Responsible predator

Tasks
Students have to search information about the essential role of predators in the oceans and make a presentation with the conclusions. Them they have to became in a responsible predator learning the minimum consumption size of species and disseminate this information through a mural with QR code and a computer game made by mblock.

Learning goals

- Search information in internet, books… about predators in the oceans.
- Analise the information and make conclusions.
- Change the idea about predators as a monsters and be aware of their important role in the ecosystems.
- Be aware of our role as predators and get knowledge to became in a responsible predators.
- Know the principal fish species which we use to eat and the minimum consumption size.
- Learn to make a computer game as a learning tool.

Expected leaning outcomes

Integrate in the curriculum Ocean Literacy, creative ICT,

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.

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

Digital Tools

mblock

Internet

powerpoint

RQ code

Explore

Students should explore about the role of predators in the oceans searching information in internet. And search information about the minimum consumption size of species.
They should then Plan a visit to an aquarium to observe animals in their habitat, take photos and make videos.

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 predator and collect the conclusions in a powerpoint.
Students should work collaboratively to begin to apply their understanding to start to consider how they can create a game to teach others students to be a responsable predator.

Implement

The aim of this phase is for students to develop a powerpoint to explain the predators´s important and make the computer game by groups. The students of 3º grade will designing the mural drawing the different species and making each fish with recycled materials being aware the problem of contamination in the oceans. the mural will be completed by students 6º grade who will create some RQ with information about species or the damage caused by pollution.

Communicate results

Students will present to others calss or the school their conclusions with the powerpoint, present the game to learn to become a responsible predator and encourage the others to visit the mural and learn more about species and the oceans care.

Title: Responsible Predator
Teacher: María Pazos and Lucía Pérez
School: CPI Plurilingüe O Cruce   **Class: 6º**
Task: Explore the different animals that grow in the Aquarium Finisterrae pools and observe the main species we use to eat. Observe too the shark "Gaston" behavior. Do a research work about the oceans predators and make conclusions in powerpoint. After that students of others grades, must to do a mural which shows the species and the information about them this mural will be make by recycled materials, students of 6 grade will create a RQ code which will include information about each fish or information about recycling. Then students will crate a computer game using mblock where a predator has to eat only the fish which respect the minimum consumption size, then win points but if the predator fish eats a prey which doesn´t respect the minimum size so they lost lifes. The fish´s size will be write as a math operation so the game can be use by students of 1º,2º grade to practice mental calculation.

Phases of the project

The teacher will assess all project phases

Explore	analize, explain and document	Implement	communicate results
Teacher will guide students about search information ands prepare the aquarium visit	Teacher will guide students about analyze data, make conclusions, organice the collaborative work…	To make the computer game, teacher will teach them the use of the software mblock, and guide the steps to create the game. To make the mural, students have to search each specie, draw the fish and search information about the minimum consumption size, the scientific name, and the pollution problem in the oceans. The teacher will guide all process assistance students show them different ways to search information in internet, to find a specific fact… Students will learn to record a video, upload to youtube and create a RQ code to show the information.	Before show their works to others students, They have to practice how do it and the teacher will help them how speak when there are public, how to use de pictures… Students do an exhibition to show how to play whit mblock game called "Responsible Predator"

when students work with mblock program they have to use the knowledge of maths some of learnings that are includes in our curriculum, for example:

B3.3. Investigar as características de ecosistemas do seu contorno mediante a recollida de datos, facendo hipóteses, empregando diversas fontes de información e presentando os resultados en diferentes soportes, mostrando interese pola rigorosidade e hábitos de respecto e coidado cara aos seres vivos.

B2.10. Números positivos e negativos.

B3.11. O ángulo como unidade de medida dun ángulo. Medida de ángulos.

B4.3. Sistema de coordenadas cartesianas. Descrición de posicións e movementos.

4. Communicate the results. using the blipp (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.

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	