



In a Drop of Pond Water

Introduction

In the book *Jo MacDonald Saw a Pond*, author Mary Quattlebaum introduces children to the plants and creatures of a pond ecosystem. In this activity and its related connections, children use observation and several scientific tools to examine a drop of pond water.

Materials Needed

- ◆ Vial of pond water
- ◆ Scientific notebook (3 pieces of paper stapled)
- ◆ Pencils
- ◆ Magnifying Glass
- ◆ Microscope
- ◆ Slide and slide cover

Procedure

1. Tell children that they are scientists and will be making careful observations of a drop of pond water using three types of scientific tools (eye, magnifying glass, and microscope).
2. Ask them to draw one big circle on each page of the scientific notebook.
3. Put a drop of pond water on a slide or piece of clean, clear plastic. For the first observation ask children what they see or "observe"; have them draw their observations inside the first circle in the notebook. The eye is usually the scientist's first tool.
4. For the second observation, have children observe the drop with a magnifying glass and draw what they see inside the second circle in the notebook.
5. Place a drop of pond water on a slide with the slide cover. Have children observe with microscope and draw what they see inside the third circle in the notebook. This is the third observation.
6. Have children compare their different observations. What are the similarities and differences between the three drawings?
7. Explain that Jo MacDonald was able to see many pond plants and creatures with her naked eye. Some creatures are so tiny, though, that you can see them only with a microscope. But they, too, are part of the pond ecosystem. Tiny plants (algae) and creatures such as hydras, protozoa, and worms are an important food source for pond creatures.

Key Concepts

- ◆ Plan and conduct a simple systematic observation or investigation.
- ◆ Use simple instruments such as magnifier and microscope to gather data and extend the senses.
- ◆ Communicate investigations that might be drawn or spoken as well as written.

For standards correlation please see our website.

Nature Connections

- ◆ Have children examine a drop of pond water to which a drop of bleach or other chemical has been added. Repeat steps 2-6 in procedures above. Have them compare their observations/drawings of pond water and pond water with bleach. Discuss with children: How might pollutants and chemicals affect the microorganisms that are part of a pond ecosystem? And then, what might be the effect upon larger creatures that depend on these microorganisms for food?

Additional Resources

Pond Life Video Gallery

<http://www.microscopyu.com/moviegallery/pondscum/>

Pond Life Activities

<http://42explore.com/pond.htm>

Pond Life Basics

<http://sciencespot.net/Pages/kdzbiopond.html>

