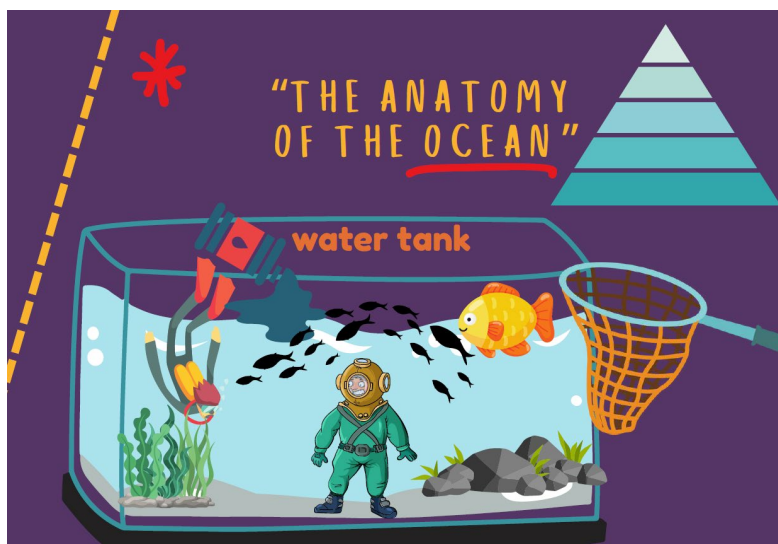


ACTIVITY: The Anatomy of the Ocean

Understanding Underwater Ecosystems

4th, 5th and 6th Grade Level



What you will need to simulate a controlled ecosystem:

- A bucket or tank
- Water
- Sand
- Salt
- Oil
- Some toys representing animals
- Any natural element you can find around you for the activity – rocks, sediments, shells, seagrass...
- Magnifying glass.

Goal:

- understand how ecosystems function
- how human actions can disrupt ecosystems: pollutions, oil spills, microplastics
- Interaction of materials and elements on ecosystems

Activity:

Prepare the tank with kids adding with them the elements and explaining what each one is representing and what the impact of each can be on the ecosystem.

1. Prepare the Tank:

Involve the kids in setting up the tank. "What do you think each element represents in an ocean ecosystem?"

- "What might live on the ocean floor (sand), in the water, or on the surface?"

2. Add Salt to the Water:

Ask the kids to observe how the salt dissolves. "What happens when salt mixes with water? How do you think this is similar to what happens in the ocean?", "Can you think of other things that dissolve in the ocean?"

3. Add Sand, Rocks, and Natural Elements:

Let the kids place sand and other natural elements in the water. "What do these elements represent in the ocean?", "What animals might use these as their homes or hiding spots?"

4. Introduce Oil to the Water:

Slowly add a small amount of oil to the surface. "What do you notice about the oil? Why does it float on top?", "How might this affect marine animals and plants?", Using a magnifying glass, ask them to observe how the oil creates a film. "What might this film do to underwater life?"

5. Simulate a Fishing Net Hazard:

Use a small piece of netting or string to demonstrate how animals can become entangled. "Let's pretend this is a fishing net left in the ocean. What happens when a fish or turtle gets caught in it?", "How could we prevent this from happening in real life?"

6. Reflect on the Ecosystem:

Once the tank is complete, discuss with the kids: "Is this ecosystem healthy or unhealthy? Why?", "What would you do to make it healthy again?"

Important things to note or typical curiosities that this activity arises:

Encourage kids to connect what they see in the activity with real-life examples.

Use storytelling to make the activity relatable: "Imagine this tank is the Ambracian Gulf, where many marine animals live. What happens if pollution enters their habitat?"

Note about the advantage of doing this activity outside:

We recommend doing this activity outside in order to be able to include the environment and the natural materials in the learning activity and make reference to the environment the kid is living in.

- Being outside allows children to collect natural materials, like leaves, shells, or stones, enriching the activity.
- It helps kids connect their learning to their immediate environment, fostering a sense of responsibility.
- Observing the natural surroundings reinforces the importance of protecting ecosystems near them.