



**Ex. 13.2 – Supergroup “SAR”**

**Lab Study A: Stramenopiles – Examples: Diatoms, Brown Algae, and Water Molds**

**Diatoms:**

1. In the space below, sketch several different shapes of diatoms.
  
  
  
  
  
  
  
  
  
  
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of diatoms.

**Brown Algae:**

1. In the table below, list the names and distinguishing characteristics of each brown algal species on demonstration.

**Table 13.2** *Representative Brown Algae*

Name	Body Forms	Characteristics

2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of brown algae.

**Water Mold *Saprolegnia* (Oomycetes)**

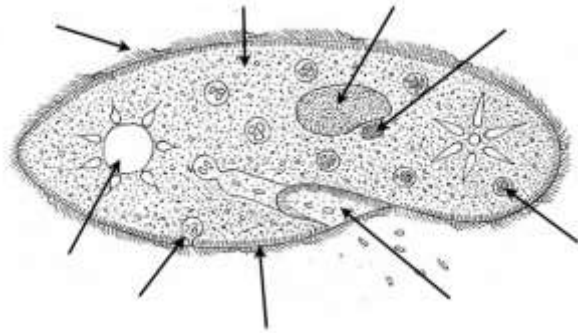
1. From your observations, describe the vegetative (nonreproductive) body of *Saprolegnia*. Do you see filaments (hyphae)?

2. Sketch below and describe any reproductive structures observed. Did they appear to contain spore-like structures?
3. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological role, and economic importance of *Saprolegnia*.

**Lab Study B: Alveolates – Examples: Paramecia, Dinoflagellates, and *Plasmodium* species**

**A Ciliate – *Paramecium caudatum*:**

1. Label the diagram of a paramecium to the right.



2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of paramecia.

**Dinoflagellates:**

1. In the space below, sketch several examples of dinoflagellates. Note the differences between the species on your slide and those in Figure 13.7.
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of dinoflagellates.

### **Apicomplexan – *Plasmodium* species**

1. In the space below, sketch a view of your slide showing several red blood cells and *Plasmodium* parasites.
  
  
  
  
  
  
  
  
  
  
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of *Plasmodium* species.

### **Lab Study C: Rhizarians – Examples: Foraminiferans and Radiolarians**

#### **Foraminiferans:**

1. In the space below, sketch several different forams.
  
  
  
  
  
  
  
  
  
  
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of forams.

#### **Radiolarians:**

1. In the space below, sketch several different radiolarians.
  
  
  
  
  
  
  
  
  
  
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of radiolarians.

**Ex. 13.3 – Supergroup Unikonta**

**Lab Study B: Amoebozoan Slime Molds – Examples: *Physarum* and *Dictyostelium***

1. In the space below, sketch the plasmodium and fruiting bodies and be sure to label visible structures.
  
  
  
  
  
  
  
  
  
  
2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of slime molds.

**Ex. 13.4 – Supergroup Archaeplastida**

**Lab Study A: Red Algae (Rhodophyta)**

1. In the table below, list the names and distinguishing characteristics of each red algae on demonstration.

**Table 13.3** *Representative Brown Algae*

Name	Body Form	Characteristics

2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of red algae.

**Lab Study B: Green Algae (Chlorophyta and Charophyta – The Protist-Plant Connection)**

**Chlamydomonas – A Unicellular Chlorophyte**

1. Describe the shape of individual cells and their swimming pattern.

2. Look for the two flagella. Where are they attached to the cell? Do they appear to pull or push the cell through the water?

***Spirogyra* – A Filamentous Chlorophyte**

1. Describe the appearance of the chloroplasts. Can you see a nucleus in each cell of the filament?

***Ulva* – A Multicellular Chlorophyte**

1. Describe the appearance and form of *Ulva*.
  
2. Are there structures present that would serve to attach *Ulva* to a substrate? If so, describe them.

***Chara* – A Multicellular Chlorophyte**

1. In the table below, list the names and distinguishing characteristics of each green algal species studied.

**Table 13.3** *Representative Green Algae*

Name	Body Form	Characteristics

2. Refer to table 13.5 on pages 363-364 and list the characteristics, ecological roles, and economic importance of red algae.

