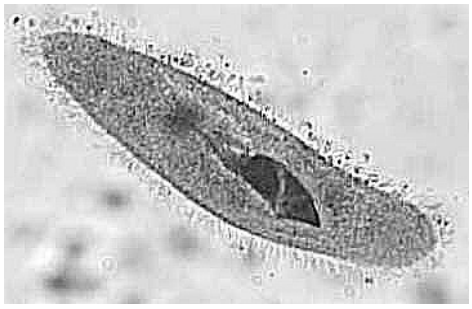
Name: _____ Class:_____ Date; _____

Unicellular Organisms



Learner Outcomes:

- Use instruments – including microscopes – effectively and accurately for collecting data (*e.g., use a microscope ot produce a clear image of cells*).
- Analyze similarities and differences between single-celled and multi-celled organisms

Key Terms:

Unicellular	Organelle	Organ system
Multi-cellular	Organ	

Background Information: Cells are the individual units that make up all living organisms. Each cell contains all of the functional parts to keep itself alive. In multi-cellular organisms, cells begin to specialize into tissues that perform a specific function for the organism.

Investigative Question: What features of various unicellular organisms can be observed using a simple light microscope? What function do these features support?

Hypothesis:

Materials:

Compound microscope	Prepared slides unicellular organisms	Prepared slides of tissues

Procedure:
In this lab you will be observing two prepared slides of unicellular organisms and a slide that contains live unicellular organisms.

1. Set up your microscope and observe a paramecium and an amoeba on high power.
2. **Complete 2 drawings**: one for each unicellular organism. Label the structures you can identify and note their function.
3. Prepare a live specimen slide (see p. 112) **Observe** the live sample. Write a qualitative observation about what functions you see your specimen performing.
4. Choose one multi-cellular organism and identify tissues that perform the same functions as the organelles you identified. Record your data in a table.

Observations:

1. Complete the drawings of your organisms on the pages provided.

Live Specimen – Observations

Comparison of cell to organism functions

Organelle	Function in cell	Tissue / organ	Function in organism

Analysis:

1. Compare the appearance of the unicellular organisms to the plant and animal tissue that you saw in the last lab.
    a. List the similarities:

    b. List the differences:

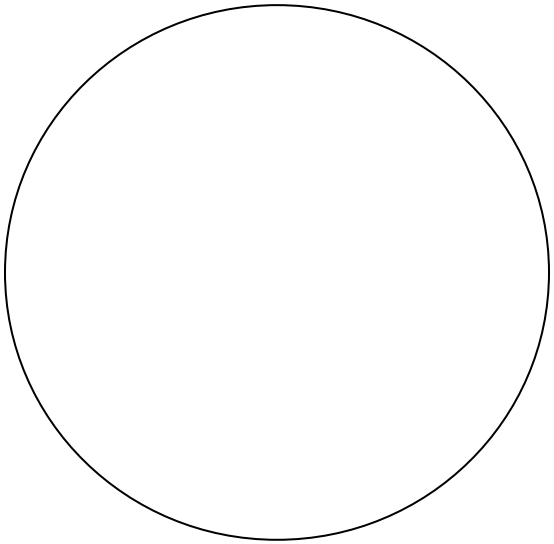
2. How does viewing the live specimen allow you to see the function of the organelles differently? Provide examples.

3. How did the live specimens react to their environment? Is this valuable information in identifying the relationship between structure and function?

4. What are three major differences between unicellular organisms and multi-cellular organisms?

Unicellular Organism Drawings

Title: _____



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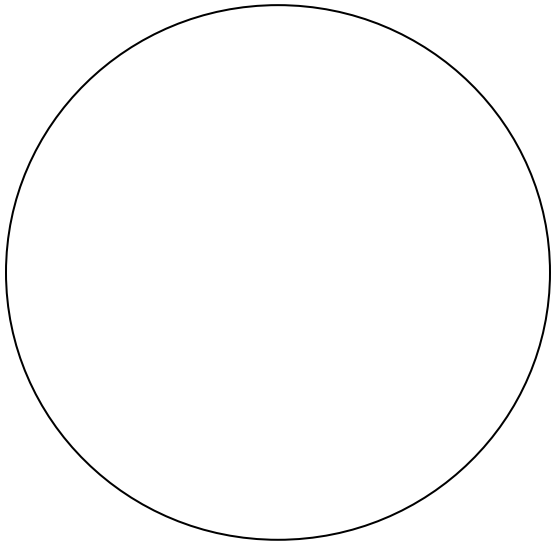

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Live Organism Observations

Extension:

1. Investigate how unicellular and multi-cellular organisms depend upon one another for survival. Prepare a visual presentation to share your findings.

2. Research and write a description of one of the largest organisms in the world and one of the smallest and describe how they are similar in how their bodies function.