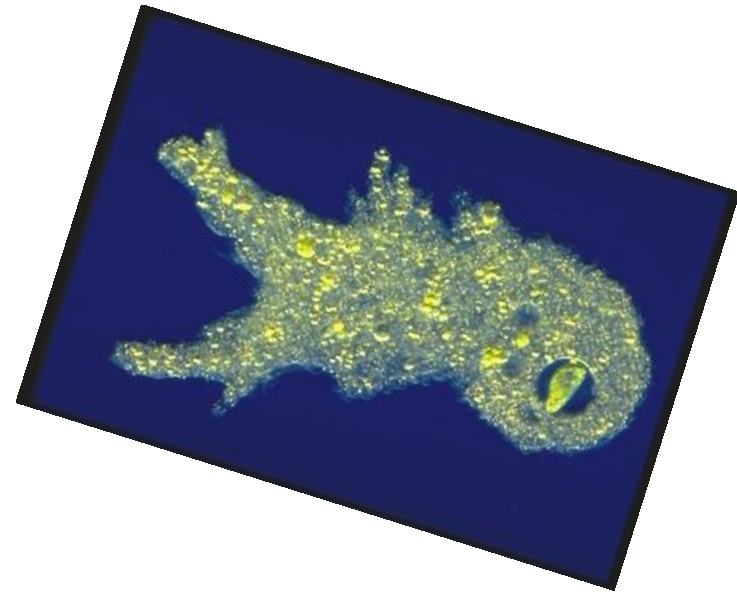


Carolina Biological Supply Company

Introduction to Protozoa



Session Objectives

- To understand and recognize the different classes of protozoans
- To successfully find amoeba
- To learn tips on short-term maintenance of protozoa
- To learn tips on long-term maintenance of protozoa

Materials: Microscopes

Stereomicroscope

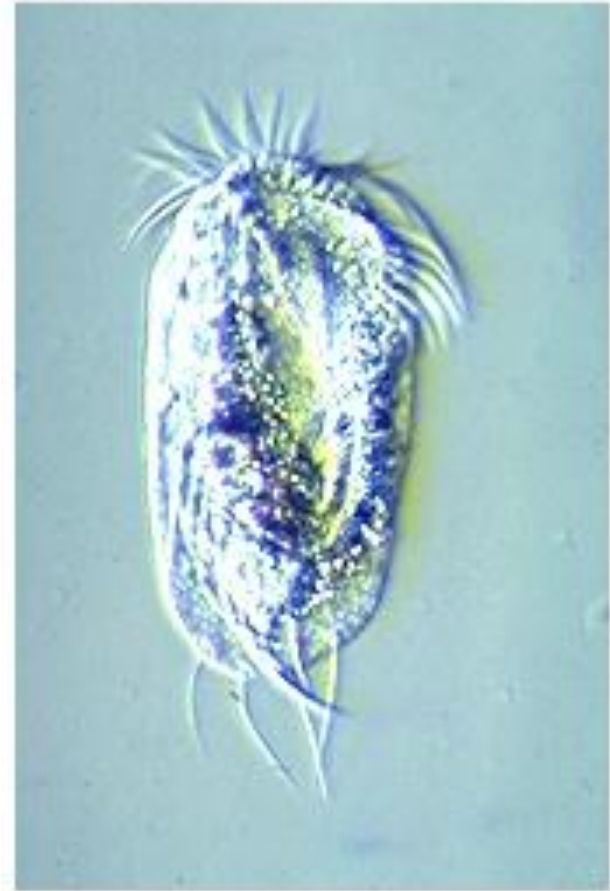
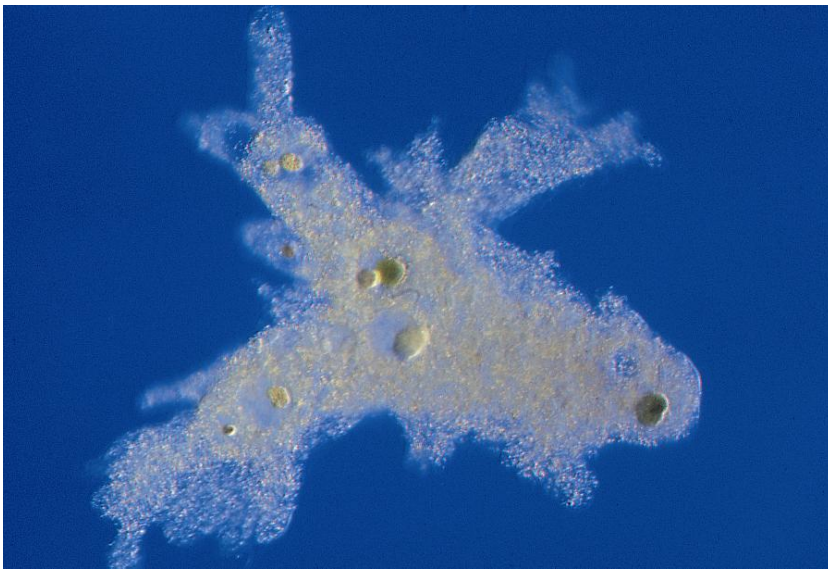


Compound microscope

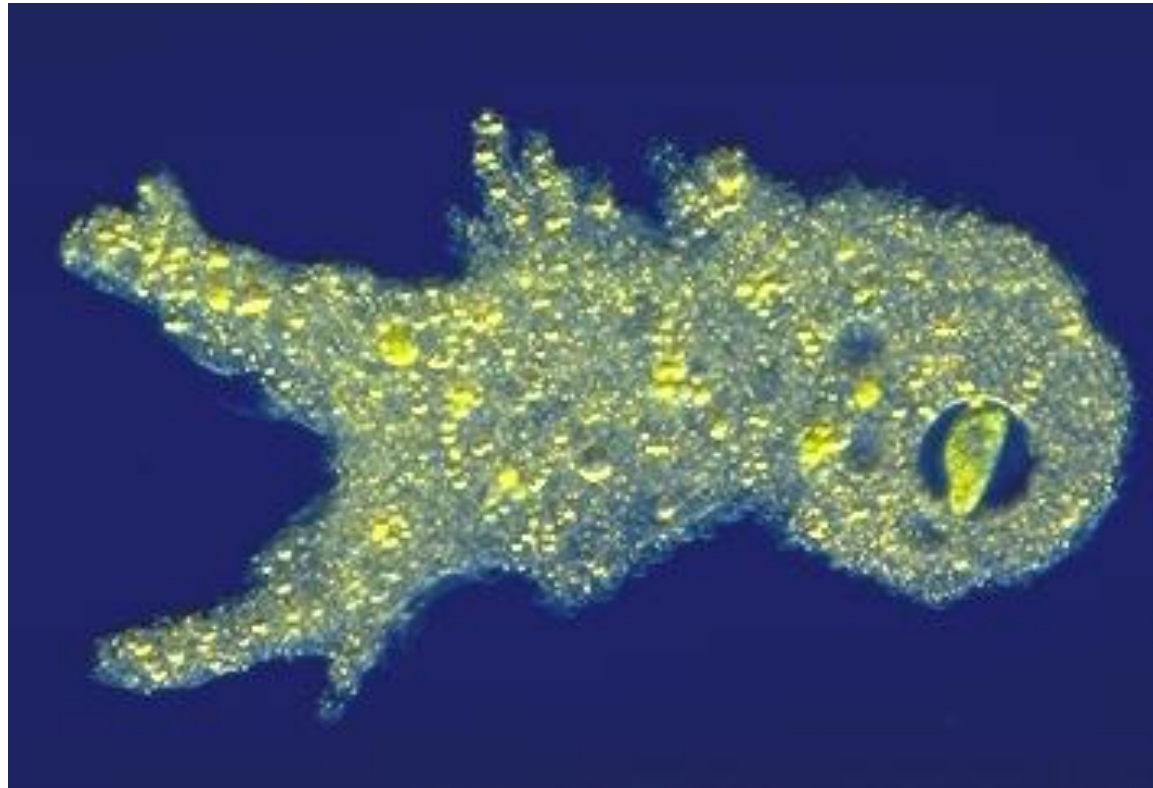


Different Classes of Protozoans

- Grouped by mode of locomotion



Sarcodines



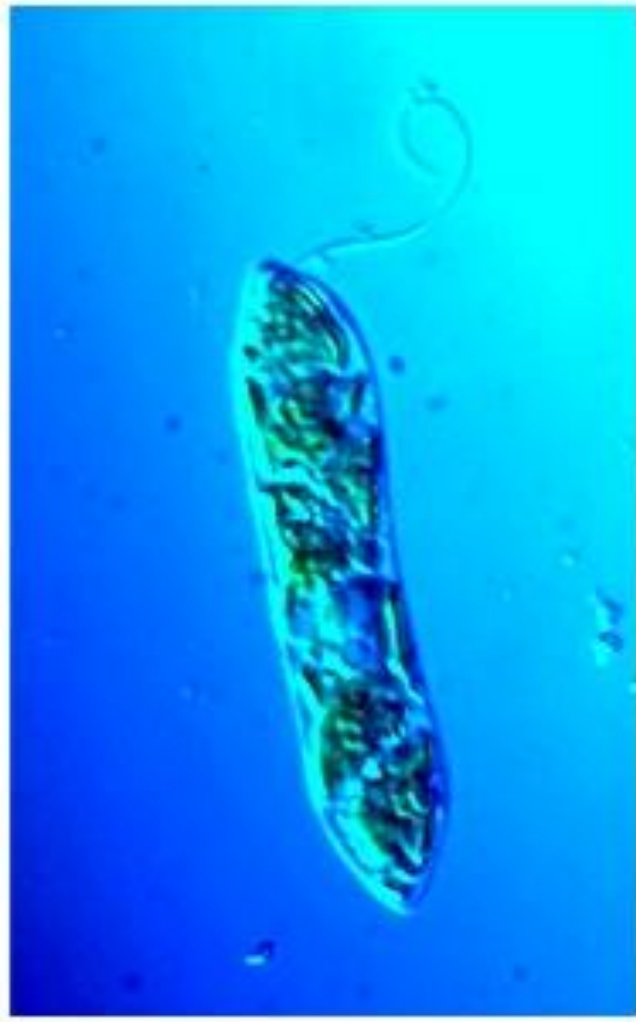
- Movement by pseudopodia

Ciliates

- Movement by cilia



Flagellates

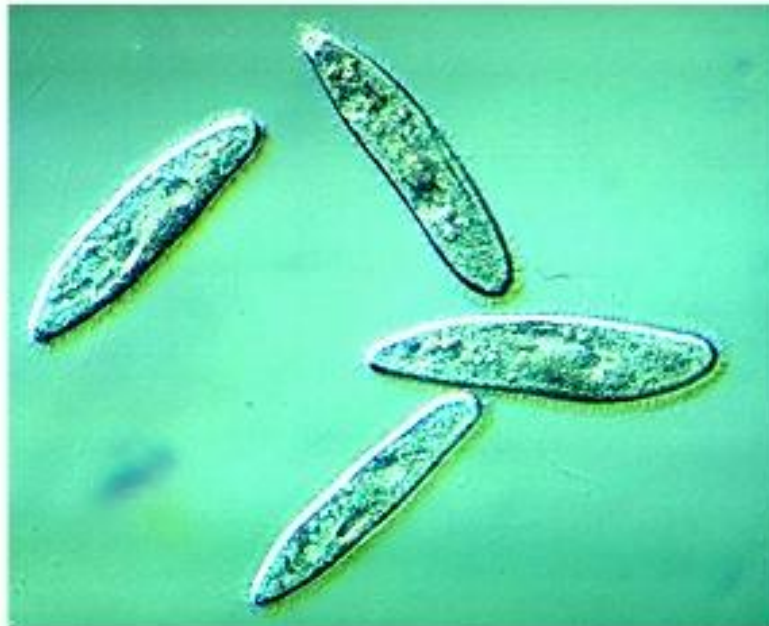


- Movement by flagella

Classify the Protozoan Cultures

Activity #1

- Observe the locomotion under a microscope
- Identify each protozoan's type of locomotion



Classify the Protist

- Gather materials for microscopic activity
- Add a drop of culture to a slide
- Mix with a drop of Protoslo[®] solution (needed if the protist is highly motile)
- Observe under the microscope

Find the Amoeba

- Let culture jar sit for 30 minutes
- Carefully pour off $\frac{3}{4}$ of culture liquid
- Keep poured liquid
- Most congregate at bottom
- Appear more concentrated

Euglena Phototaxis

Take-Home Activity

- Obtain materials
- Add *Euglena* to phototaxis container
- Cut an image in black paper
- Wrap paper around container
- Place container in light

Shooting Trichocysts

- Obtain materials
- Add *Paramecium*
- Add Protoslo[®] solution
- Observe *Paramecium*, add vinegar
- Action is immediate

Short-Term Maintenance

Once received:

- Immediately loosen cap/check contents
- Leave caps loose
- Maintain constant temperature at 70° F
- Keep out of direct light
- Store in culture jar up to 7 days

Long-Term Maintenance

Subculturing:

- Carolina™ Spring Water (catalog no. 132450)
- No soap or detergent on culture vessels
- Maintain at a constant 70° F
- Timothy Hay (catalog no. 132385)
- *Euglena* Concentrate (catalog no. 132320)
- Liquid Protozoa Nutrient Concentrate (catalog no. 132350)
- Protozoan Pellets (catalog no. 132360)

Quote for the Day



“In the past summer I have made many observations upon various waters, and in almost all discovered an abundance of very little and odd animalcules . . .”

—Antony Van Leeuwenhoek,
1675

National Science Education Standards

“Students at all grade levels and in every domain of science should have the opportunity to use scientific inquiry and develop the ability to think and act in ways associated with inquiry including using appropriate tools and techniques to gather data.”

Standards Met

- Standard #1: The Cell
- Standard #2: The Interdependence of Organisms
- Standard #3: Behavior of Organisms

Resources from Carolina

- Protozoan cultures and mixtures
- Protozoan kits and sets
- Protozoan culture media and supplies

Review of Objectives

- To understand and recognize the different classes of protozoans
- To successfully find amoeba
- To learn tips on short-term maintenance of protozoa
- To learn tips on long-term maintenance of protozoa

Carolina Free Resources



**Carolina offers many free resources
to help support teachers.**

CAROLINA®
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Evaluations: Share Your Thoughts!

Scale = 1 to 10

10 = Outstanding

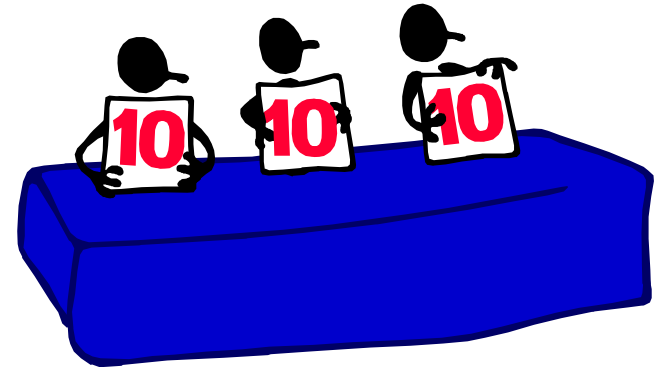
9 = Above Average

8, 7 = Average

6, 5, 4 = Below Average

3, 2, 1 = Well Below Average

Please provide comments!



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**Thank you for investing your time in
our training program.**

**For all of your classroom needs, check
out our Web site, www.carolina.com.**

Enjoy the rest of the conference!