


# 6 Kingdoms of Life



All organisms are classified into one of the following 6 kingdoms.

**Archaeobacteria** – bacteria that live in harsh conditions

**Eubacteria** – bacteria that live in normal conditions

**Protista** – organisms made of one eukaryotic cell

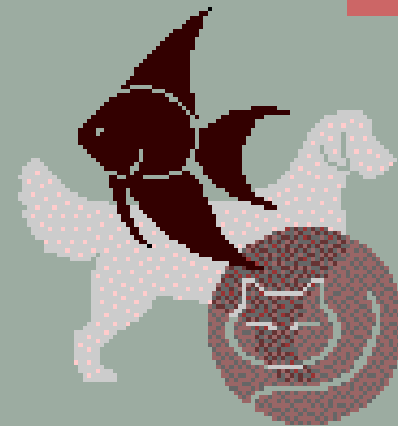
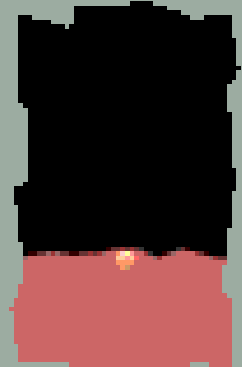
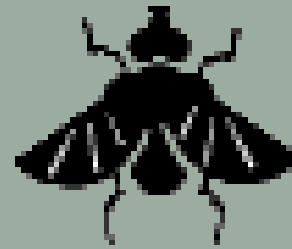
**Fungi** – mushrooms and molds

**Plantae** – all plants including trees, bushes, and flowers

**Animalia** – all animals including insects

◆ The grouping of organisms into KINGDOMS is based on 3 factors:

- 1. Cell Type
- 2. Cell Number
- 3. Feeding Type



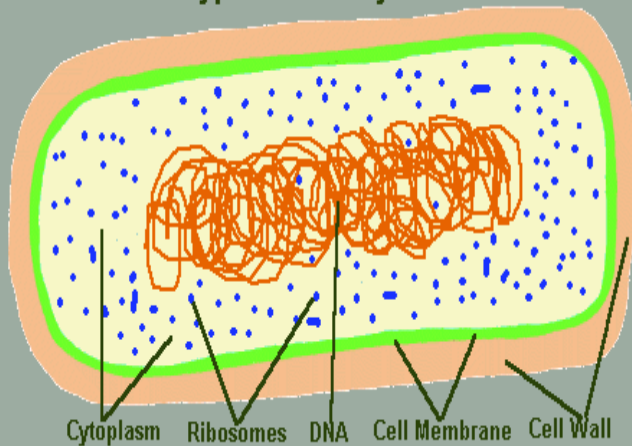
Notice these are three of the categories at the top of your chart.

# 1. Cell Type- The presence or absence of a nucleus.

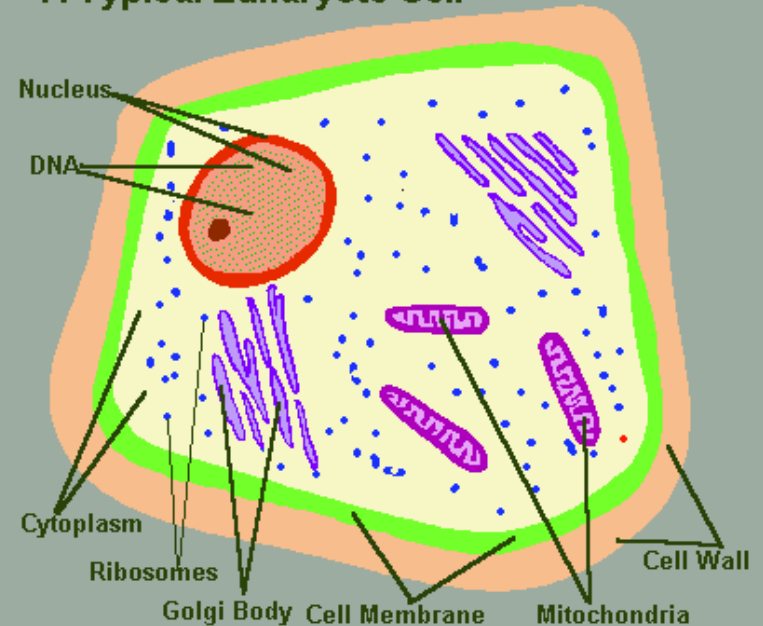
Prokaryotes (NO nucleus)

& Eukaryotes (DO carry a nucleus)


A Typical Prokaryote Cell



A Typical Eukaryote Cell





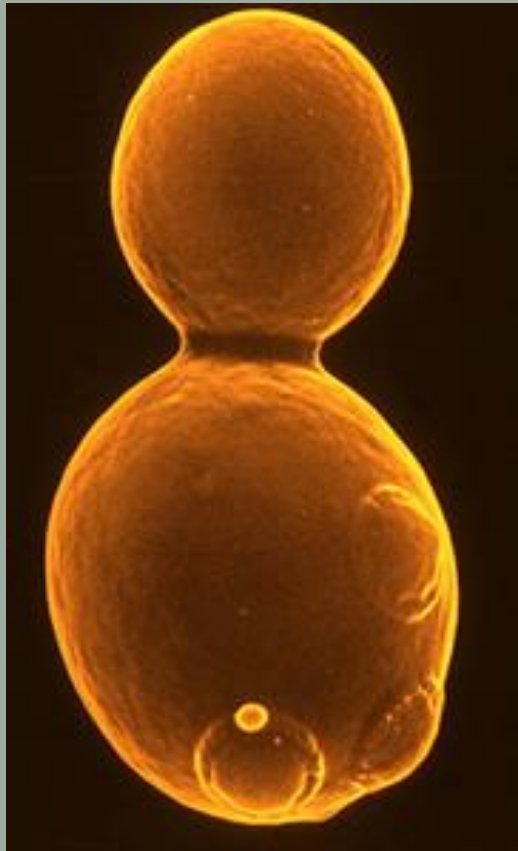


2. Cell number - Whether the organisms exist as single cells or as many cells

◊ Unicellular- single celled organism

◊ Multicellular- many celled organism

◇ Unicellular



◇ Multicellular





### 3. Feeding Type - How the organisms get their food

- Autotroph or Producer
  - ◇Makes it's own food



- Heterotroph or Consumer
  - ◇Must eat other organisms to survive





As we go through the PowerPoint Fill in the chart with the correct information about each of the 6 kingdoms. Remember for each kingdom you want to find:

Cell Type – Prokaryotic OR Eukaryotic

Cell Number – Single celled OR Multi celled

Feeding Type – Autotrophic OR Heterotrophic

How organisms in that kingdom are important to us





# 6 Kingdoms

- ◇ Archaeobacteria
  - ◇ Eubacteria
  - ◇ Protista
  - ◇ Fungi
  - ◇ Plantae
  - ◇ Animalia
- Prokaryotes
- Eukaryotes

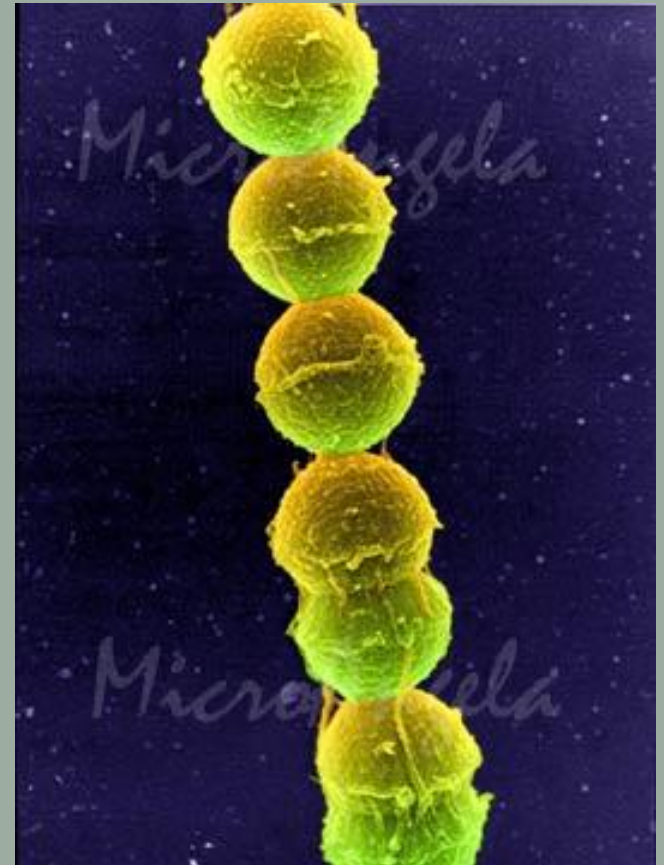
# Archaeobacteria

- ◇ Ancient bacteria–
  - Live in very harsh environments



# Eubacteria

- ◇ It is the eubacteria that most people are talking about when they say bacteria, because they live in more normal conditions like the human body or pond water.





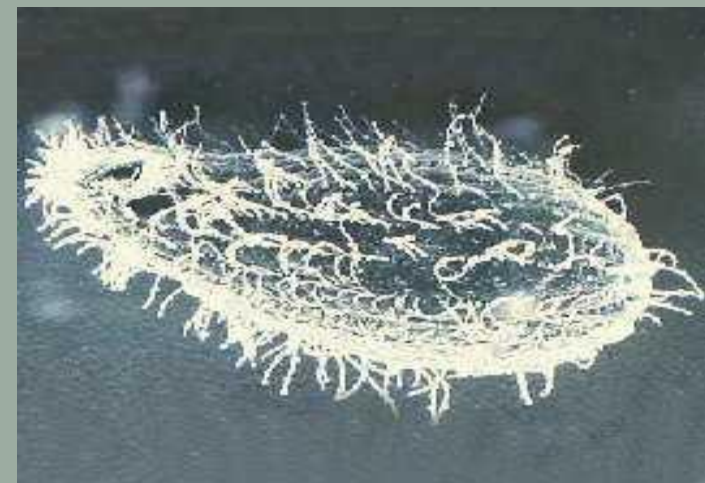
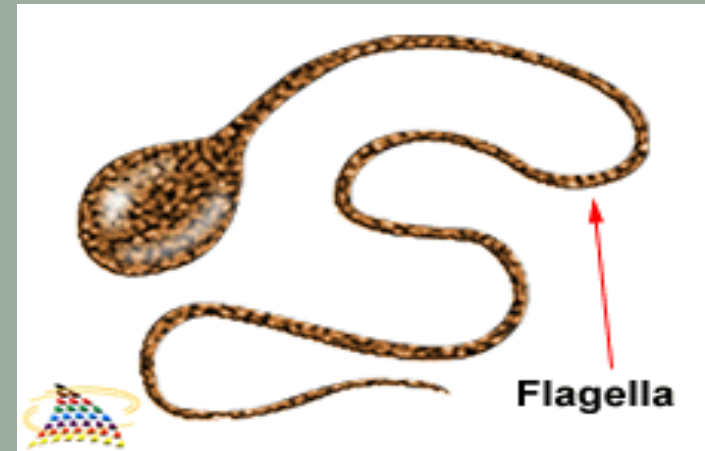
# Both Types of Bacteria

- ◇ ALL bacteria are single celled, prokaryotes so they are very simple organisms



# Bacterial Locomotion

- ◇ Some bacteria have flagella or cilia for movement
- ◇ Some secrete a slime layer and ooze over surfaces like slugs



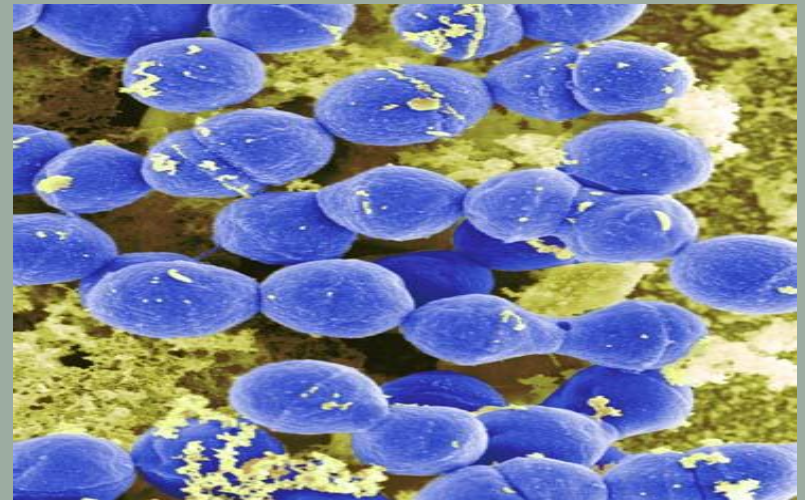


# Bacterial Feeding

- ◇ Some bacteria are autotrophs and can photosynthesize like a plant.



- ◇ Some bacteria are heterotrophs that catch their food





# Protists

- ◇ Protists include many single celled organisms, like slime molds, protozoa and primitive algae.

Odds & Ends Kingdom



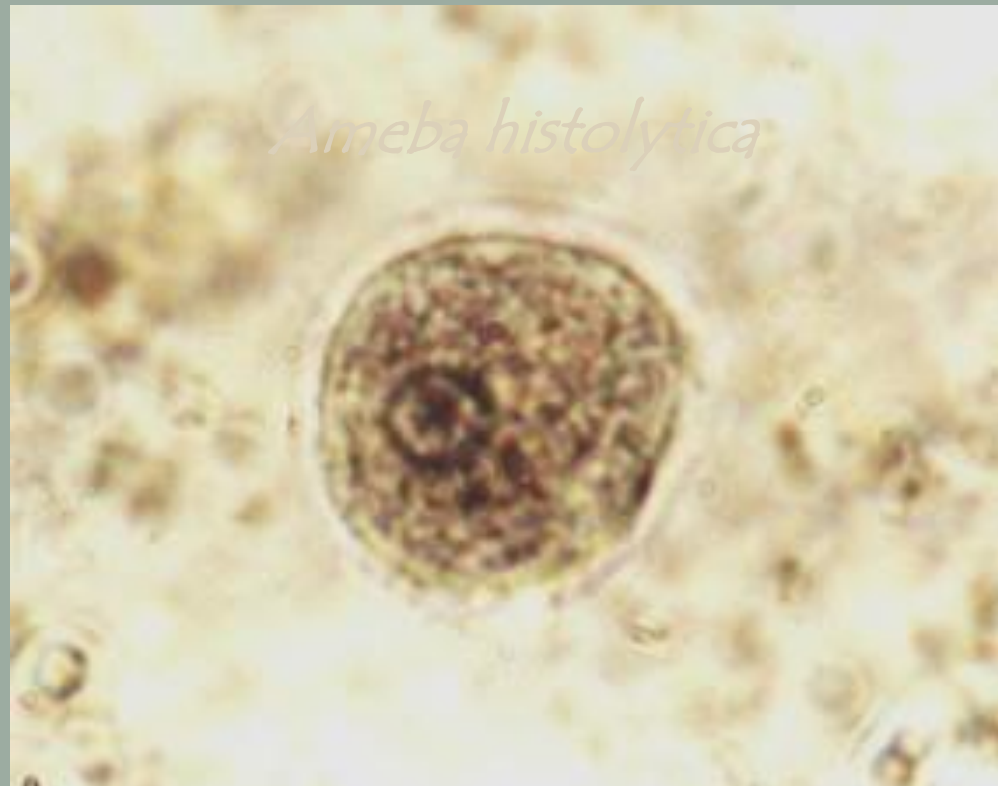


# Protists

- ◇ There are animal-like, fungus-like, and plant-like protists
- ◇ Some are beneficial
- ◇ Protists are found in lakes and ponds
- ◇ Some protists can cause diseases in humans, such as:

# Protists Disease

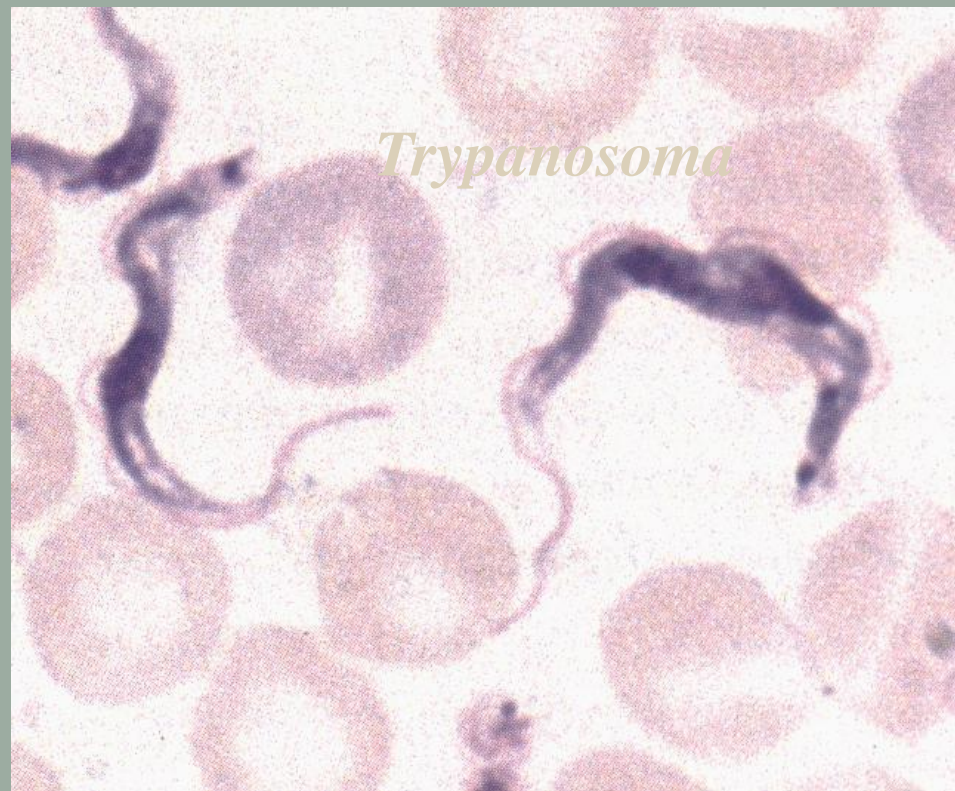
- ◇ Amebic dysentery





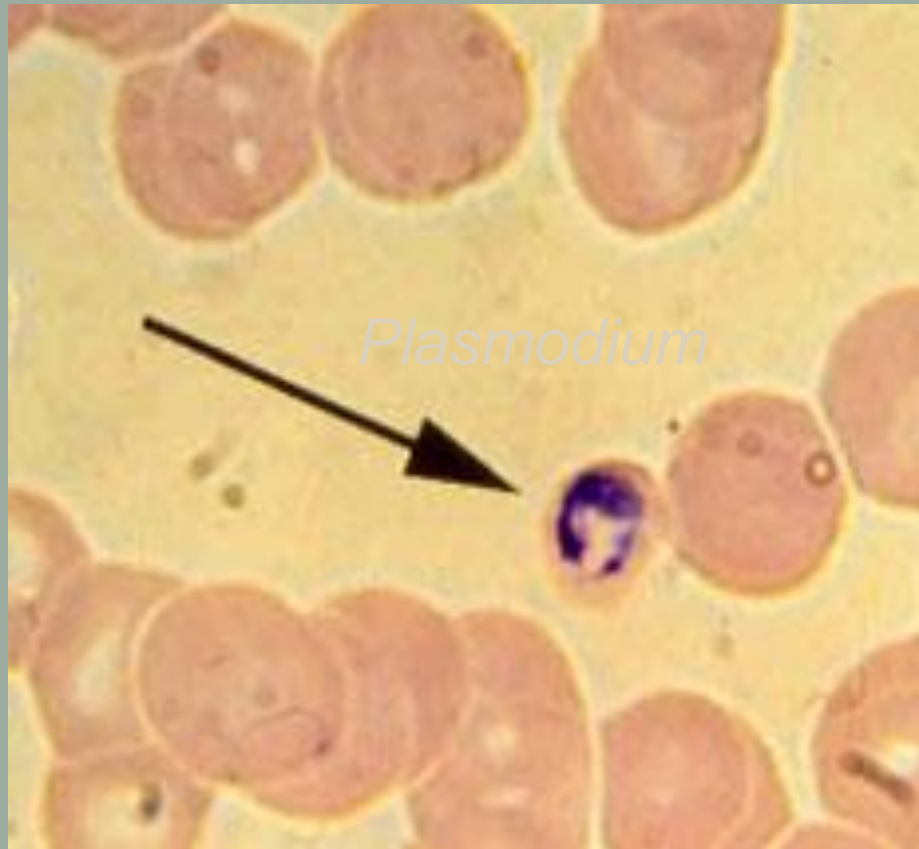
# Protists Disease

- ◇ African Sleeping Sickness



# Protists Disease

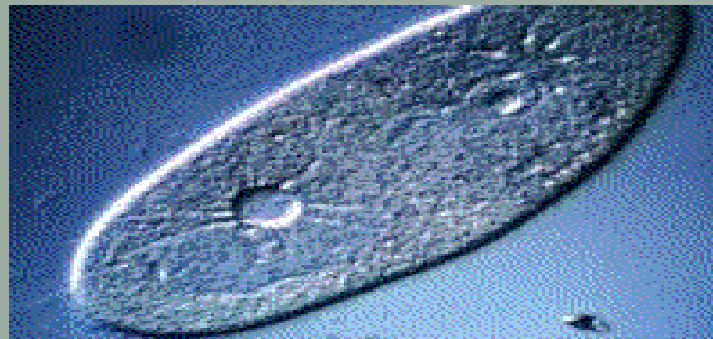
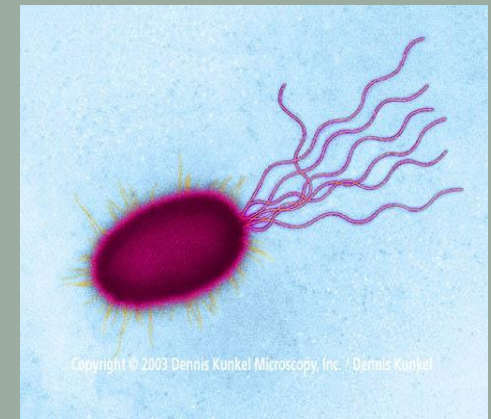
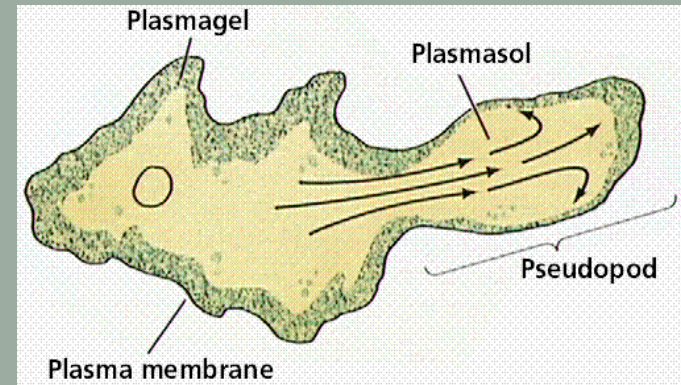
## ◇ Malaria





# Protists Movement

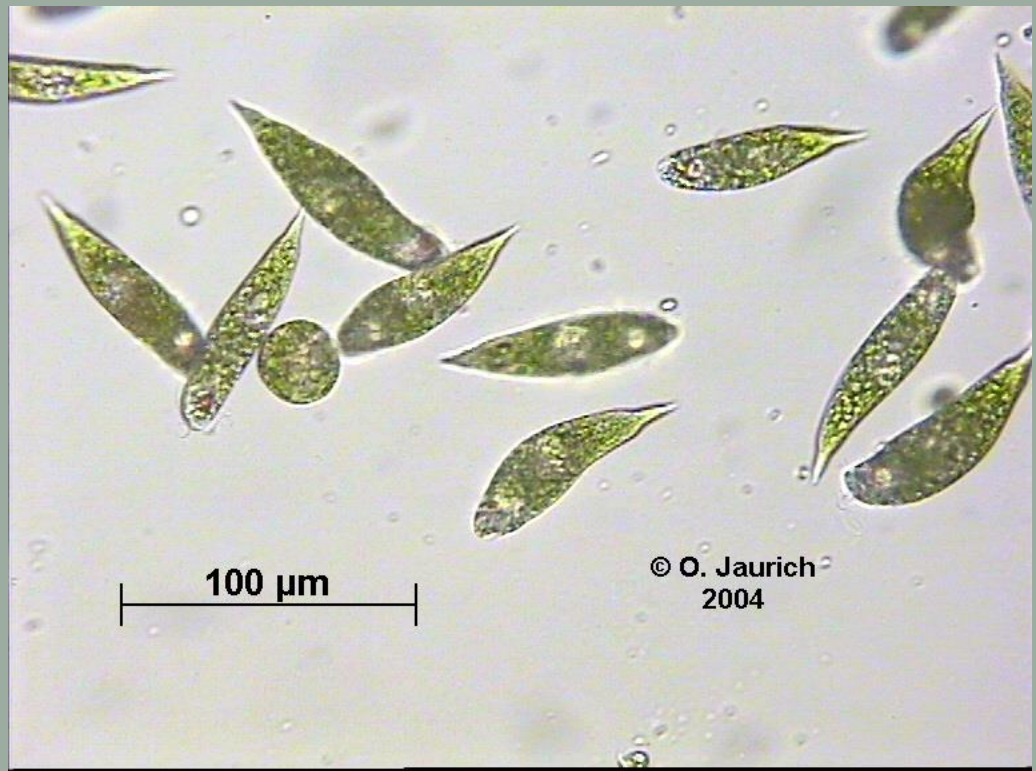
- ◇ 3 types of movement:
  - Pseudopod (false foot)
  - Flagella/cilia (hairs)
  - Contractile vacuoles





# Protists Feeding Style

- ◇ Protists can be autotrophs or heterotrophs



# Fungi

- ◇ The Kingdom Fungi includes some of the most important organisms.
- ◇ By breaking down dead organic material, they continue the cycle of nutrients through ecosystems.





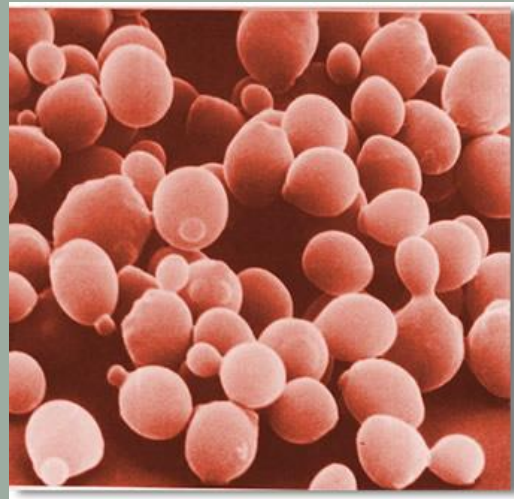
◇ All fungi are eukaryotic

◇ They may be unicellular or multicellular

◇ Found in wet areas

# Fungi

Unicellular  
(yeast)



Multicellular





# Fungi

- ◇ Fungi can be very helpful and delicious
- ◇ Many antibacterial drugs are derived from fungi

*Penicillin*



# Fungi

◇ Fungi also causes a number of plant and animal diseases:

◇ Athlete's Foot





# Fungi

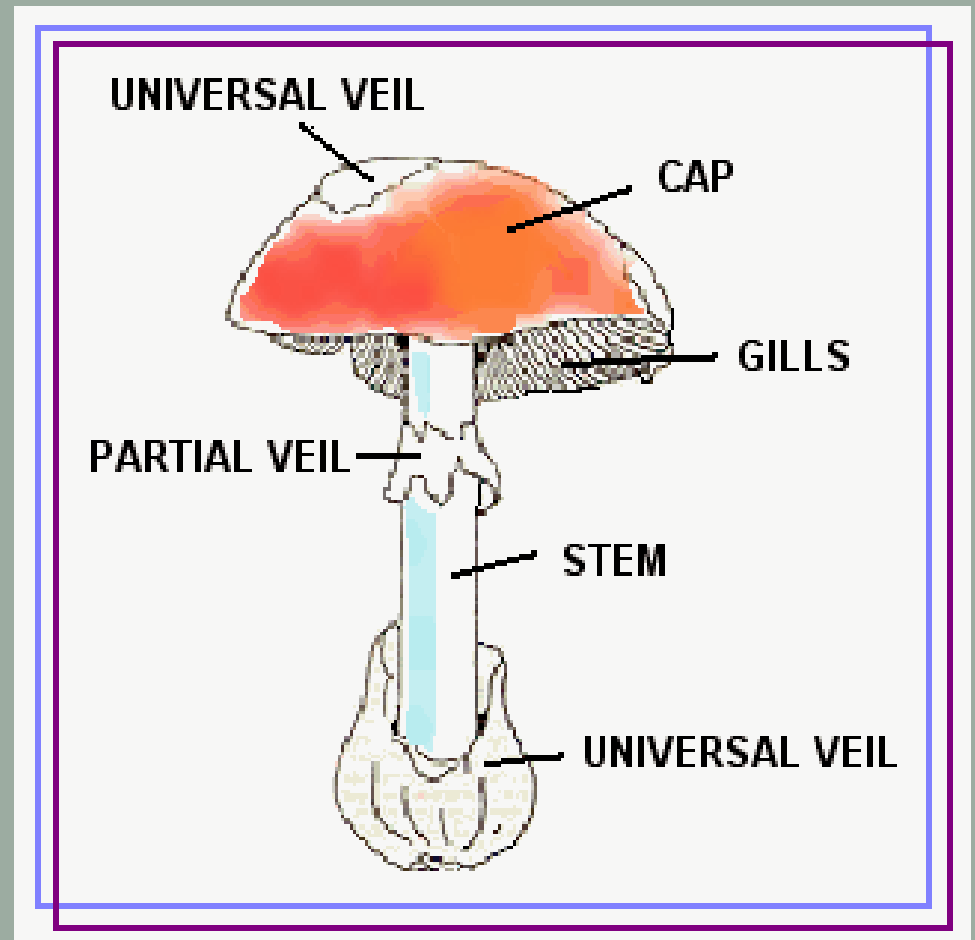
## ◇ Ringworm





# Fungi Movement

- ◇ Fungi are stationary
- ◇ They have root-like structures that they use for attachment



# Fungi Feeding

- ◇ All fungi are heterotrophs
- ◇ They absorb nutrients from dead organic matter





# Plants

- ◇ All plants are multicellular organisms made of Eukaryotic cells that have a cell wall. They get food through photosynthesis so they are autotrophs.





## ◇ Mosses





## ◇ Liverworts & Hornworts





## ◇ Ferns







- ◇ Conifers (cone bearing)
  - Gymnosperms
    - ◇ Oldest vascular plants





◇ Flowering plants  
– Angiosperms





# Animalia

All animals are multicellular and made of the more complex Eukaryotic cells. All are heterotrophs that are capable of movement at some point in their lives.







- ◇ Some important **animal groups** (phyla) are the:



◇ Porifera: sponges

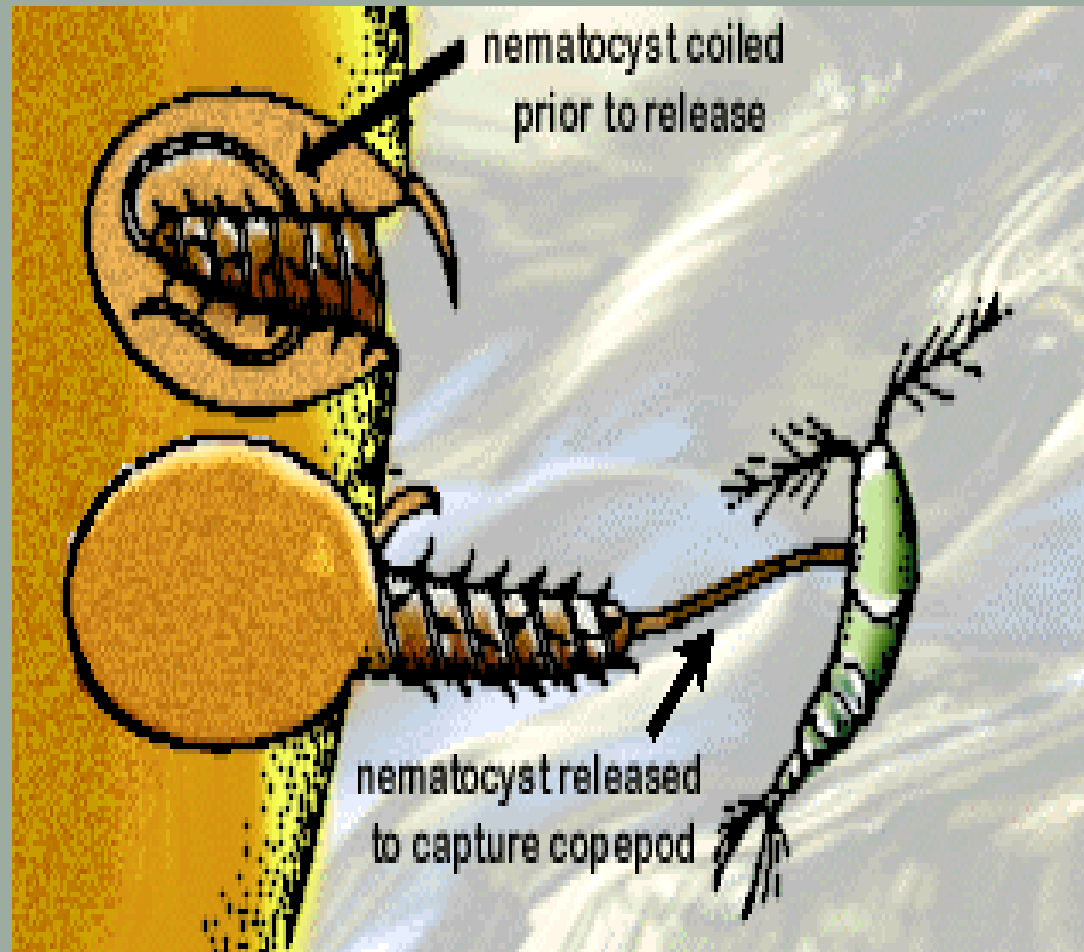
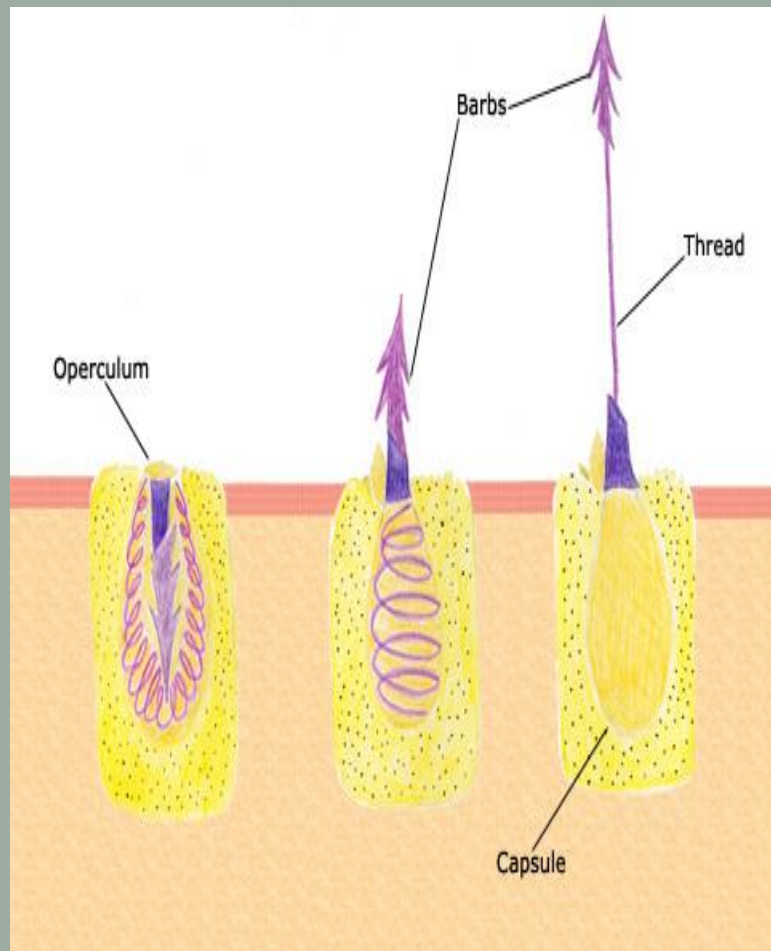




- ◇ **Cnidarians:** Jellyfish, corals, and other stingers. . .  
Their stinger is called a nematocyst



## ◇ Nematocyst



The stinging cells (nematocyst) found in coral tentacles in coiled and released positions.

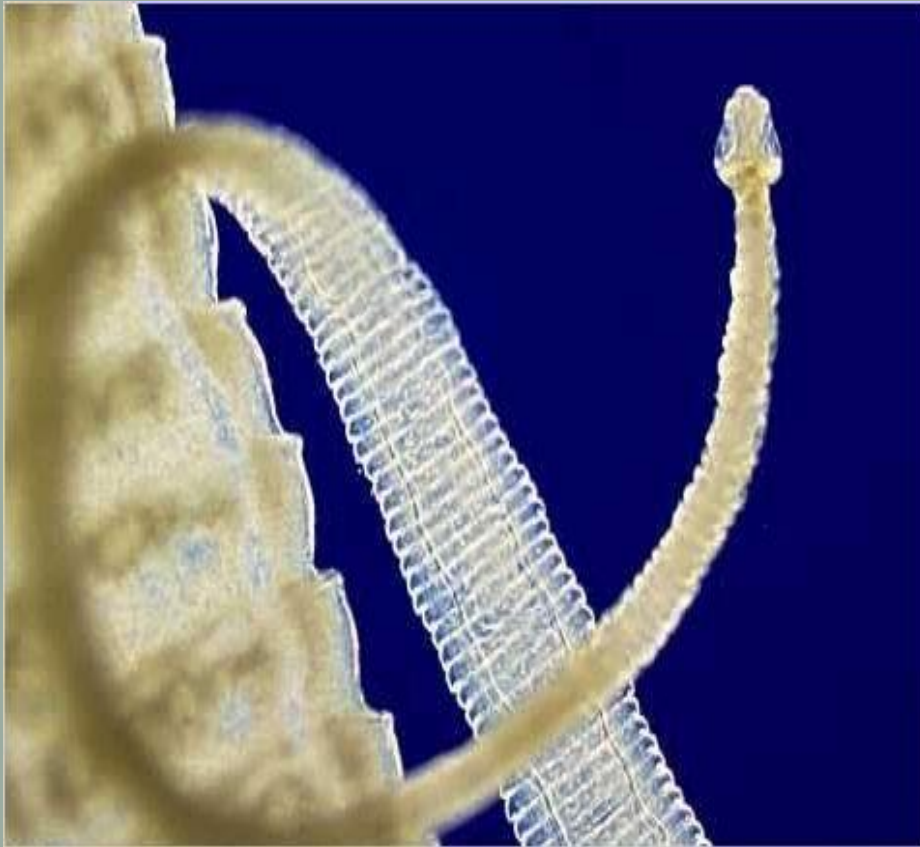


## ◇ Mollusks

- Octopi, squid
- Clams, oysters
- Snails, slugs



- ◇ **Platyhelminthes** (flat worms)  
– Tapeworms & flukes



Human liver fluke



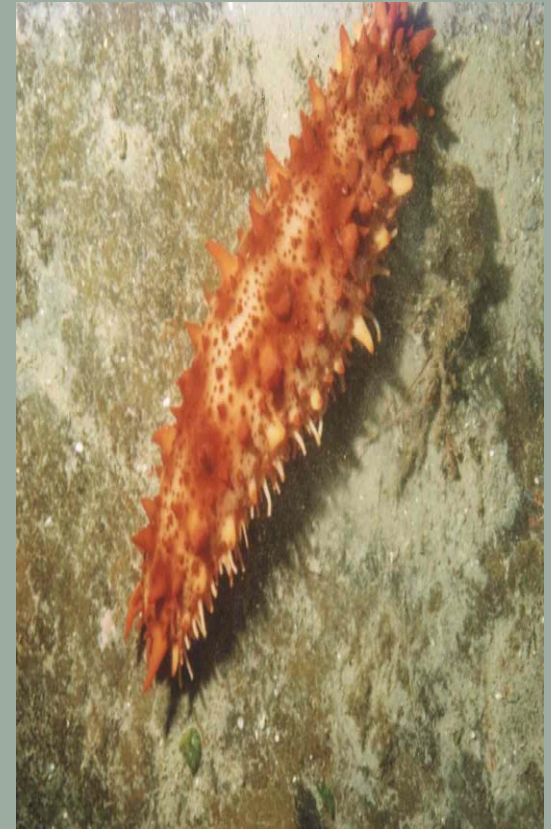
- ◇ **Annelids** (segmented worms)
  - Worms & leeches





## ◇ Echinoderms

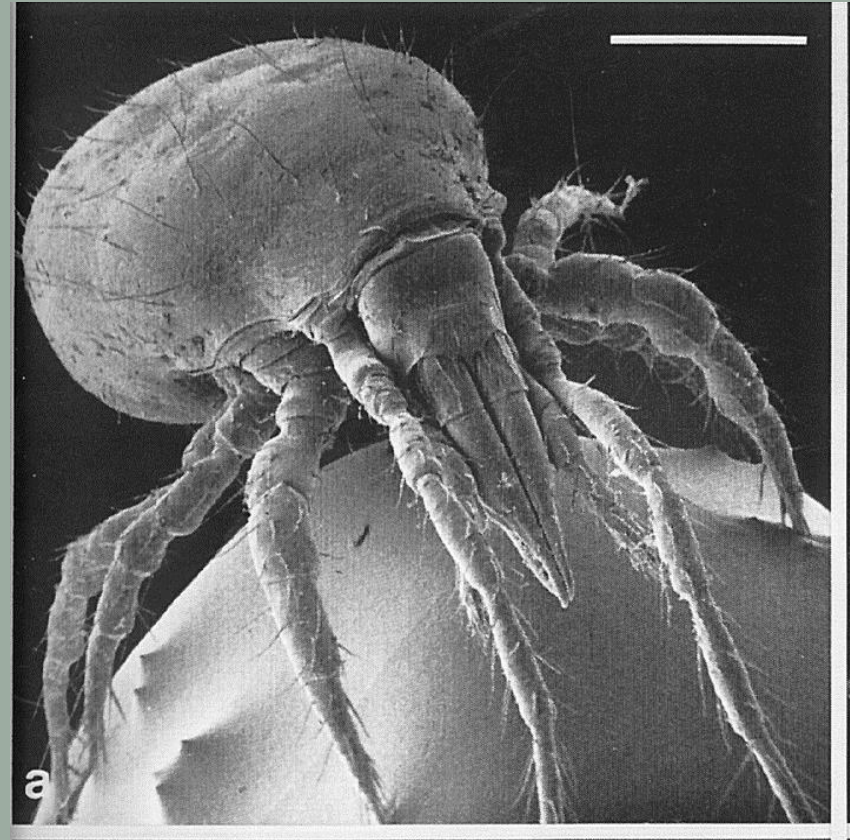
– Starfish, sea urchins, sea cucumbers





## ◇ Arthropods

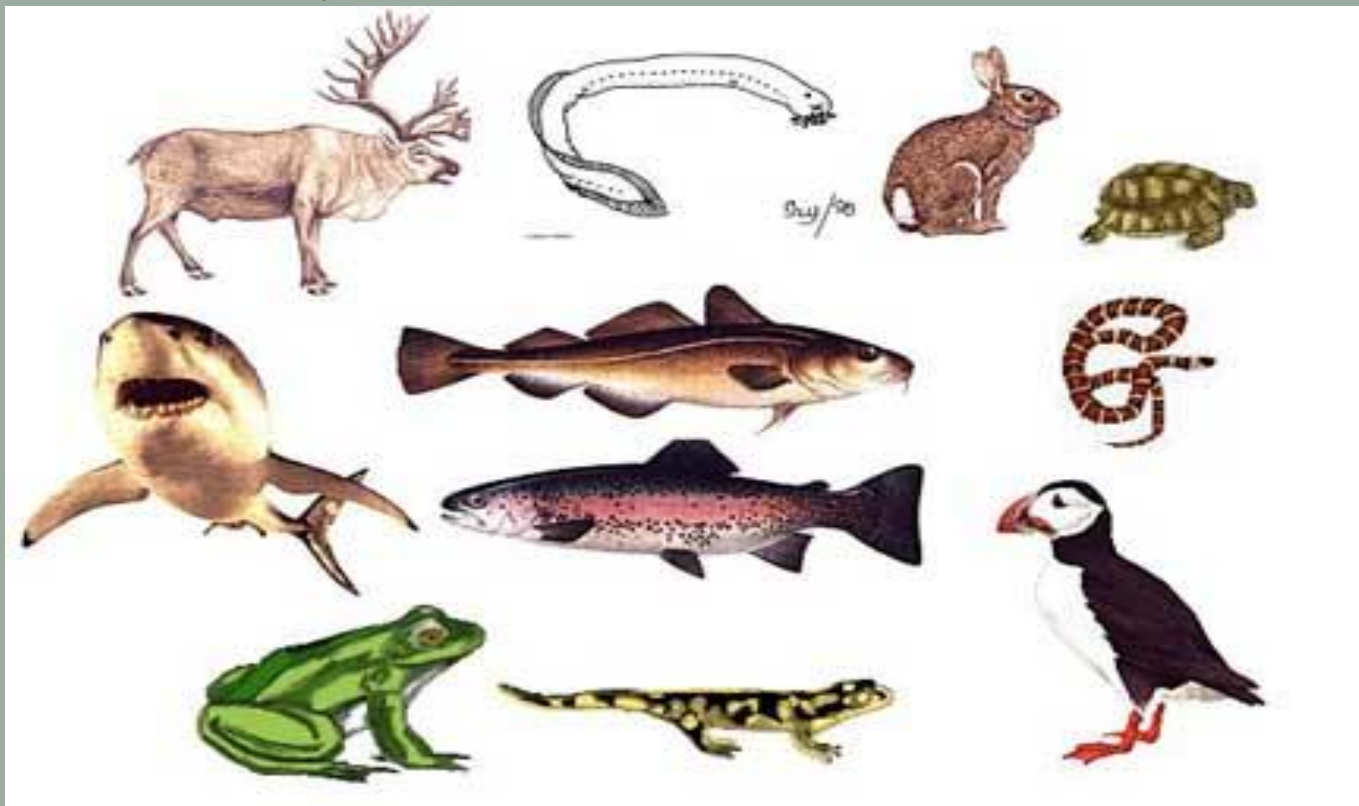
– Shell fish, arachnids & BUGS!





## ◇ Chordates

- The Chordata is the animal phylum with which everyone is most familiar, since it includes humans and other vertebrates.







Kingdom	Cell Type	Cell #	Feeding Type	Location
Archaeobacteria	Prokaryote	Unicellular	Autotroph	Harsh areas
Eubacteria	Prokaryote	Unicellular	Both	Everywhere
Protista	Eukaryote	Most Unicellular	Both	Ponds / Lakes
Fungi	Eukaryote	both	Heterotroph	Wet areas dead stuff
Plantae	Eukaryote	Multicellular	Autotroph	Forests, deserts, water
Animalia	Eukaryote	Multicellular	Heterotroph	Anywhere they can get food



Now That you are familiar with the 6 Kingdoms of Life, complete your thinking map by putting the title of the kingdom and some illustrated examples of organisms that belong to that kingdom in each box.



# TREE OF LIFE

