

Lesson Nine

Microorganisms—Under the Microscope (Protista)

- Standard 5:** Students will understand that microorganisms range from simple to complex, are found almost everywhere, and are both helpful and harmful.
- Objective 1:** Observe and summarize information about microorganisms.
- Indicator a:** Examine and illustrate size, shape, and structure of organisms found in an environment such as pond water.
- Indicator b:** Compare characteristics common in observed organisms (e.g. color, movement, appendages, shape and infer their function (e.g., green color found in organisms that are producers, appendage help movement).
- Indicator c:** Research and report on a microorganism's requirements (i.e. food, water, air, waste disposal, temperature of environment, reproduction.)

Procedure

1. Go to the lesson—*Once Upon a Pond* (From the Elementary, CORE Academy, page 8-16).
 - a. Read the “Background Information” about microorganisms.
2. Do the activity *Once Upon a Pond*, page 8-18
 - a. Three or four days before this activity, get some pond water and put it in a jar of sorts and put grass or hay in it. The grass or hay expedites the growth of the microorganisms.
 - b. Do the activity as presented in the activity.
 - c. Have the students fill out the activity pages as given on pages 8-23, 8-24, 8-25, and 8-27.
 - d. Pass out to them page 8-29 to see if the students can recognize any of the microorganism.
 - e. Ask questions that come to your mind about the microorganisms.
 - i. Can you see some that help them to swim?
 - ii. Can you see any that are on the sheet?
 - iii. How do they look?
 - iv. Are some big and some small?
3. You may want to do the soil activity as a class assignment or a homework family activity on pages 8-27 and 8-28.
4. Pictures of protists.
 - a. <http://www.youtube.com/watch?v=3zLJvumsUo8&list=PLE4FFBF56A3EAF5>
 - b. <http://www.youtube.com/watch?v=hC0jeNUyQ9s>

Life in a drop of water

- c. https://www.youtube.com/watch?v=_cpBK2t0Yeo
- d. https://www.youtube.com/watch?v=tIMJWWpOrjw&feature=em-sub_digest-vrecs