Kingdom Protista

Domain: Eukarya

Eukaryotic Cell (Has a nucleus)

Unicellular and Multicellular

Autotrophic and Heterotrophic

May or May Not Have A Cell Wall (Made of Cellulose)

Organized into three different groups: 1 – Fungus Like

2 – Animal Like

3 – Plant Like

1. Pyrrophyta (Fire Plants) – Ex) Dinoflagellate

Autotrophic or Heterotrophic

Has a flagella

Can be luminescent

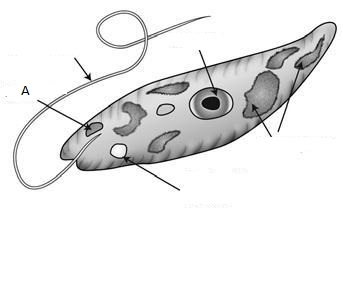
Algal bloom (Red Tide – produces toxin)

1. Bacillariophyta (Diatoms) – Unicellular

Cell Wall of Silicon not Cellulose

Most Abundant Organisms on Earth

Commonly Called Phytoplankton



1. Euglenophyta (Euglena) – Unicellular

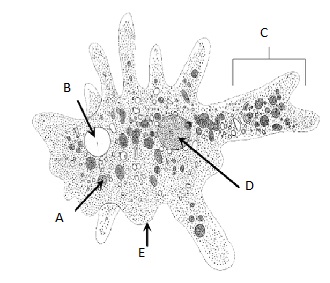
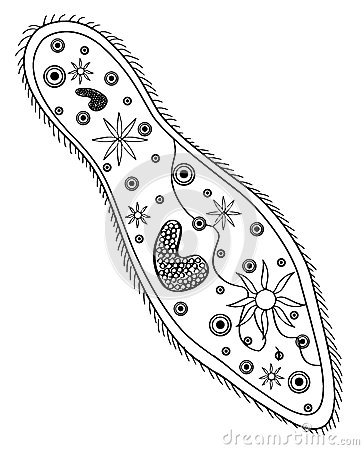
No Cell Wall

Autotrophic & Heterotrophic

Uses a flagella to move

around to find food and light

Plant-Like Protists



* Heterotrophic
* Lacks a Cell Wall
* Unicellular

Organized Based on How they Move (Obtain Energy)

1. Sarcodina - Ex) Amoeba (Ameba)

Uses pseudopodia/pseudopods (false foot) to move and

gain energy

Can cause amebic dysentery

1. Ciliophora (Ciliates)- Ex) Paramecium and Stentor

Uses small hair like projections called cilia to move

and obtain energy

1. Sporozoans – Ex) Plasmodium (Causes Malaria)

Do not move on their own

Mostly Parasitic

1. Zooflagellates – Ex) Trypanosoma (African Sleeping Sickness)

Trichonympha (Symbiotic Relationship with Termites)

Giardia (Causes Giardiasis)

Uses Flagella to Move

Animal-Like Protists

* Autotrophic
* Unicellular or Multicellular

Classified Based on Chlorophyll (Coloration)

1. Chlorophyta (Green Algae) – Ex) Volvox, Spirogyra, Ulva

Ancestor to Modern Plants

Chlorophyll A and B

Used in cosmetics and paints and food

May be unicellular or multicellular

1. Rhodophyta (Red Algae) - Mostly multicellular

Lives at Great Depths (Absorbs Blue Light)

Used in ice cream and pudding

Important to coral formation

1. Phaeophyta (Brown Algae) – Ex) Kelp

Multicellular

Largest Algae (Up to 60 meters long)

Uses a swim bladder to stay upright

* Heterotrophic Decomposers (External Digestion)
* Found in Damp Moist Environments (Commonly called Molds)
* Reproduce by Spores (Asexual) or Alternation of Generations (Sexual)
* Phylums: Acrasiomycota, Myxomycota, Oomycota
* Caused the Great Potato Famine

Fungus-Like Protists