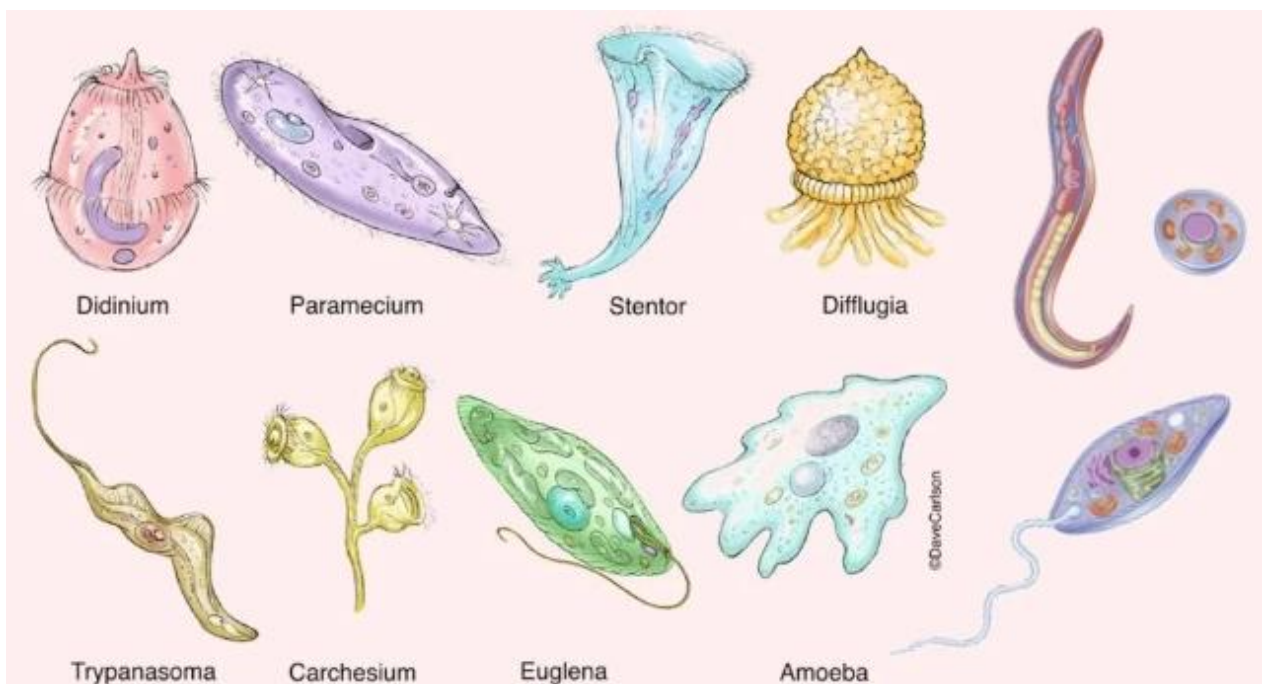


# Protista

- Protists are **eukaryotic** organisms that are often grouped and referred to as plant-like or animal-like or fungus-like.
- Often found in aquatic environments or damp soils. Some are parasites.
- Have been on earth for 1.7 billion years.
- Most are single celled but some like kelp are multicellular and can be 100 feet tall.
- Some are autotrophic (plant-like) and others are heterotrophic (animal-like and fungus-like).
- They mainly reproduce asexually.

## **Protozoans (Animal-Like Protists)**

- unicellular.
  - Heterotrophic.
  - most live in aquatic environments and moist soils.
  - some are parasitic living inside hosts (Trypanosoma protozoa can cause sleeping sickness in humans).
  - there are **four** main groups of protozoans;
1. **Amoeboid Protozoans** – aquatic and moist soils, move via pseudopods.  
Example: amoeba
  2. **Flagellated Protozoans** – some free-living some parasitic, move via flagella.  
Example: euglena
  3. **Ciliated Protozoans** – always aquatic, move via cilia.  
Example: paramecium
  4. **Sporozoans** – produce spores, most are parasitic.  
Example: plasmodium (which leads to malaria)



## Plant-Like Protists

- are both photosynthetic and aquatic.
  - many are referred to as green or brown or red algae.
  - both unicellular and multicellular.
  - others are divided into **three** groups;
1. Chrysophytes – (aka diatoms) form phytoplankton in oceans which are both the foundation of marine ecosystems but also produce a tremendous amount of atmospheric oxygen.
  2. Dinoflagellates - exhibit bioluminescence can cause red tide
  3. Euglenoids - Unique plant and animal like organisms. In the presence of light they photosynthesize, but in the absence of light they feed on other smaller organisms.



## Fungal-Like Protists

- Heterotrophic
- Decomposers
- Slime molds are examples.

