Shoal fish

Tasks

Your class is going to create a Shoal fish with augmented reality using Bippar. You are going to introduce the fish that we can see in a tank the Aquarium Finisterrae in A Coruña. Please provide all the informationthat is necesary to get knowledge about the about the species that live in the aquarium.

Learning goals

- Be able to obtain knowledge to generate questions and analyze the characteristics, knowledge and behavior of fish and link them with the survival of the species.
-Promote reflection on feedback between peers and design together the presentation of a species using Augmented Reality.
- Create a screen that offers information about a school of fish that represents an aquarium tank
Offer visible and reallistic information using Augmented Reality.

Skills and competences

– **Targeted**

-Working in groups playing different roles.
-Explain and debate with fellow group.
- Use technology tools.
- Manipulative skills

Emerging

-Share knowledge with others.
-Learn to learn
- Science competence
- scientific method

Expected leaning outcomes

Students will achieve the eight practices of science that the *Framework* identifies as essential for all students to learn:

1. Asking questions
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations.
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information.

Digital Tools

Blippar

An editing tool

Internet

Vocabulary

Shoal, survival, texture, technique, collaboration, adaptation, Augmented Reality behaviour, light, colour, effectiveness, motion, streamline, drag, space, risk, assessment, habitats, motion through fluid, material,

Know How

How are we going to do it?
What do we need?
How will it work?
How will we make it with Augmented reality?
Is it working?
What we want it too?
Are we ready to display it and share it with others?
Which format are we going to use?

Explore

Students should explore patterns of behaviour in animals (fish) by posing, selecting or being given scientifically orientated questions to investigate. **They should then** Plan a visit to an aquarium to observeanimals in their natural habitat at some point over this first

Analyse & Explain

Students should begin to analyse the data they have gathered by discuss it with each other and their teacher. They should begin to consider the possible explanations
Students will be asked to create information about what they've found out about a fish
Students should work collaboratively to begin to apply their understanding to start to consider how they can create a visual representation that moves authentically and accurately. Students will propare a template- with the information they need

Implement

The aim of this phase is for students to develop their idea of how to create an accurate shoal of fish as well
as to consider fish position and how this influencesthe overall appearance of the shoal. Students should
create their blipps to represent each fish

Communicate results

Students will install produce their blips , when they are ready to present to the calss or the wider school community to share their explanation of this sort of behaviour in fish and to justify their choices of material and display
At the class a gropup of five will assess the whole process
Students then need to reflect collaboratively on the effectiveness of the materials used in representing fish in a Tank

Shoal fish

Title: Shoal Fish
Teacher: Milagros Trigo
School: CPI Plurilingüe O Cruce Class: 2º A
Task: Explore the different animals that grow in the Aquarium Finisterrae pools. Choose one of the animals and do a research work about the animal. Create information using different formats: video, link, photographs, recipes, fish description... Using Blippar, create a blipp about your chosen fish, with all fish create your Class Shoal fish Publish your work in Internet

Phases of the project

The teacher will assess all project phases

Explore	document	develop	communicate results

1. Make observations in the aquarium of your fish.

Asking questions and defining problems. Students identify the task they have to carry out. Ask questions and try to identify them Example Where does the fish live? describe the fish charasteristics, Is it apreciaed in gastronomy? ...

2. **Planning and carrying out investigation**s

3. Implement the blipp and share your blip with other students in your class with all your blipps make a Shoal

4. Communicate the results. using the blip (They can do it individual or In groups of four, they present a group of fish)

From the beguining document the activities they have done and the provide this documents to the teacher.

Students do an exhibition with all blipps. Other students can visit the exhibition using the ohone or iPad

The teacher provides a Rubrica to students also do assesment.

The teacher will use a registration form to asses students

Project rubrica				
Student; Project:	1	2	3	4
Defining the problem. Ask questions that arrise from examining modles to clatify or seek information.				
Planning and carrying out investigations. Plan an investigation individually and collaboratively, and in the design: identify independent and dependent variables and controls, what tools are needed to do the gathering, how measurements will be recorded, and how many data are needed to support a claim.				

Conduct an investigation and/or evaluate and/or revise the experimental design to produce data to serve as the basis for evidence that meet the goals of the investigation				
Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today. Apply scientific reasoning to show why the data or evidence is adequate for the explanation or conclusion. Design, evaluate, and/or refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and tradeoff considerations.				
Compare and evaluate competing arguments or design solutions in light of currently accepted explanations, new evidence, limitations,...				
Obtaining, evaluating, and communicating information .				

Communicate scientific and technical information about a proposed boat, tools, process, system) in writing and through oral presentations				
Communicate scientific and technical information or ideas using blippar (in multiple formats, including orally, graphically, textually, and mathematically.				

Teacher's observation sheet

Explaining Phenomena or Designing Solutions	Explain the evidences	Evidence of Quality?	Suggestions for improvement
:		☐ None ☐ Inadequate ☐ Adequate ☐ Extensive	

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