

Plankton in the Air

OBJECTIVE

Students will identify places that animals live. Students will identify that some animals can live in more than one habitat.

PURPOSE OF ACTIVITY

Apply Skills

21st CENTURY SKILLS

Critical Thinking, Collaboration, Creativity

COGNITIVE LEVEL

Strategic Thinking, Skills and Concepts

CLASS TIME

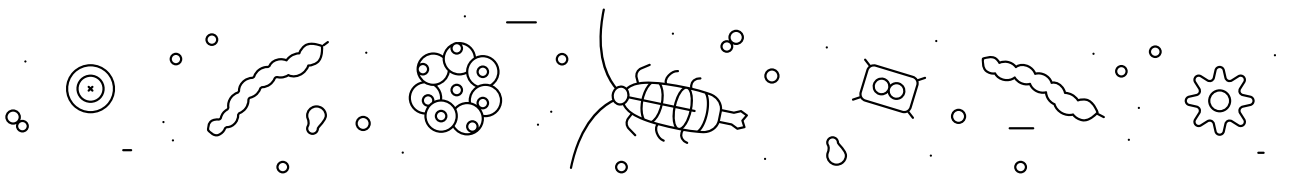
15 minutes

MATERIALS

- Bubble liquid or dishwashing liquid
- Bubble blower (suggested)
- Photos representing filter-feeding organisms

Procedure

1. Gather students together and explain how energy moves through the food chain. Plants make energy and grow from the sun. Herbivores (plant-eating animals) eat the plants. Carnivores (meat-eating animals) eat the plant-eating animals. Other carnivores may eat them.
2. Describe plankton, and its role in the environment. Explain how plankton creates the base of many marine food chains. You can ask a student for a 'favorite sea creature,' and describe a food chain from the sun to that animal. For example, if a student says 'shark,' you can create the following food chain: sun-plankton-shrimp-little fish-big fish-shark. Describe how whales use great gulps of sea water and their special teeth (baleen) to gather up the plankton. Explain how clams and oysters draw water into a siphon to do the same. Explain how jellyfish use tiny tentacles to sting and capture plankton, etc.



3. Once the students have a basic understanding of the role of plankton in the marine environment, introduce the rules of the game. There is no running, no pushing, etc. Explain that the students will become the filter-feeders. They will mimic the filter-feeders as follows:
 - **Whales** – cross your arms over your face and open and close them like a giant mouth
 - **Jellyfish** – put both hands on your chin and wiggle your fingers like tentacles
 - **Clams** – sit on the floor, cupping hands together like two shells (sitting on the floor represents the fact that most bivalves cannot chase prey)
4. Use these motions to “become” these filter-feeders. Once the bubbles (plankton) arrive, we can “eat.” Practice the motions with the students until they can change from one to another with ease.
5. Have the students pretend to start to float or swim in the sea.
6. Once the students are adrift, start blowing bubbles. The children should continue drifting. Tell the students that the bubbles represent plankton drifting on the currents. Once there are a good number of bubbles, tell the students that they can now be whales and “feed” on the plankton. Remind them that they should pop the bubbles with their arms and hands, not their mouths. After a short time, tell the students to become jellyfish, then clams. Go back to whales, jumping from one motion to another.
7. After 10-15 minutes, bring the students back to the starting point and analyze which strategies were best or worst.

CRITICAL THINKING QUESTIONS

Did all of the plankton get eaten?

No. Some plankton always escapes.

Could the filter-feeders eat without moving?

Yes, but they were dependent upon eating whatever plankton happened to float their way.

Adapted from: https://www.dec.ny.gov/docs/administration_pdf/lpplankton.pdf