Observe the biodiversity of the environment round you and how it is changing in different seasons- dificulty 1

1. **Big Idea**

   1.1. Why do we propose this activity? students will have the opportunity to get engached in explore the plants round the school , their region and compare it with other countries in Europe. The proposal will focus on student-centred inquiry processes where students observe, raise questions, reason, discuss results with pairs and communicating their new understanding We' ll use the BSCS 5E Instructional Model which includes engangement, exploration, explanation, elaboration and evaluation

   1.2. Further work on key to identify the species we will help the students of Secondary to identify different types of plants. Students training other students.

   1.3. Objetives and results
   - To develop in students the interest in carrying out real tasks, autonomous and collaborative learning.
   - To help students learn to take control of their own learning by defining goals and monitoring their progress in achieving them
   - Improve in students preconceptions about how the world works
   - Improving in students: 1. understanding facts and ideas in the context of a conceptual framework; 2.organize knowledge being able to apply it in different tasks.3. Developing scientific reasoning, practical skills and complexity and of empirical work
   - Using ICT for learning and familiarize students with the use of different resources (iPad, Apps, Mobile,
   - Get to know the biodiversity of their immediate environment
   - To compare the biodiversity of Galicia with other European areas and analyze how climate, geographical area influence in the growth of plants
   - Promote respect for the environment through knowledge of the environment round them.
   - Encourage discussion and exchange of ideas among students.
   - Be able to synthesize the acquired knowledge

   1.4. Decisions on how to integrate the lesson in the curriculum. It is a lesson in the curicula of year 1 Secondary.
   Decisions on what ICT tools we will use. We'll use the project app and the maps in the platform

   1.5. Teacher's sheet (Attached is the teacher's sheet)

   1.6. Rubric (The is encolsed)

2. WebQuest

Introduction

Students year 1 Secondary will have to explore the plants near the school and area, for this we will focus on the trees and plants. You're going to collect data on them and observe the changes that occur in certain periods of time and will compeair it with other regions in Europe specially our partners' regions.

This will be support with in resources such as the project apps and maps that will contribute to gain information on "Biodiversity", classification of living things " "Keys to identify different Plants types"...

Task

We propose students to explore the plants round them and use the project App to identify different types of plants. Students will become engaged in acquire new concepts through the use of short activities that promote curiosity and elicit prior knowledge.

You will Collect information on trees and plants in the environment round the school and region and be able to communicate it by different means. Students will compare the biodiversity of the Galician environment with other countries through the project platform.

The explanation phase focuses students' attention on a particular aspect of their engagement and exploration experiences and provides opportunities to demonstrate their conceptual understanding, process skills, or behaviors, so that students will produce a final product that includes Classification of plants from dichotomous keys and other means.

 Students will classify some varieties of plants and trees and perform classification of species in the area to show their collegues all about the Biodiversity in Galicia. They can use the ICT tools they like.

Process

Work organization:

1 Students explore the biodiversiy in their area. The select some plants and they apload them in the project App, in aditions all students become researchers (the process will have the following fases: engangement, exploration,explanation, elaboration and evaluation) Students will capture images and collect information on trees and plants in the environment round them and take into account (What happens to your trees and plants at this time?). Each student scores and photographs and use the project App, if possible, each of the botanical varieties, to ensure that all aspects are addressed, students analyzed as climate, geographical area influence the growth of plants. The work will be done in groups. Each group will present their final product to the class

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Students will deabate on different teamworks.

Rubric

<table>
<tr><td colspan="5">Biodiversity round us (plants)</td></tr>
<tr><td></td><td>Development 1</td><td>Improvement 2</td><td>Advanced 3</td><td>Mark</td></tr>
<tr><td>Learning to learn</td><td>I don't feel positive about learning I don't like solving problems I can't use strategies to make my learning easier</td><td>I don't feel positive about learning I don't like solving problems When I find a difficult task I don' try to go on I 'm able to use strategies to make my learning easier</td><td>I feel positive about learning I don't stop when I face difficulties I know about and can use strategies to make my learning easier</td><td></td></tr>
<tr><td>Search, collect and select information</td><td>The information found is not relevant, (pictures are not the best ones) it's not well orgaized , There are some mistakes in the collection The description was poor and some data are missing</td><td>The information found was ok , but it doesn't include the most important elements, All pictures belong to what we ask Good description, but it´s allmixed</td><td>Very good research, relevant data. The pictures are the most important in the impresionism. Very good description, relevant data</td><td></td></tr>
</table>

Team work	Poor cooperation in group. Most of the work was done by only one team member	Good cooperation in group. Participation in the search has been unequal, as the contributions to the presentation	Los contenidos son suficientemente sólidos, claros y precisos	
learned contents	Lack of clarity in the contents learned and poor vocabulary	The learned contents are accurate, but with little degree of depth Insufficient clarity of ideas	The learned contents are solid, clear and precise. Accuracy in terminology and ideas	
Final task	Scarce adjustment requested. Lack of clarity and little processing,	There is some evidence of creativity. Task performed correctly and the scientific vocabulary is appropriate.	I can generate appropriate ideas, integrating into them prior knowledge Technically very successful implementation of the final task	
Pooling and final debate	There has been no information exchange and sharing between groups Pooling and debate have been significantly inadequate	Sharing and discussion have been somewhat insufficient. The working environment in the groups has been adequate	There has been sufficient exchange of information between groups and lively debate	

3. Reflection on experimentation

3.1. We analyze the consistency of the proposed activities and tools in relation to the objectives, competenccias and transferable skills we intend to develop.

3.2. Justify the added value of ICT tools used.

3.3 Provides opportunities for teachers to evaluate student progress toward achieving the educational objectives

Teacher's sheet

Observe the biodiversity of the environment and how it is changing in a certain period of time- year 1 SECONDARY

ACT	Activities What we are going to do	Objetives Main aims	Transversal skills	Students activities	Teacher's Activities	Tools With what?	Results What do we create?	How and with what instrument do we assess?
1	-Propose students tasks(exploration) that helps them become engaged in a new concept through the use of short activities that promote curiosity and elicit prior knowledge -Collecting information on trees and plants in the environment round the school and region and be able	- Use exploration to help them use prior knowledge to generate new ideas, questions and possibilities, and design and conduct a preliminary investigation -Use ICT for the study of biodiversity - To familiarize students with the use of different resources	-Selection Information - Communication Information - Creativity - Improve digital Literacy	-Select relevant plants in the environment round them and provide information on them with multimedia resources	-To guide students in the development of activities. - Helping students to use the error as a resource	-Móvil -iPad - Notebook	Exploration provide students with a common base of activities within which current concepts processes, and skills are identified and conceptual change is facilitated -Information about biodiversity using multimedia resources	-Active participation Teacher's observation

	to communicate it by different means. Compare the biodiversity of the Galician environment with other countries Content Use project app to get a wide knowledge of the plants.						Compare the biodiversity of the environment with other c	
2	Explanation phase focuses students' attention on a particular aspect of their engagement and exploration experiences and provides opportunities to demonstrate their conceptual understanding, process skills, or behaviors	Provides teachers opportunities to directly introduce a concept, process, or skill. Being able to communicate information about different topics using ICT	Get to know how to combine written and graphic information for efficient communication.	Select information and communicate knowledge through Symbaloo	Review the content developed by students	Symbaloo Internet App and project platform	-Learners explain their understanding of the concepts adquired -Students provide information on "Biodiversity", classification of plants ""	-Active participation. -Use vocabulary adequately -Build up correct concepts and expres them clearly

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	Use the project App and Platform to get to know the biodiversity round us.						Keys to identify different types of plants "...	
3	Classification of plants from dichotomous keys and other means classify some varieties of plants and trees and perform classification of species in the area.	Getting to now the biodiversity of the nearest environment - Galicia. Compare it with other partner countries	Identify relevant information Teamwork	Match plants and trees in the area with each one of the species Identify changes in plants according to the year seasons and Earth areas	Improve in students curiosity and creativity Observe, review and give feedback to the student activities	Móviles Note-books iPads	The biodiversity of the area and plants classification	-Buld up a clasifacatio of plants in the area , that contributes to identify different type of plants
4	Teachers challenge and extend students' conceptual understanding and skills.	the students develop deeper and broader understanding, information, and adequate skills. Students apply their	Make the presentation, discuss and assess the final task	Expose Debate Assess Make conclusions	Observes monitors arises curiosity in students	Pizarra digital Aple TV Ipad	-Understanding facts and ideas in the context of a conceptual framework Present and debate on produced artícle	Pair assessment

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	Presentation of the final task and discussion Pair assessment	understanding of the concept by presenting a final task Promote respect for the biodiversity (plants) through knowledge of the environment round us. Encourage debate and the exchange of ideas among students						
5	Individually, each makes a conceptual map that summarizes the content of the article	Getting to know how to synthesize the knowledge acquired	each student produces a conceptual map that collects the information contained in the article	Transfer their knowledge to a mind map	Observes asks questions Arouses interest	Digital board notebooks computers	Express knowledge about the biodiversity of the area through a mind map comparing it with biodiversity of	Individual, formative assessment The rúbrica Encourages students to assess their understanding and

	Other assessment tasks will be set by the teacher						other countries and ar	skills