

Microbes On My Mind

Summary

Students will observe and read about microorganisms so that they can create an information book on microorganisms.

Group Size

Small Groups

Materials

- *Kids Discover Magazine--Microbes*
(one per student)
- [Microorganism Words/Phrases](#)
(cut out and in an envelope, one set per group)
- Books on microorganisms
- Protozoa (from pond water, hay infusion, or purchased in advance)
- Depression slides
- Cover slips
- Microscopes
- Eye dropper

Additional Resources

Books/Magazine

- *Kids Discover Microbes Magazine*
; ISBN 1054-2868
- *Slime Molds and Fungi*
, by Elaine Pascoe; ISBN 1-56711-182-3
- *Single-Celled Organisms*
, by Elaine Pascoe; ISBN 0823963128
- *Fungi*
, by Elaine Pascoe; ISBN 0-8293-6313-6
- *Microorganisms: The Unseen World*
, by Edward R. Ricciuti; ISBN 1-56711-040-1
- *A World of Microorganisms*
, by Robert Snedden; ISBN 1-57572-241-0
- *My Health--What Are Germs?*
, by Dr. Alvin Silverstein, Virginia Silverstein, and Laura Silverstein Nunn; ISBN 0-531-16640-6

Background for Teachers

Microbes are small living forms of life that cannot be seen without the help of a microscope. As a result, these tiny one-celled organisms are known as microorganisms. Microorganisms are as real and alive as you are. They eat and grow; they reproduce and die.

Microbes can be found everywhere. They live in almost all natural conditions where moisture is found. They may be found in fresh water ponds, soil, salty water, hot springs, or snow drifts. They are present on animals, people, and even in the air we breathe.

Intended Learning Outcomes

1. Use Science Process and Thinking Skills

4. Communicate Effectively Using Science Language and Reasoning

Instructional Procedures

Invitation to Learn

Ask students what they know about microorganisms. What are they? How do they move? What do they eat? Where do they live? What is their purpose? Create a class cluster on the ideas the students give you. (Display the cluster throughout the unit so students can refer back to it and see what they might change or add.)

Instructional Procedures

Day One

Divide students into groups of four to five.

Hand each student a copy of the *Kids Discover Magazine—Microbes* and an envelope with the cut out *Microorganism Words/Phrases*.

Have each group read the magazine pages and create their own cluster.

Collect clusters so groups can add more details later.

Day Two

Collect protozoa from local pond water by making a hay infusion, or order them in advance.

Using an eyedropper, suck up some protozoa and squirt it into a depression slide, then cover with a cover slip.

Have students use a microscope to observe protozoa.

Ask students to draw what they observe and add drawings to their clusters in the appropriate area.

Look at bacteria slides under the microscope and draw observations; add to cluster.

Day Three

Have students get back into their groups.

Pass out a different microorganisms book to each group.

Have groups read through the books and add details to their clusters. Have them look for characteristics of organisms (e.g., color, movement, appendages, shape, size, etc.) and requirements of microorganisms (i.e., food, water, waste disposal, temperature of environment, reproduction, etc.).

After about 15 minutes, have groups exchange books and see if they can find more details.

Exchange books until each group has enough information to create a detailed cluster.

As a class, discuss how group clusters compare to the class cluster made the first day. What are the similarities? Differences?

Day Four

Have students use their clusters and drawings to create an information book on microorganisms.

Extensions

Integrate with social studies and the Black Plague.

Use Venn Diagrams to compare characteristics in observed organisms.

Create a PowerPoint presentation on microorganism requirements.

Family Connections

Have students quiz family members on what they know about microorganisms.

Have students read their microorganisms book to their family.

Look in a grocery store advertisement and write down all the foods in the ad that have a relationship to microorganisms. Remember foods like spaghetti sauce may contain mushrooms and foods containing dough have yeast.

Assessment Plan

Informal assessment includes the clusters, drawings, and observations of groups during the activities.

Formal assessment is the microorganisms book.

Authors

[Utah LessonPlans](#)