

A Shrimpy Home



Objective

Students will demonstrate how changes in an environment can affect the survival of an animal.

Background

Animals constantly adapt to the changing world around them. Sudden changes in weather temperatures, food supplies, or physical environment can cause significant decreases in animal or plant populations. Some animals adapt well to a variety of environments while others depend on specific food sources or living conditions. Some animals can change homes or food items while others can't. For example koalas eat only certain eucalyptus leaves while skunks scavenge for and eat almost any type of food.

Materials

For each student group:

- 2 teaspoons (4 gm) brine shrimp eggs (available from biological supply company or aquarium store)
- 6 liters of bottled drinking water
- coarse salt
- three 2-liter plastic soda bottles with tops cut off
- magnifying lens
- waterproof markers
- measuring teaspoon

For teacher:

- 2 teaspoons (4 gm) brine shrimp eggs
- 2 liters of bottled drinking water
- coarse salt
- one 2-liter plastic soda bottle with top cut off

Action

1. Discuss as a class what an animal needs to survive (food, shelter, water). What happens when an animal can't find one of these?
2. Divide your class into student groups and distribute the brine shrimp eggs. Have students touch a few. Explain that these are eggs and, given the proper living conditions (oxygen and salt water), they will hatch.
3. Distribute soda bottles and markers. Students should label bottles as numbers one, two, and three.
4. Have students fill bottles with water. Explain that the brine shrimp eggs need salty water and students should estimate how much salt to add to each bottle. Students write on the front of each bottle how many teaspoons of salt they added. Each bottle should have a different concentration. (While student groups are working, assemble one additional bottle following the water directions given on the brine shrimp eggs package.)
5. Have students stir water and add eggs. Set bottles together on a table out of the sunlight. (Best hatching at 80°F.)
6. Observe for at least five days. Students can use magnifying lenses for better viewing. Which salt concentration seemed to support more brine shrimp? What was the best environment?