

Name:

Date:

Core:

## Microorganisms

**Part 1: Based on Discovery-ed video (Life in a Drop of Water – <https://www.youtube.com/watch?v=cpBK2t0Yeo> )**

**<https://app.discoveryeducation.com/search?Ntt=LIFE+IN+A+DROP>**

- What do we call a life-form that is so small we need to look at it through a microscope in order to see it?
- How many microorganisms can live in one drop of water?
- What do humans have in common with the smallest microorganisms?
- What is a cell?
- How many cells does it take to make a living organism?
- How many cells are there in a human body?
- What parts do all cells contain, regardless of what organism they belong to?
- What are the smallest microorganisms you can see with an ordinary microscope?
- Why are bacteria important?
- What is another important food source for many pond organisms?
- What are algae?
- What are protists?
- How do algae obtain their food?
- What is photosynthesis?
- What is the green substance found in most algae?
- What are clusters of algae called?
- What are protists that possess flagella called?
- What are protozoa and what does their name mean?
- What are protozoa that possess cilia called?
- What structures in protozoa allow them to take in and expel water?
- How do most protozoa reproduce?
- What is the name of the process during which protozoa exchange cell material?
- What is the enclosure a protozoan forms when it enters a state of suspended animation?
- How does an amoeba move?
- What are the bubbles that protozoa form to surround food?
- In what ways are protists important?

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### **Part 2: Independent Activity:**

Choose these four microorganisms for further study (Amoeba, paramecium, volvox, Euglena). You need to draw realistic, detailed illustrations of each one, labeling its various parts and the function of each part. Then choose one of the four microorganisms you have drawn, research it further, and write a one-page report (minimum 200 words) explaining its life cycle. The report should answer these questions:

1. What is the name of the microorganism?
2. To what larger family of organisms does it belong?
3. Where does it grow?
4. Does it have only one cell or is it a multi-cellular organism?
5. How does it eat?
6. What does it eat?
7. What eats it?
8. How does it reproduce?
9. What other interesting facts have you learned about it?

### **Part 3: Group activity:**

Choose partners. Share your life cycle reports and illustrations with your partners and answer any questions. Then summarize his or her partner's report for the class, using the illustration to help explain it and mentioning at least three interesting facts.

### **Assessment (Three-point rubric)**

- **3 points:** Students were highly engaged in class discussions; produced high-quality illustrations and a complete report, including all of the requested information; accurately summarized partner's report and illustration and cited at least three interesting facts.
- **2 points:** Students participated in class discussions; produced adequate illustrations and an adequate report, including most of the requested information; satisfactorily summarized partner's report and illustration and cited two interesting facts.
- **1 point:** Students participated minimally in class discussions; created unsatisfactory illustrations and an incomplete report with little or none of the requested information; were unable to summarize partner's report, discuss the illustration, or recall any interesting facts.