal Rubric.	

SESSION Nº7 November 25, 26 and 29, 2021	TITLE: All actions affect our health.	Area objectives
Specific objectives. <ul style="list-style-type: none"> • To know the difference between the quality of products depending on the type of livestock and agriculture. • To understand the concept of money and the currency system we use (euro). • To distinguish organic products from the rest. • To be aware of the need to respect the breeding cycles of marine species. • To become aware of how our actions affect our health. 		O.CN.3., O.CN.6. O.CS.1., O.CS.2., O.CS.5., O.CS.8. O.LCL.1.,O.LCL.2., O.LCL.3., O.LCL.4.O.MAT.2., O.MAT.3., O.MAT.7.
		Key competencies
		CCL, CMCT and CAA.
Description of session routines		Dynamics and spaces





<p>Starting the session from previous knowledge</p>	<p>To detect students' prior knowledge, I will ask if they believe that all our actions have an impact only on the "health" of the planet or also affect us directly.</p>	<p>Dynamics: Communicative approach.</p> <p>Space: Classroom.</p>
<p>Presentation of the subject</p>	<p>In this session, we will learn how each of our actions has an impact on our health, since depending on what food we eat will be more or less healthy, or that the quality of the meat depends largely on where and how the livestock has been cared for.</p> <p>This difference in quality also leads to a difference in price, so it is a good time to work the money.</p>	
<p>Development of activities</p>	<p>On the first day, we will review what was covered in the previous session on how livestock farming can be, and remember that livestock farming can be intensive or extensive, in order to explain that on farms where the animals have practically no space, the animals are fed with medicines that make them get fat faster, and therefore when we consume that meat it will not be as healthy as the animals that are raised in open spaces and with other types of food.</p> <p>In addition, they will be shown images and videos adapted to their age so that they can see the difference in the way animals are treated.</p> <p>On the second day, we will deal with agriculture, since vegetable products are also more or less healthy depending on the chemicals used.</p> <p>On the other hand, I will show them images of meat products with extensive livestock farming and vegetable products from organic gardens so that they can appreciate the distinctive features of the labels and packaging can thus distinguish</p>	





	<p>products and know what they are buying.</p> <p>The third day we will compare the price difference between these products to work the money, and explain that organic products or meat with higher quality has a somewhat higher price, but in many cases if we can afford them is more beneficial to our health.</p> <p>Finally, we will raise awareness about the importance of physical activity in our well-being, since it is as important to eat healthy as to exercise.</p>	
Closing of the session and anticipation of the next session	This session concludes the project, and I would like you to self-evaluate and evaluate the project itself.	Resources
Evaluation procedures	Evaluation instruments	Digital board and meat and vegetable products in their packaging.
<ul style="list-style-type: none"> • Observation 	<p>Observation sheet.</p> <p>Teacher's journal.</p> <p>Rubric.</p>	

2.7. Evaluation

The evaluation tools used throughout the 7 sessions are the observation sheets, the teaching diary to make the appropriate notes and the holistic and specific rubrics, and depending on the session, the results can be evaluated, such as the elaboration of our own water cycle in a bottle or the didactic exploitations such as the dictionary, thus also evaluating the process. Likewise, the student's diary in which they would write down the changes in the water cycle that occurs in the bottle is also evaluable.

As for the evaluation techniques, observation is mainly used, both of the process (which is the most important) and of the final result.



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