

UNIT
8

ACTIVITY

*Euglena Observation Lab**Purpose:*

- To observe euglena and how they move
- To identify the parts of an euglena

Procedure

1. Obtain your slide materials from the back of the room (well slide and cover slip).
2. Bring this materials to the front. Ensure that the well side is facing in up so the water drop will be placed correctly on the slide.
3. Find a euglena on low power and work your way to high power.
 - a. Helpful hint: Euglena are smaller compared to amoebas and paramecium. They also move very quickly.
4. Sketch a drawing of the euglena on high power.

Title _____

Mag _____

5. Observe the movement of the euglena. You should notice that it twirls as it moves. This is due, in part, to the flagellum. In your own words, define flagellum.

6. What is the function of the flagellum?

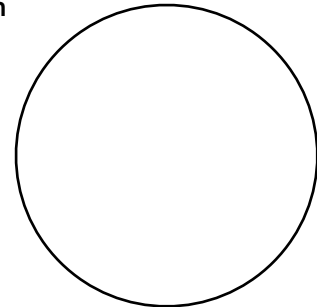
7. The outer part of the euglena is made of a flexible material that gives it its shape. What is this part called? _____

8. Observe the euglena as it encounters an obstacle or want to change directions. How does it change directions? Describe what happens to its body.

9. Throughout the organism you will find green organelles. What are these organelles?

10. Also throughout the organism you will find sacs that are smaller than the green organelles. These have the technical name of paramylon granules. Their job is to store the sugar produced during photosynthesis. Which organelle is the paramylon granule most similar to in amoebas and paramecium?

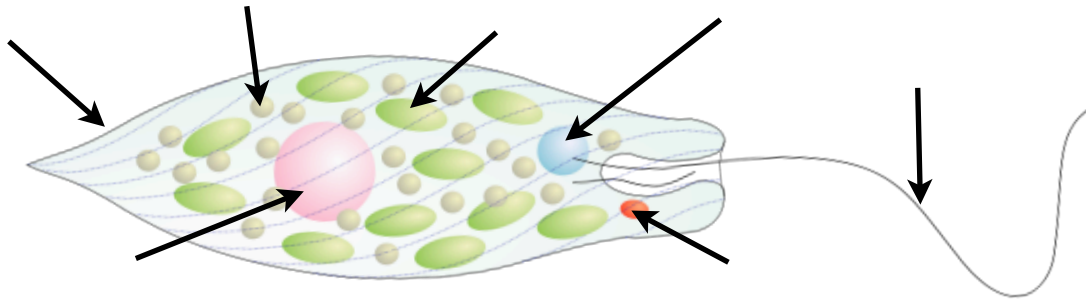
11. Look inside the organism. Toward the flagellum you should observe a very small, dark (red in color), spot. This is the stigma, or eyespot. What is its function?



12. Near the flagellum you should observe a small, star-shaped organelle. It removes excess water from the cell. What is the organelle? _____

Diagram

Label the following diagram with these parts: *chloroplast*, *contractile vacuole*, *flagellum*, *nucleus*, *paramylon granule*, *pellicle*, and *stigma (eyespot)*.



Questions

1. Which group of protist (protozoa, algae, decomposers) do euglena belong to?

2. Euglena contain chloroplasts. When light is limited, they can eat particles to obtain energy. Are these organisms classified as heterotrophs or autotrophs? _____
3. Euglena are not the only protists that have flagellum. Zooflagellates are protozoa that also have flagella. Although euglena and zooflagellates move by flagella, why are these organisms classified differently? _____
4. Name two organelles you could find in a euglena that you couldn't find in a zooflagellate that would help you know it is a euglena. _____
5. You place millions of euglena into a container and place it by the window. The entire container is a bright green color as the euglena swim freely. You cover half the container, blocking out the sunlight. At the end of the day, you return to the container and find that all the euglena are now on the uncovered side. Explain why this happened. Your answer must include the words: *stigma (eyespot)*, *sunlight*, and *photosynthesis*.

