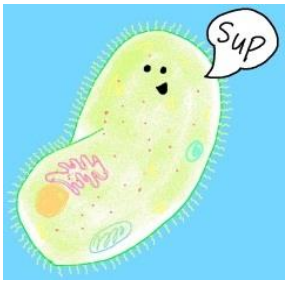
Name_____ Date_____



Gen Bio 2 Lab #2: Kingdom Protista

Pre-Lab Reading: Pages 543-556 in 9th edition
Pre-Lab Vocabulary:

1. Protists-

2. Pseudopodia-

3. Cytoplasmic streaming-

4. Conjugation (Paramecium)-

5. Fission (Paramecium)-

6. Trichocysts-

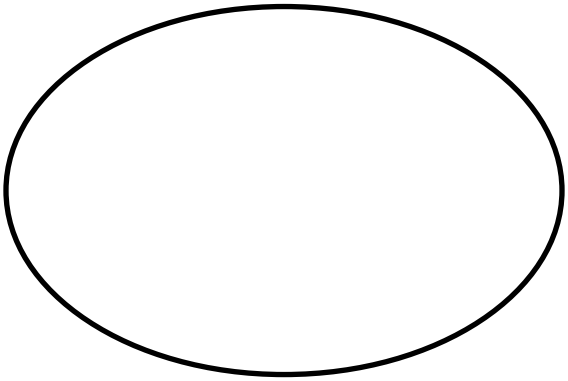
Procedure 1: Phylum Sarcodina

Materials
Microscope
Prepared Slides-Mixed Protist, Amoeba, and Foraminifera
Microscope Slide and cover slip
Pipette
Live Amoeba

Procedure 1 A: Live Amoeba

1. Try to find a live prepared amoeba. You will have to move the slide back and forth to find a live amoeba. You may also have to adjust the fine focus as these are really small thin organisms.

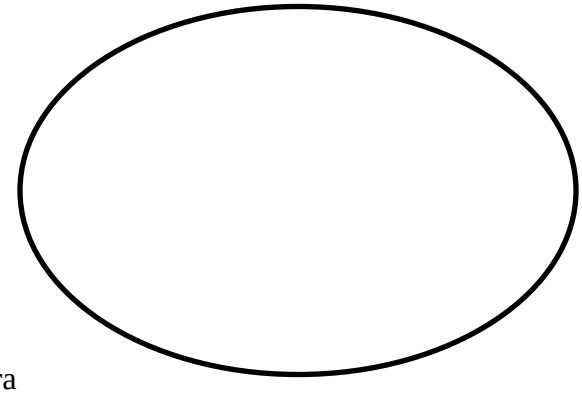
2. **Draw your Amoeba.** Note: the movement of its innards is called cytoplasmic streaming.



Procedure 1 B: Foraminifera
Members of this phylum die and deposit on the ocean floor. These deposits are mined as chalk, limestone or marble. They are responsible for the "White Cliffs of Dover" and their presence is often an indicator of an oil deposit.

Examine the demo slide of Arcella and draw it. They are "Shelled Amoebas" and extend their pseudopodia through their covering. **What is their covering called?**

_____

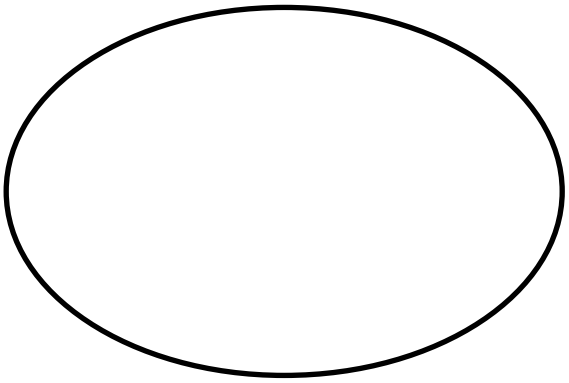


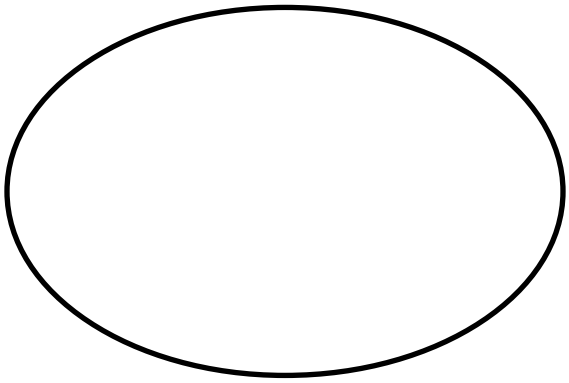
Procedure 2: Phylum Ciliophora

Materials
Microscope
Prepared Slides- Paramecium undergoing conjugation and fission, Paramecium
Microscope Slide and cover slip
Pipette
Live Paramecium

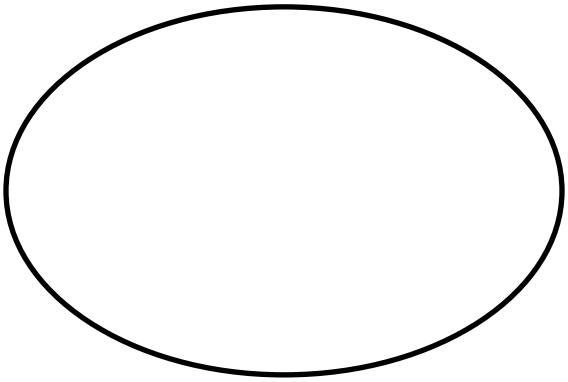
Procedure 2 A: Paramecium Reproduction
Examine the prepared slides of Paramecium undergoing conjugation and fission. **What are they doing in each slide? _____**

Draw and label Paramecium undergoing conjugation and fission.



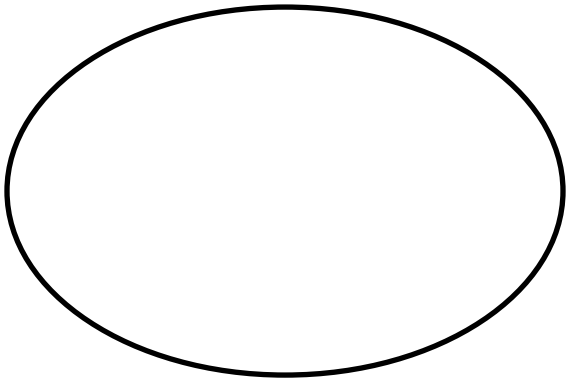


Procedure 2 B: Paramecium
Examine the live prepared paramecium. You will have to move the slide back and forth to find a live paramecium. You may also have to adjust the fine focus as these are really small thin organisms. They move pretty fast so take your time finding them. **Draw what you see**.



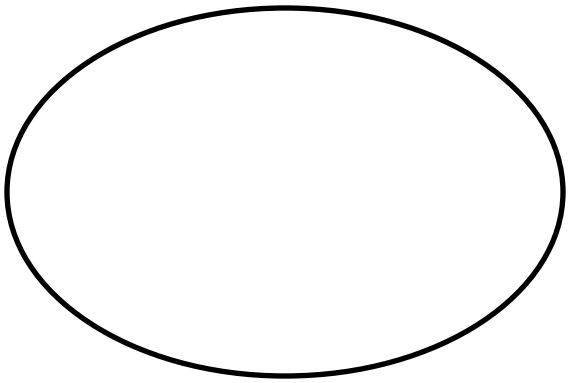
Procedure 3: Phylum Zoomastigina-Flagellates
Examine the blood smear slide. The small pale pink cells are RBCs and the bright red cells are WBCs. Look for the long slender parasite, Trypanosoma gambiense. **What illness does this parasite cause? What is a parasite?**

Procedure 4: Phylum Pyrrophyta
Another bad boy – Peridinum, is a dinoflagellate. Occasionally they multiply very fast and cause "red tides" that kill fish and can infect humans. Examine the prepared slide and **draw a few**.



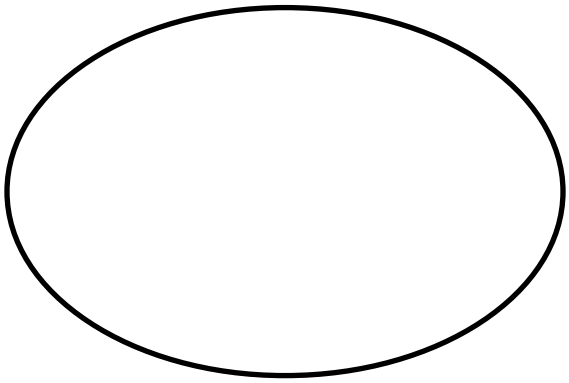
Procedure 5: Phylum Chrysophyta

Examine the Diatom Strew. These are the glassy **tests** of the organisms. Deposits of the tests are mined as diatomaceous earth used in paint and cosmetics. It can also be used around plants to kill slugs – it scratches their bellies. **Draw a few**.



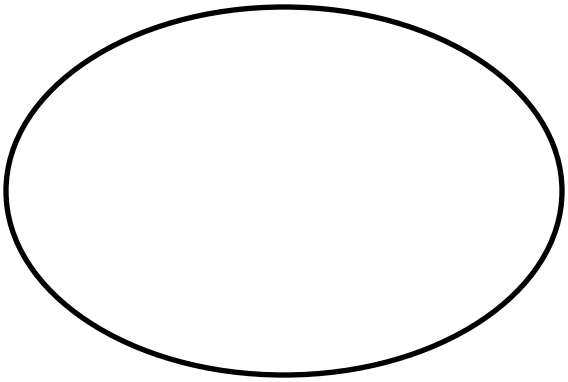
Procedure 6: Phylum Euglenophyta

Examine the live prepared Euglena. You will have to move the slide back and forth to find a live Euglena. You may also have to adjust the fine focus as these are really small thin organisms. They move pretty fast so take your time finding them. **Draw what you see**.

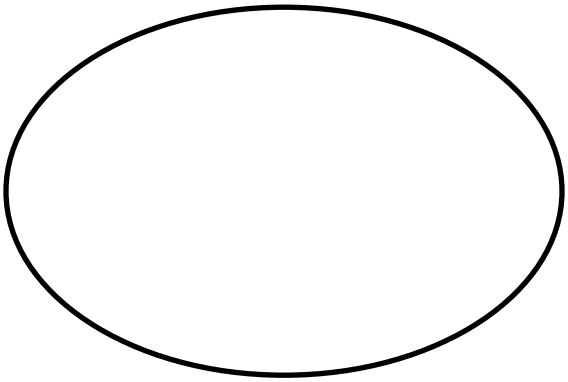


Procedure 7 A: Phylum Chlorophyta

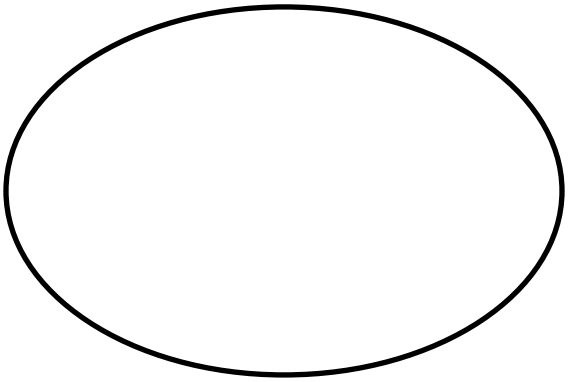
Examine the live prepared Volvox. You will have to move the slide back and forth to find a live Volvox. These are definitely a type of colonial organisms, as you will see. **Draw a colony**.



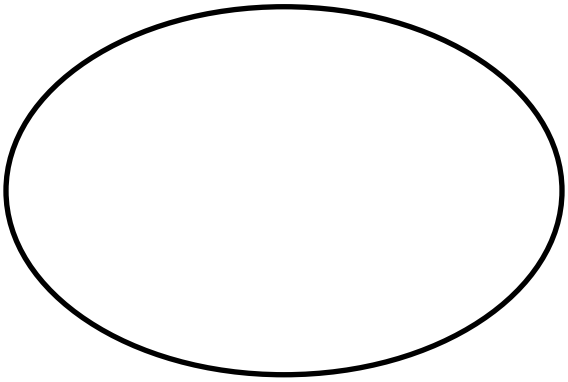
Procedure 7 B: Phylum Chlorophyta
Examine the live Stentor**.** You will have to move the slide back and forth to find a live Stentor. Draw what you see.



Procedure 7 C: Phylum Chlorophyta
Examine the green algae on demo, a filamentous species called Spirogyra. These are also colonial, but different compared to Volvox. **Draw a single colonial strand**.



Procedure 8: Phylum Cyrptophyta
Obtain a live Chilomonas. This is a type of brown algae. You will have to move the slide back and forth to find a live Chilamonas. **Draw a picture of what you see.**



Questions to e x p a n d your mind.

1. List and explain 3 beneficial uses for or environmental results from protists.

2. List and explain 3 harmful or detrimental outcomes because of protists?

3. Describe 4 evolutionary advantages that protists have compared to bacteria. For each advantage, why do you suppose these changes occurred?