



OBSERVING THE EFFECTS OF POLLUTION ON AQUATIC ECOSYSTEMS

Name: _____

Grade Level: _____

Date: _____

Experiment #: _____

QUESTION

How does pollution affect living things in an aquatic ecosystem?

MATERIALS

- 3 clear containers or jars (at least 1 liter size)
- Water
- Aquarium gravel or sand
- Aquatic plants (e.g., Elodea, hornwort, or waterweed)
- Small aquatic animals (e.g., daphnia, snails, or mosquito larvae)
- Pollutants (choose one or more):
 - Soil or mud
 - Detergent (1–2 drops)
 - Vegetable oil (1–2 drops)
- Dropper or spoon
- Timer or clock
- Notebook and pencil

SAFETY

- Handle all living organisms gently.
- Do not ingest any water or materials.
- Wash hands after the experiment.

HYPOTHESIS

What do you think will happen to the aquatic ecosystem when pollutants are added to the water?

PROCEDURE

1. Set up three containers as follows:
 - Container A (Control): Add clean water. Do not add any pollutants.
 - Container B: Add clean water and one type of pollutant (e.g., soil).
 - Container C: Add clean water and a different type of pollutant (e.g., detergent or oil).
2. In each container, add a layer of gravel or sand.
3. Add the same number of aquatic plants to each container.
4. Add the same number of aquatic animals to each container.
5. Let the containers sit in the same location (same light and temperature).
6. Observe the containers at 0 minutes, 30 minutes, 1 hour, and 24 hours.
7. Record your observations in the data table below.

WHAT TO OBSERVE

- Water clarity (clear, cloudy, very cloudy)
- Behavior of aquatic animals (active, slow, floating, at bottom, etc.)
- Condition of plants (upright, drooping, color change, etc.)
- Any other changes you notice

DATA TABLE

Time	Container A (Control) No Pollutant	Container B (Pollutant: _____) Describe Observations	Container C (Pollutant: _____) Describe Observations
0 minutes (when set up)			
30 minutes			
1 hour			
24 hours			

CONCLUSION

1. What happened in each container?

2. How did pollution affect the aquatic ecosystem?

3. What can we do to reduce pollution in lakes, rivers, and ponds?

THINK FURTHER

If you could test another type of pollutant, what would it be and why?

