Chapter Science Investigation

Investigating Brine Shrimp

**What You Need**

- Glass or plastic container that will hold at least 2 L of water
- Kosher or noniodized salt
- Brine shrimp eggs
- 500-mL beaker
- Plastic spoon
- Water
- Dropper
- Hand lens
- Petri dish

**Find Out**
Do this activity to see how brine shrimp grow.

**Process Skills**
- Measuring
- Predicting
- Observing
- Communicating

**Time**
- 10 minutes the first day
- 20 minutes three days later
- 10 minutes every other day for two weeks
**What to Do**

1. **Measure** 2 L of water and put it into the container. Allow the water to sit for three days. Stir the water occasionally.

2. Dissolve 5 level spoonfuls of salt in the water. Add a half spoonful of brine shrimp eggs to the salt water. Place the container in a warm place.

3. After a day, use the dropper to remove a few eggs from the water. Put the water and eggs on a petri dish, and use the hand lens to **observe** them closely. **Record** the day and a description of the eggs on your chart.

4. **Predict** how the eggs will change.

5. **Observe** a drop of water two days later to see how the eggs changed. **Record** the changes on the chart.

6. Continue to **observe** and **draw** a picture of your observations every other day for two weeks.
**Investigating Brine Shrimp**

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<thead>
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<th>Time</th>
<th>Observations</th>
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<td>Week 1 Day 1</td>
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Conclusions

1. When did the eggs hatch?

2. How did the brine shrimp change after they hatched?

New Questions

1. What other animals hatch from eggs like brine shrimp?

2. Write a new question you have about how brine shrimp grow.
Comparing Animal Life Cycles

Use these questions to help you organize the information you find about your animal. Add your own questions as you think of them.

What animal did your group choose?

What are the stages of the animal’s life cycle?

How long does each stage last?

How long does the average animal live?

How do the adult animals interact with their young?

Add your own questions.

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Conclusions

1. How is your animal different from the other animals chosen by your classmates?

2. Compare your animal’s average life span with the others. Is it shorter or longer than the others?

3. How does your animal’s size compare with the size of the other animals?

Asking New Questions

1. Do you think the size of an animal and its life span are related? Explain.

2. What are some animals that have a life cycle similar to your group’s animal?
Activity Journal
Lesson 2 • Carbon and Water Cycles

Name __________________________

Activity

Observing Transpiration

What do you predict will happen to the plant leaves?

What did you observe about the bag and the plant? Draw or write what you discovered.
Conclusions

1. What happened in the bag?

2. Why did this happen?

Asking New Questions

1. Predict what would happen to the plant leaves if you kept the plastic bag on the stem.

2. Predict what would happen if you moved the plant into a dark area.

3. Design investigations to test your predictions.
Food Webs

Write consumer or producer next to each of these.

Plants

Herbivores

Predators

Omnivores

Scavengers

Decomposers

Give one example for each of the above: for example, a wolf is a predator.
Activity Journal
Lesson 3 • Energy Flow

Name ______________________________

Conclusions

1. What happened to the food web when some of the cards were removed?

2. What would happen in nature if one of the animal cards were not attached to a food card?

Asking New Questions

1. What organisms do you depend on in your food web?

2. What would happen to your web if the orange sun circle were not there?