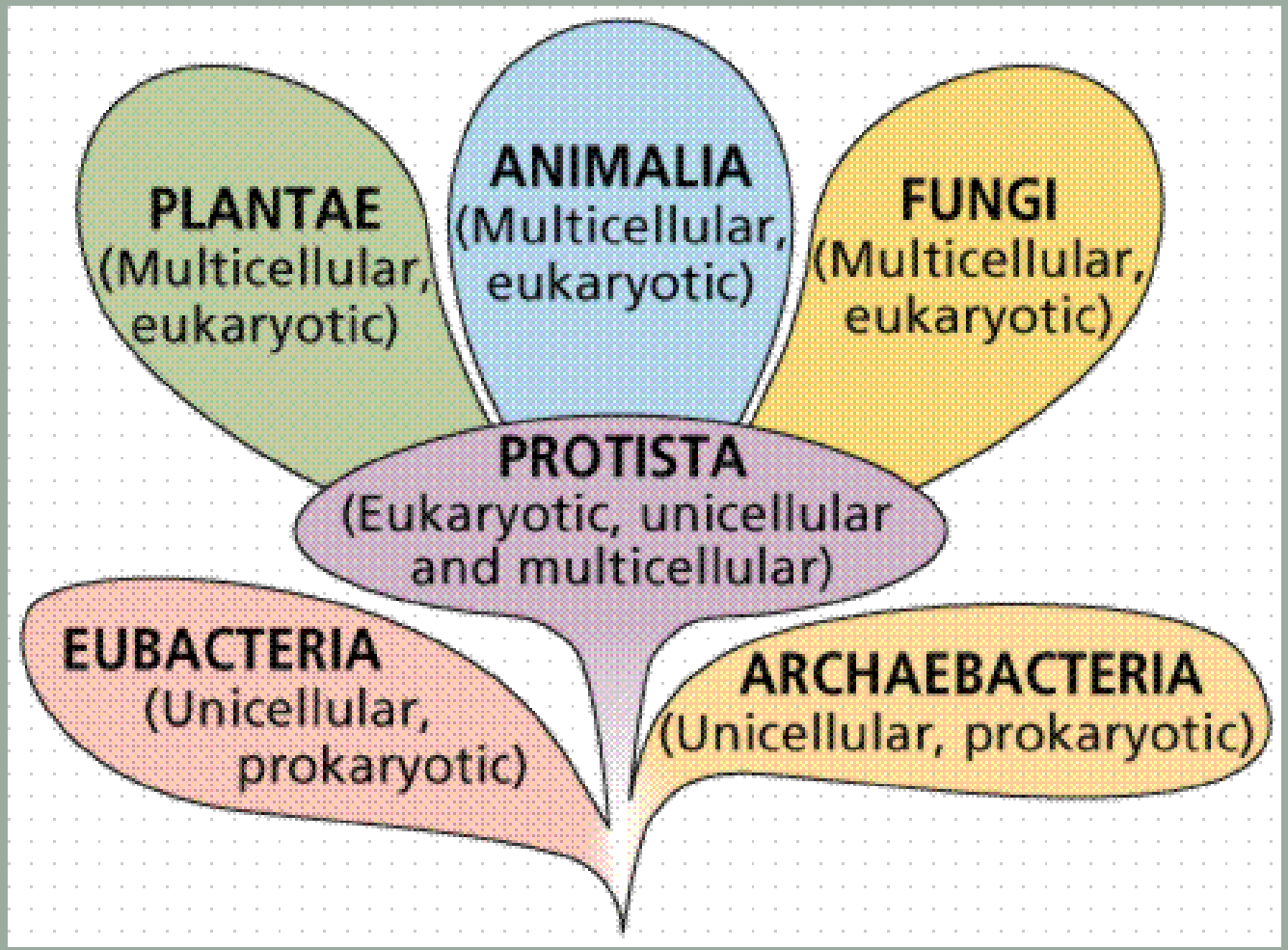
6 kingdom classification



I can goal:

- I can classify living things into 6 kingdoms .

Why classify?

- To organize all the discovered organisms
- To give organism a standard name so scientists from different countries can talk about the same animal without confusion

Who is Carlous Linnaeus?

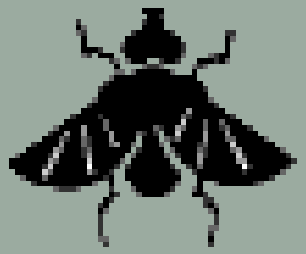
- Carolus Linnaeus was a Swedish botanist
- Developed a classification system based on similarities between organisms (plants/animals)
- Today we use an seven level system to classify living things

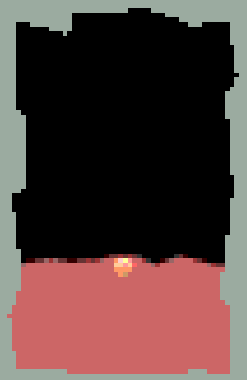
6 Kingdoms of Life

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

1. Archaebacteria – bacteria that live in harsh conditions
2. Eubacteria – bacteria that live in normal conditions
3. Protista – organisms made of one eukaryotic cell
4. Fungi – mushrooms and molds
5. Plantae – all plants including trees, bushes, and flowers
6. Animalia – all animals including insects

- The grouping of organisms into KINGDOMS is based on 4 factors:
  - 1. Cell type
  - 2. Cell number
  - 3. Feeding Type
  - 4. Reproduction

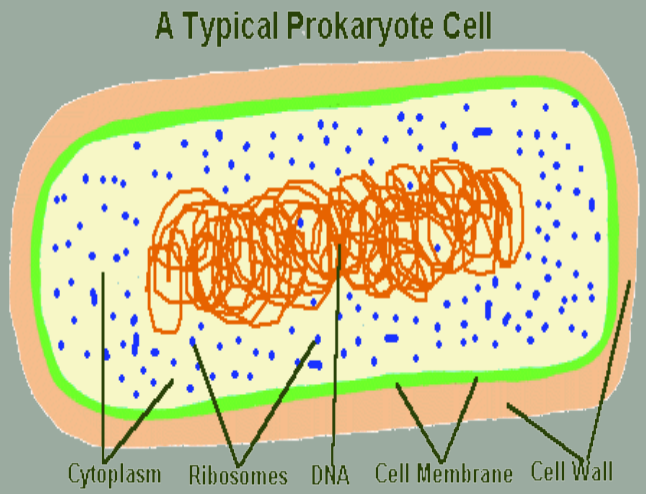


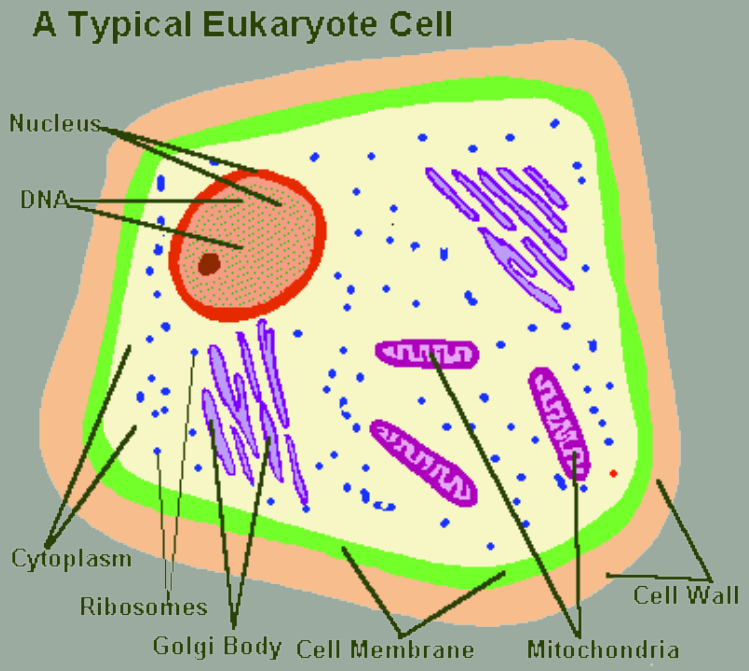


Notice these are four of the categories at the top of your chart.

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

Prokaryotes (NO nucleus) & Eukaryotes (DO carry a nucleus)



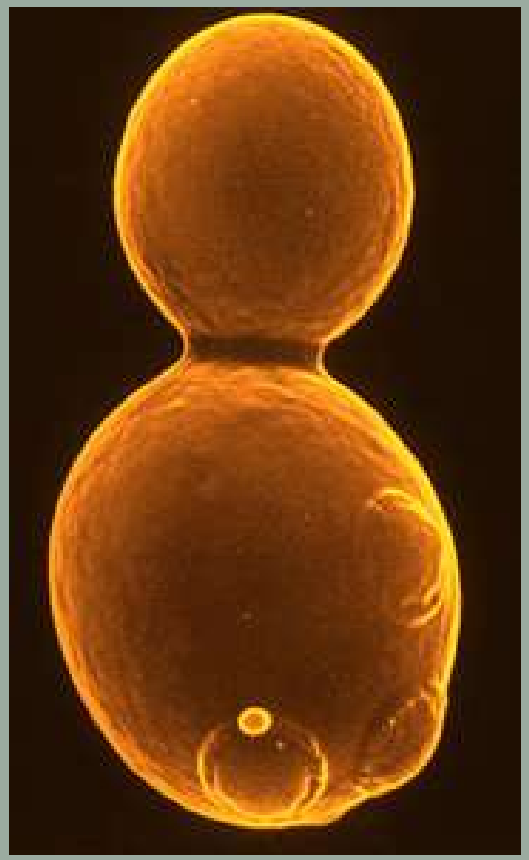


2. Cell number - Whether the organisms are made of single cells or many cells

Unicellular- single celled organism

Multicellular- many celled organism

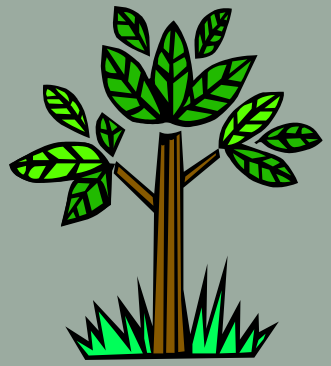
- Unicellular



Multicellular

3. Feeding Type - How the organisms get their energy Or food.

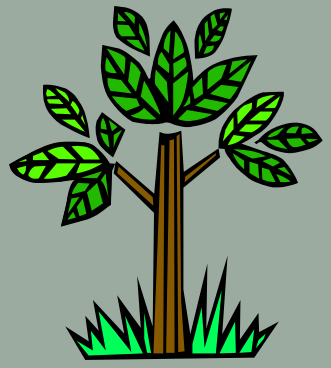
*Producer (Autotroph)
Makes it's own food



*Consumer (Heterotroph)
Must eat other organisms to survive

3. Reproduction Type - How the organisms produce offspring

*Asexual : One parent
- Binary Fission
- Fragmentation
- Budding



*Sexual: Two Parents

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

1. Cell Type – Prokaryotic OR Eukaryotic
2. Cell Number – Unicellular AND/OR Multicellular1
3. Feeding Type – Producer (Autotroph) OR Consumer (Heterotroph)
4. Reproduction Type- Asexual OR Sexual

Some interesting facts about that kingdom

6 Kingdoms

- Archaebacteria
- Eubacteria

Prokaryotes

- Protista
- Fungi
- Plantae
- Animalia

Eukaryotes

First Two Kingdoms

- The first two kingdoms involve bacteria. Scientists at one time grouped bacteria into one kingdom but just recently divided them into two groups: Archaebacteria and Eubacteria
- Both groups of bacteria are prokaryotes and unicellular

Kingdom1:Archeabacteria

- CELL TYPE: PROKARYOTE
- CELL NUMBER: UNICELLULAR
- FEEDING HABIT:

:PRODUCERS/AUTOTROPHS OR DECOMPOSERS(HETEROTROPHS)

- REPRODUCTION: ASEXUAL
- Ex: salt loving, heat loving and methane

Archaebacteria

- Archaebacteria is also called ancient bacteria as they date back 4 billion years
  - They are found in harsh environments that no other organism lives. We call them "heat-loving" or "salt-loving" or "Methane-loving"

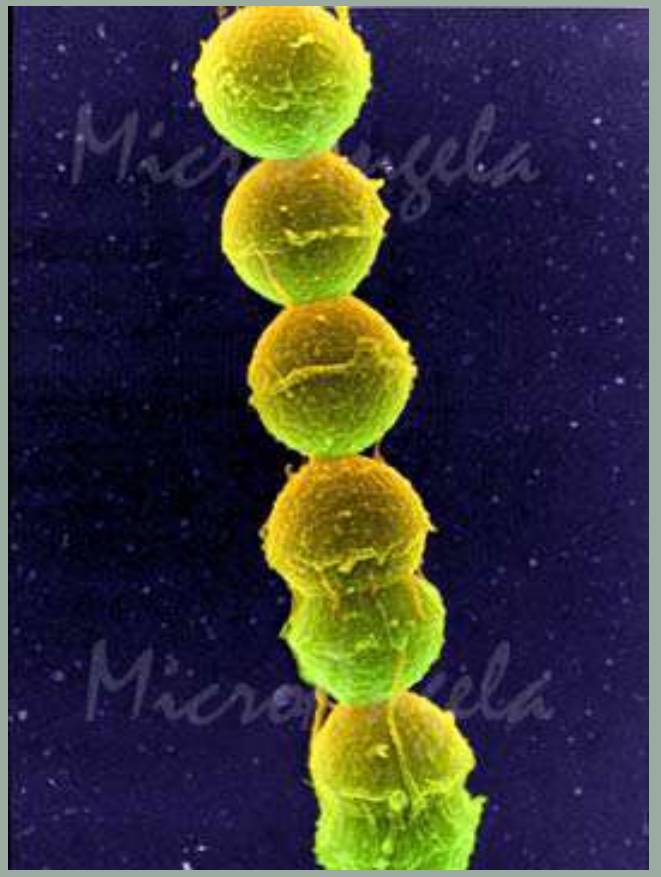
  - The yellow and orange rings around the hot springs in Yellowstone National Park were formed by the remains of archaebacteria billions of years ago!

Archaebacteria

- Gets energy from sunlight (producer/autotroph)
- Breaks down things in dead or decaying organisms (decomposer/heterotroph)
- Asexual reproduction by binary fission
- Reproduces in a short amount of time
- Different chemical makeup than bacteria

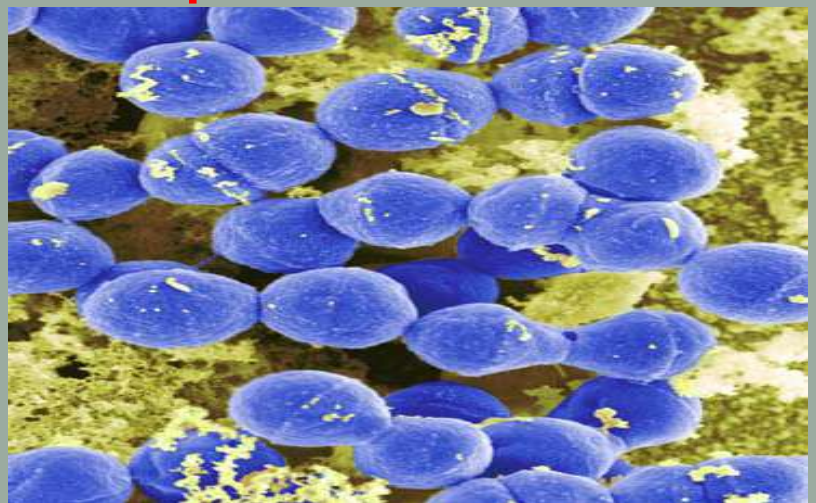
Eubacteria

- 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.



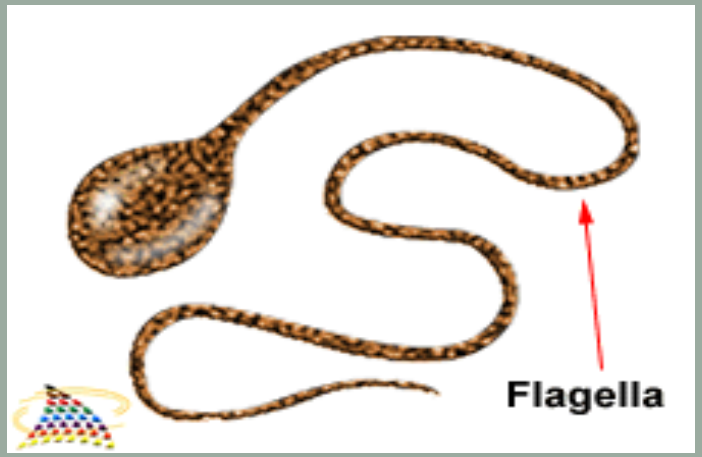
Kingdom 2: Eubacteria

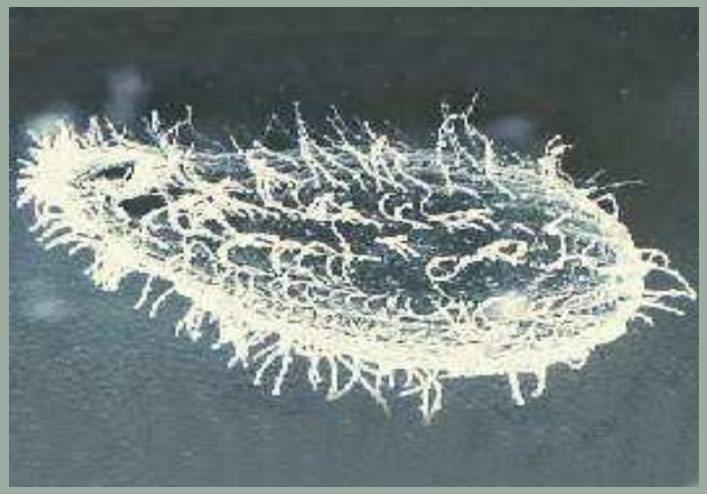
- Cell type: prokaryote
- Cell number: unicellular
- Feeding habit: producers/autotrophs
- OR decomposers/heterotrophs
- Reproduction: asexual



Bacterial Locomotion

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





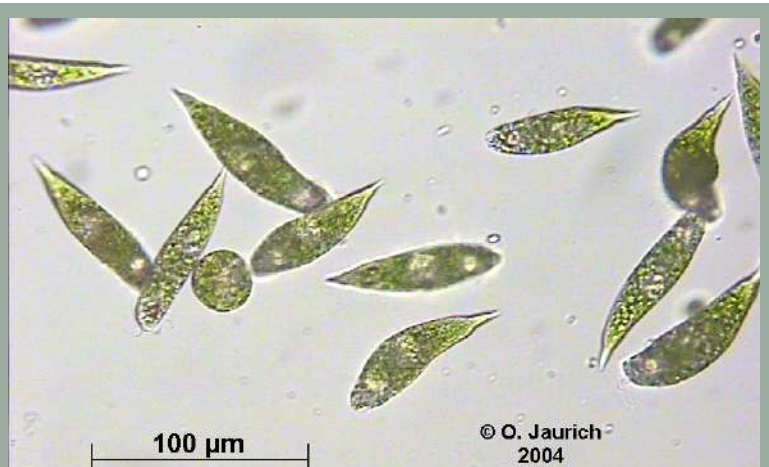
Uses of bacteria

We would not have yogurt or cheese if it was not for bacteria! Cleaning solutions and some medicines are also made from specific types of bacteria. They also are decomposers and help with the nitrogen cycle.

- 99% of bacteria is helpful and only 1% is harmful causing diseases such as tuberculosis and diphtheria.

Kingdom 3: Protists

- Cell type: eukaryote
- Cell number : unicellular or multicellular
- Feedinghabit: producer or consumer or decomposer
- Reproduction: mostly asexual but sometimes



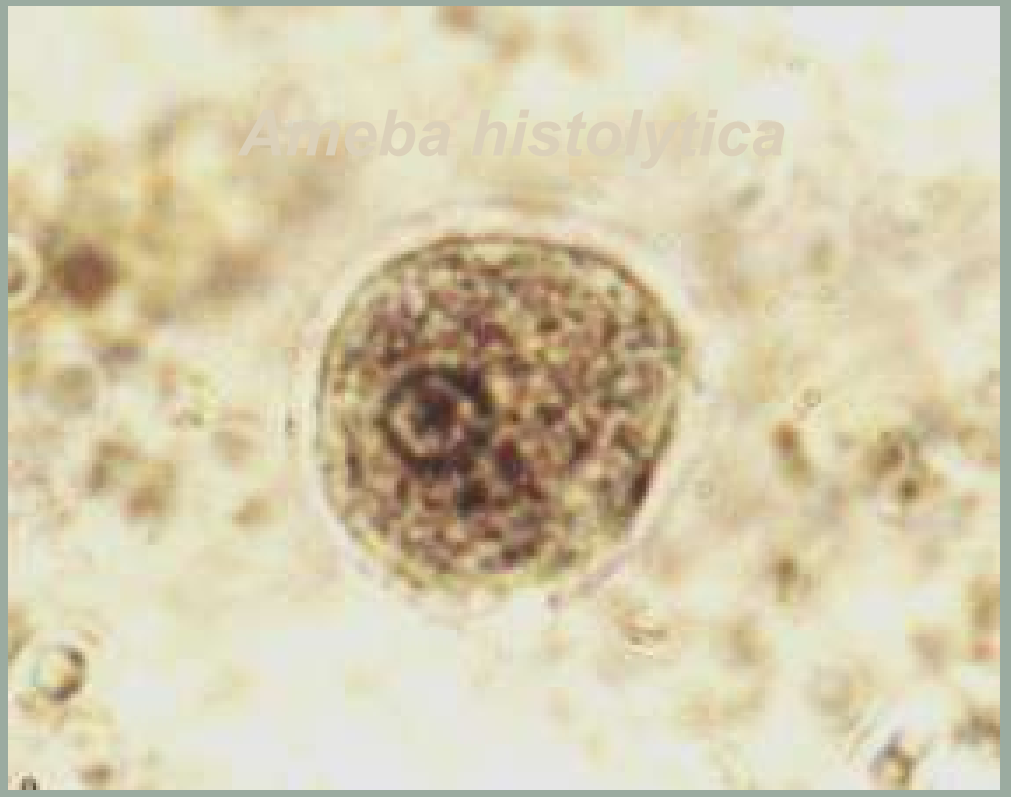
Protists

- Most diverse Kingdom
- There are animal-like, fungus-like, and plant-like protists (the left-overs)
- Some are beneficial

- Protists are found in lakes and ponds
- Some protists can cause diseases in humans, such as:

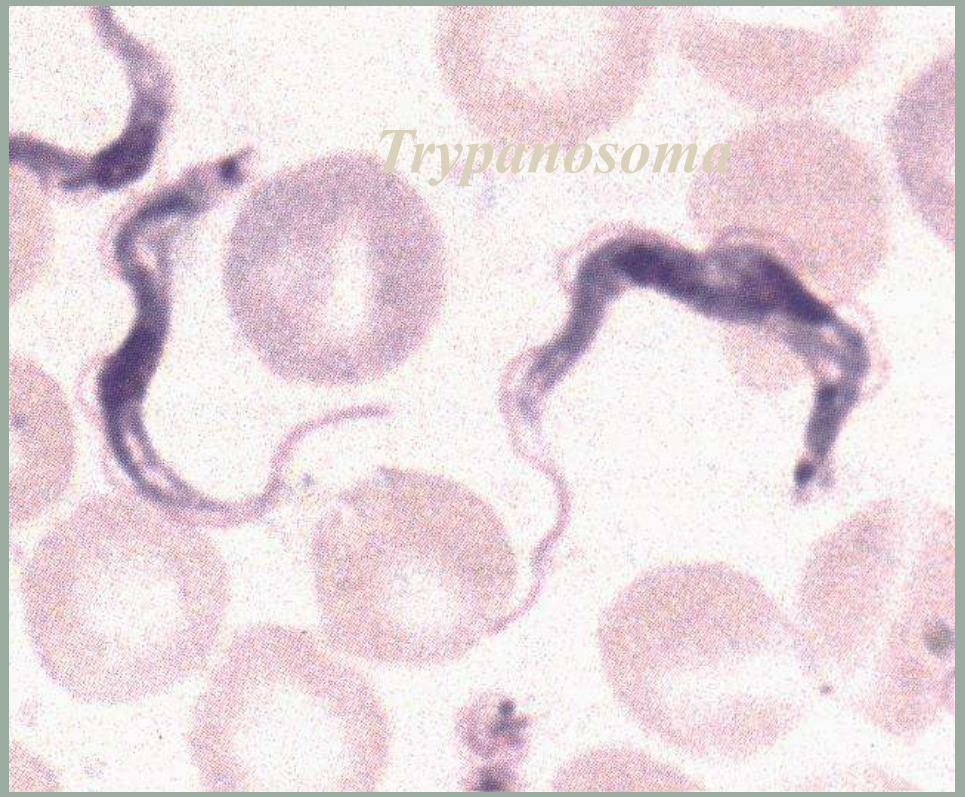
Protists Disease

- Amebic dysentery



Protists Disease

- African Sleeping Sickness

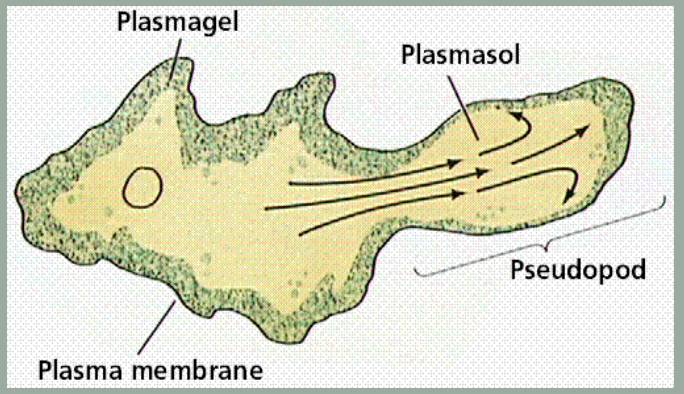


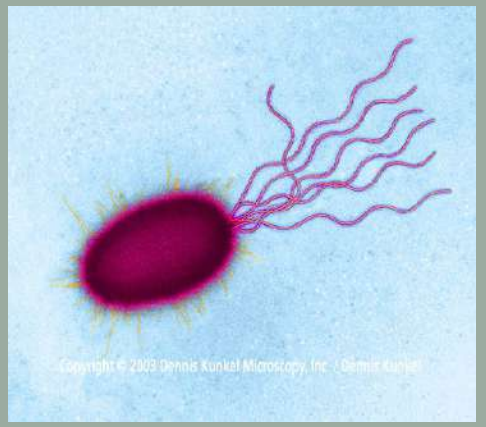
Protists Disease

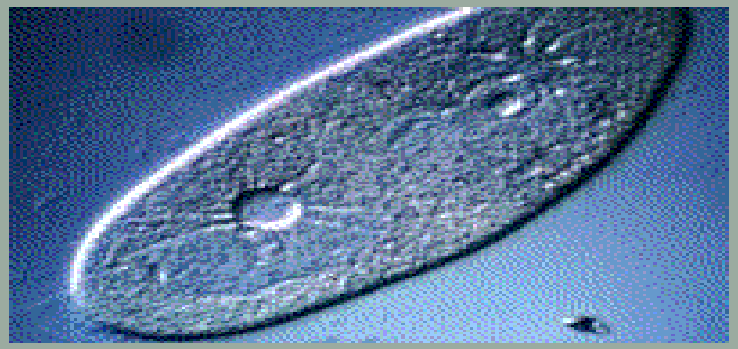
- Malaria
- Malaria kills about one million people every year!

Protists Movement

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







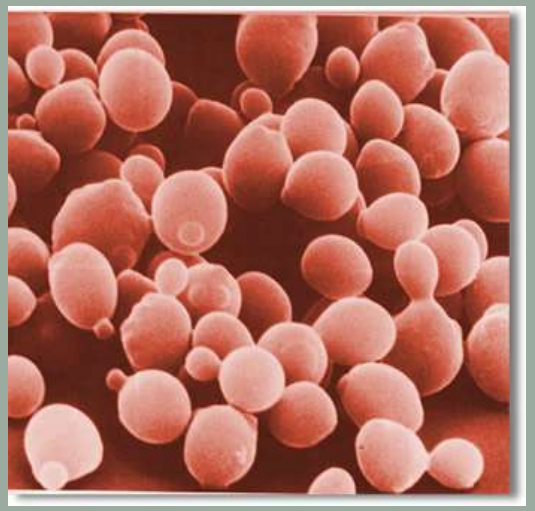
Kingdom 4: Fungi

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

Fungi

- Cell type: eukaryotic
- Cell number: unicellular or multicellular
- Feeding habit: decomposer
- Reproduction: Asexual or sexual reproduction
- Ex.: mushrooms

Unicellular (yeast)



Multicellular

Fungi

- Fungi can be very helpful and delicious

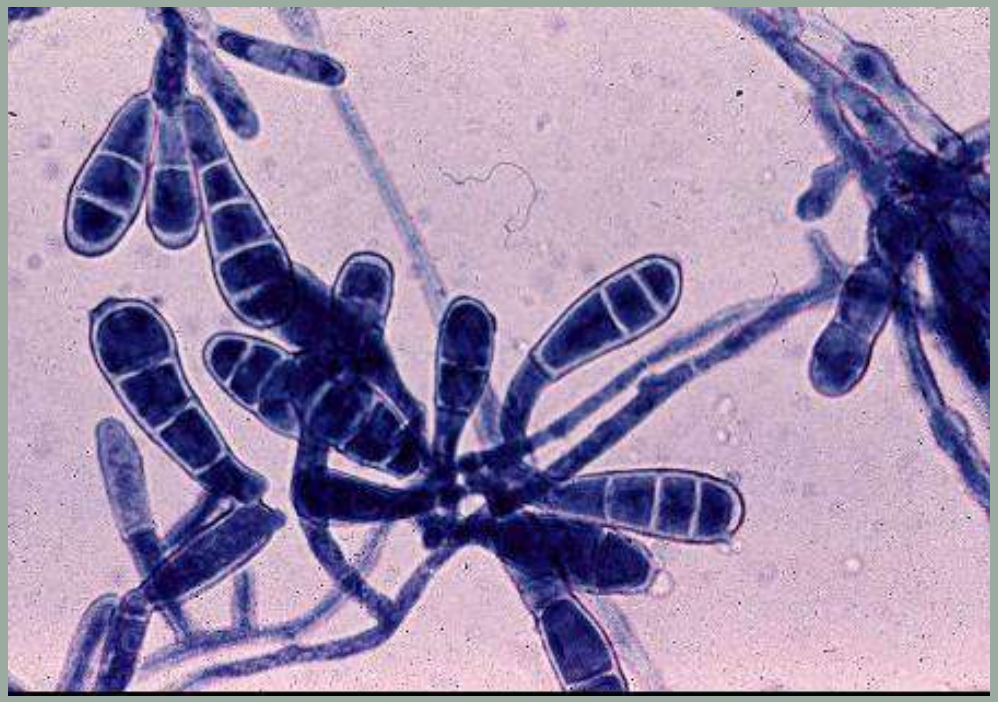
- Many antibacterial drugs are derived from fungi

Penicillin

Fungi

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

Athlete's Foot

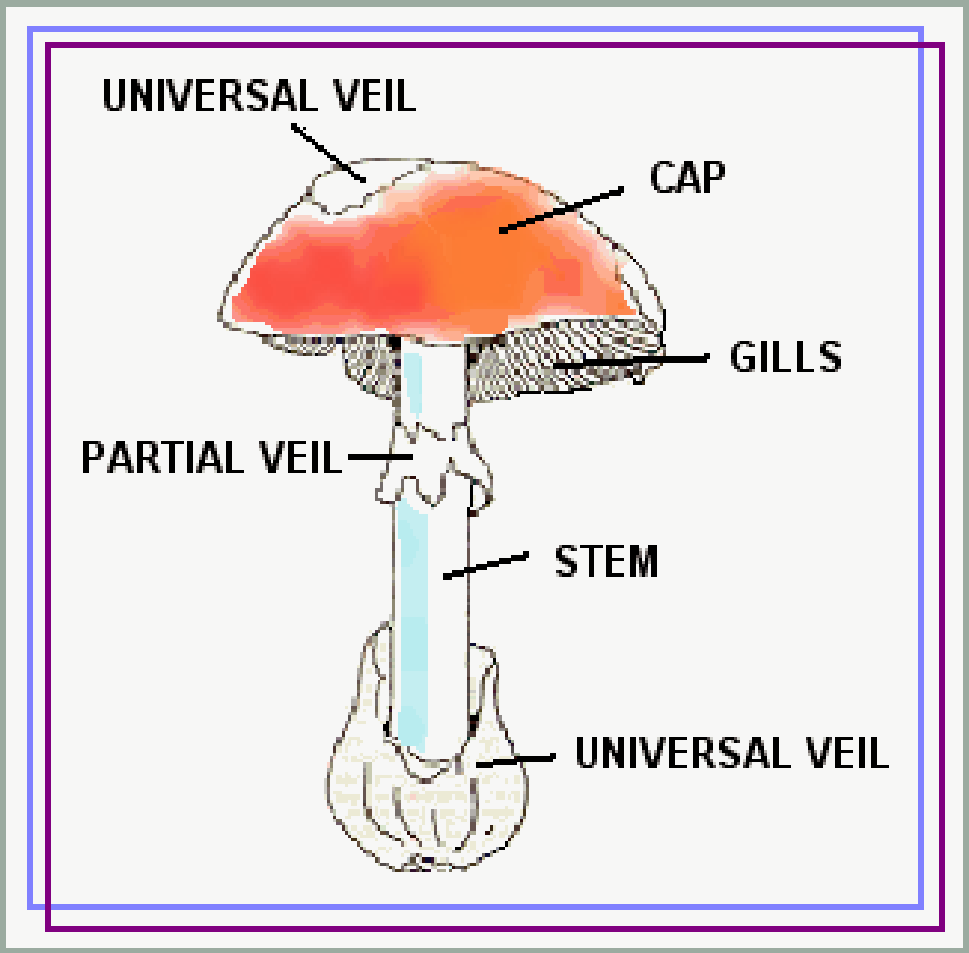


Fungi

- Ringworm

Fungi Movement

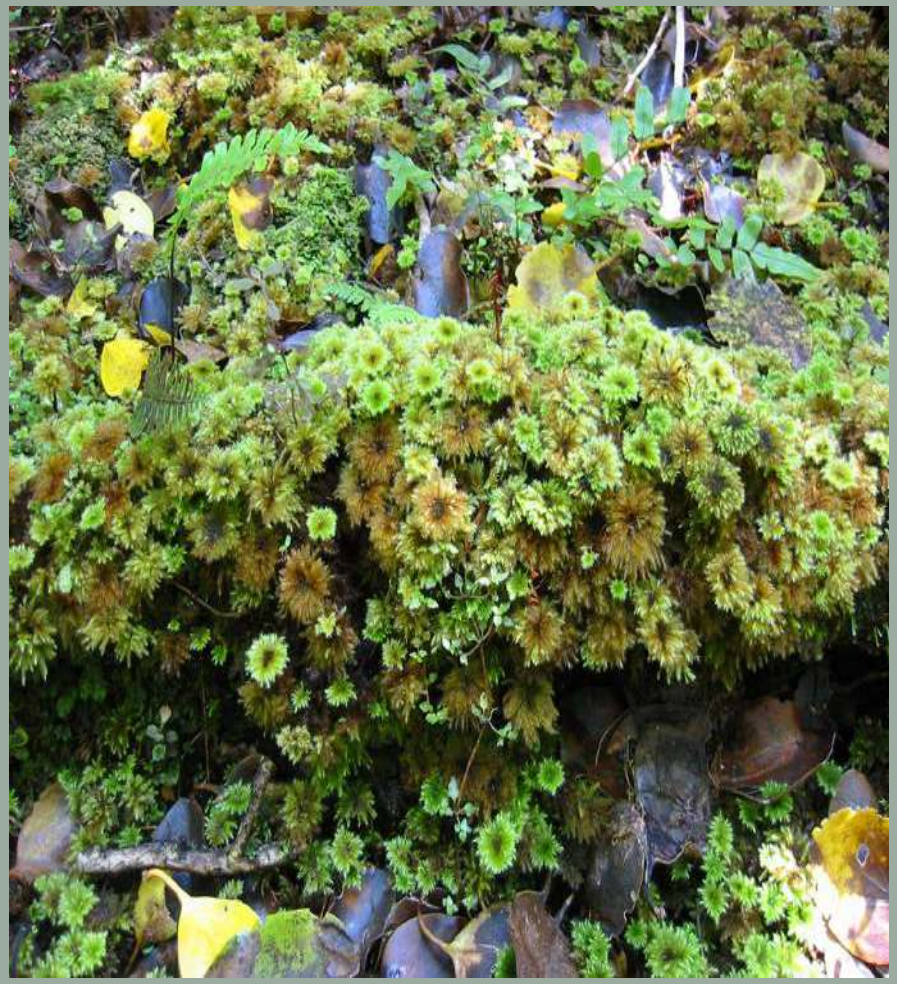
- Fungi are stationary
- They have root-like structures that they use for attachment



Kingdom 5:plants

- Cell type :eukaryotic
- Cell number: multicellular
- Feeding habit: producers
- Reproduction: asexual and sexual

- Mosses

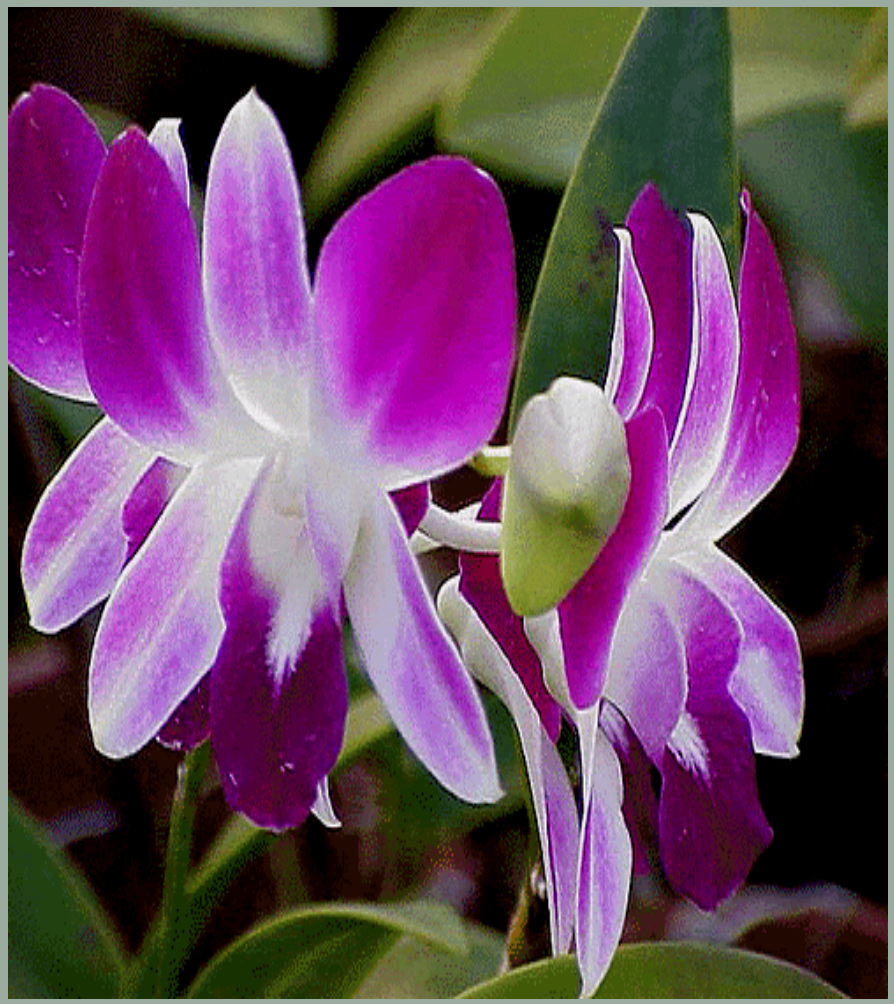


- Liverworts & Hornworts

- Ferns

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

- Flowering plants
  - Angiosperms



Kingdom 6: Animalia

Cell type : Eukaryotic cells.

Cell number: multicellular

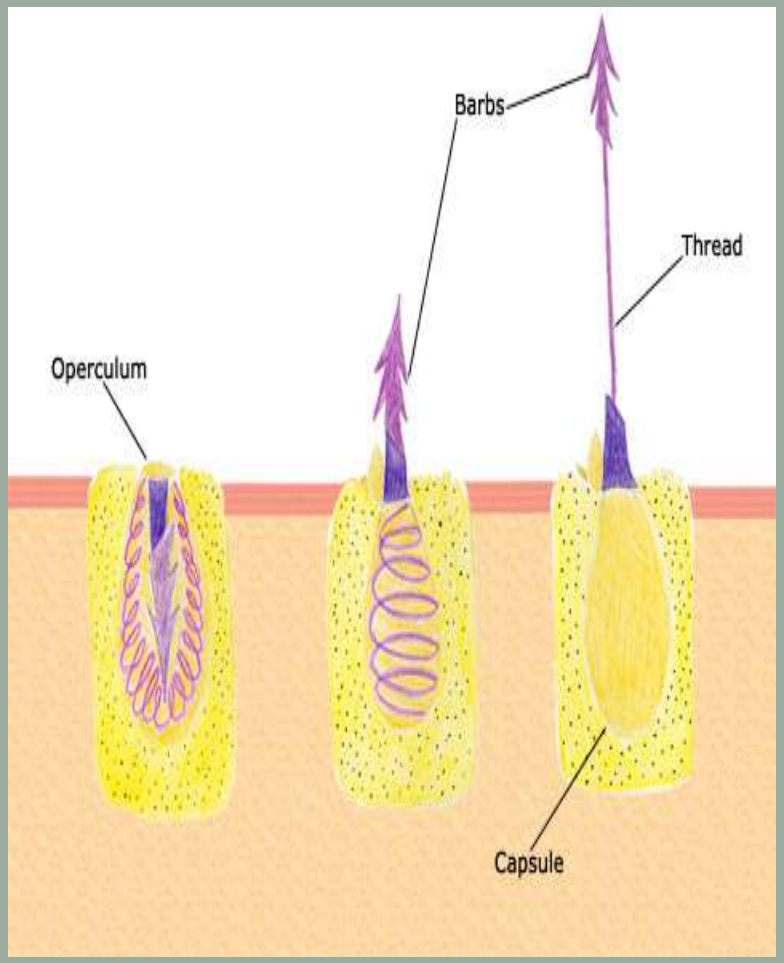
feeding : heterotrophs / consumers

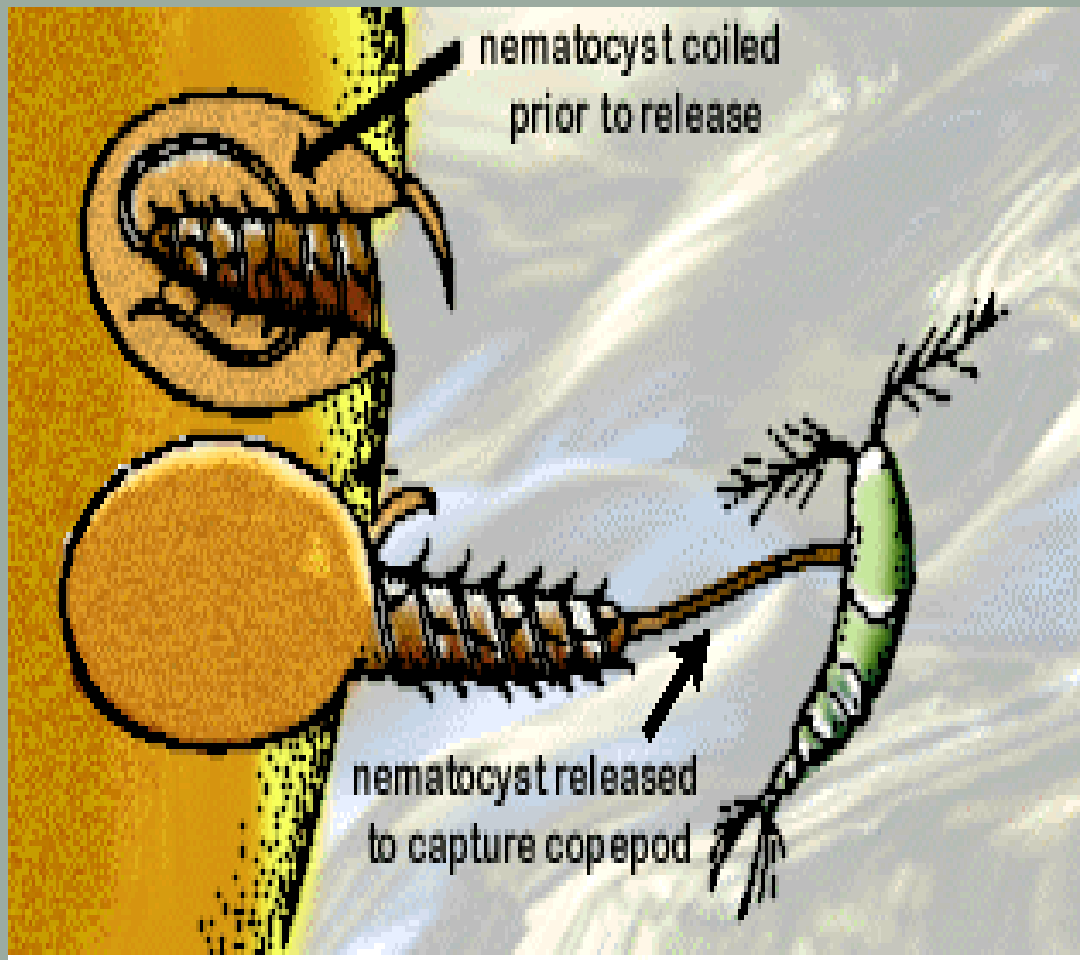
Reproduction: sexual

- Porifera: sponges

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

- Nematocyst

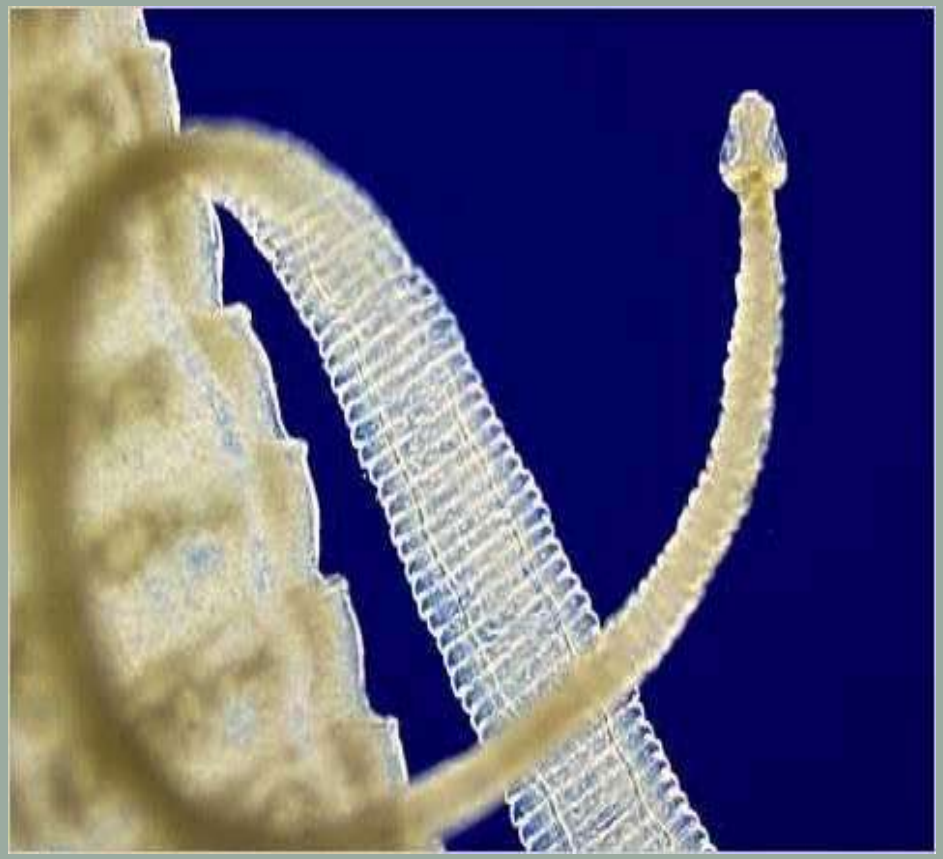




The stinging cells (nematocyst) found in coral tentacles in coiled and released positions.

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

- Platyhelminthes (flat worms)
  - Tapeworms & flukes



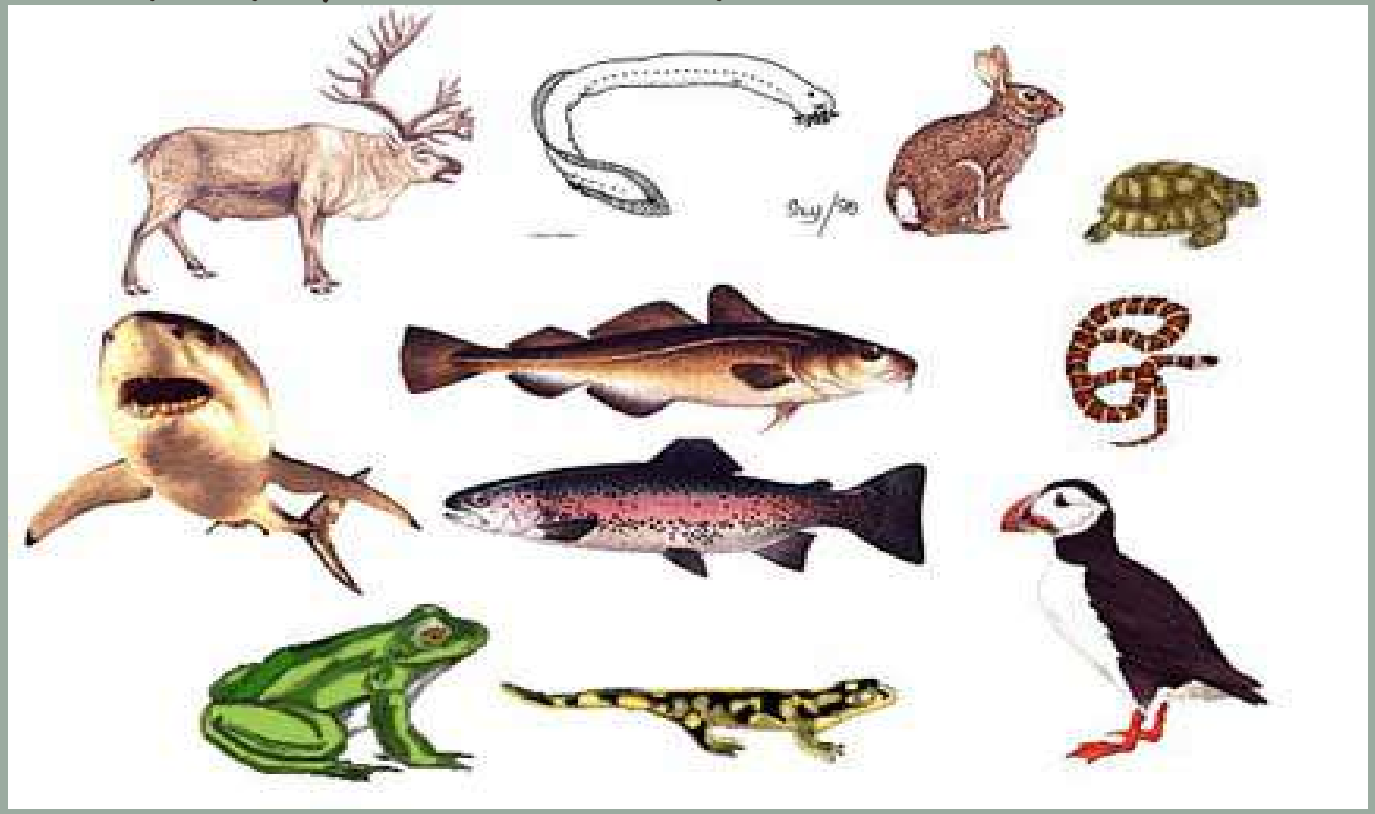
Human liver fluke

- Annelids (segmented worms)
  - Worms & leeches

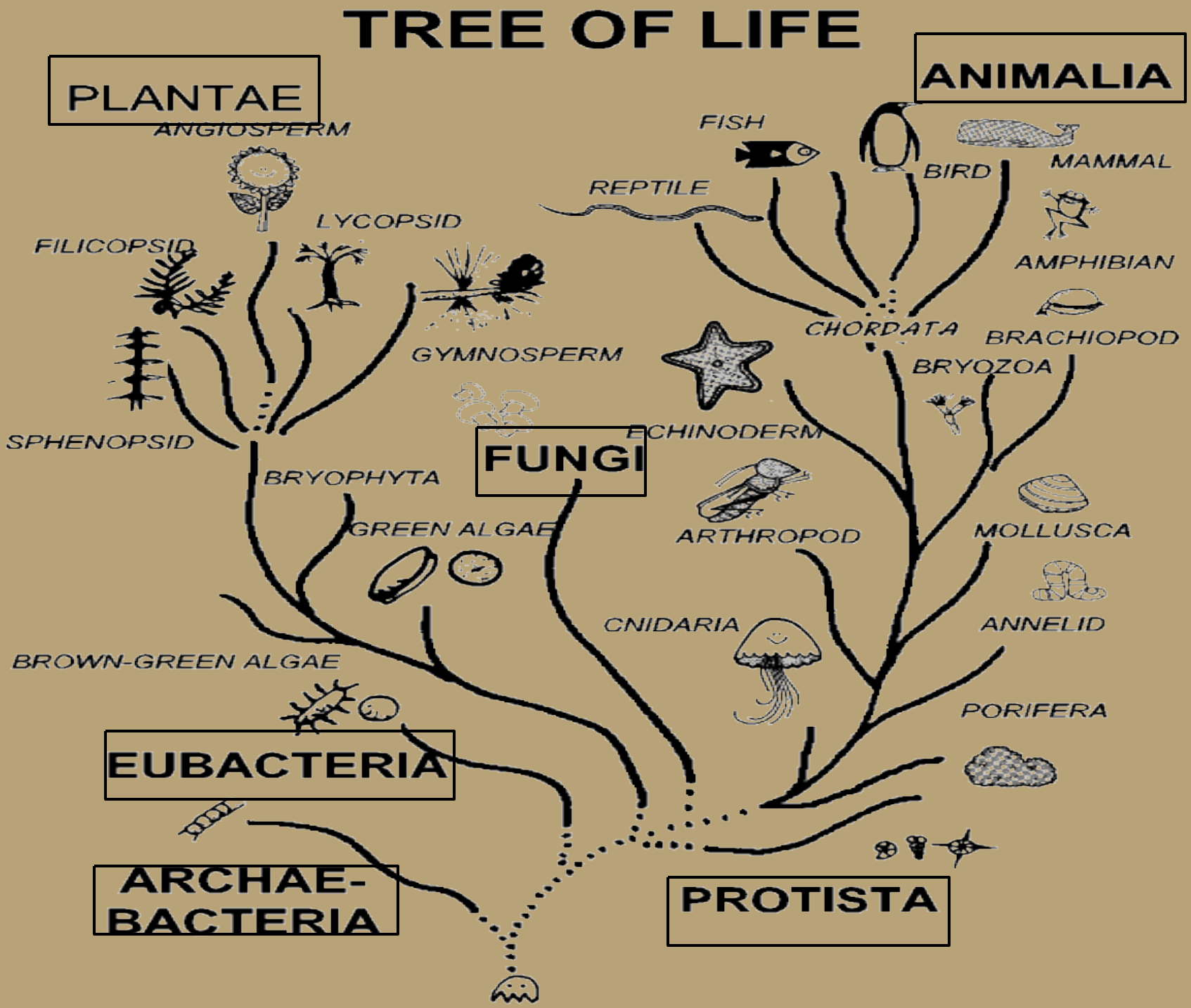
- Echinoderms
  - Starfish, sea urchins, sea cucumbers

- 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.



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. You can go back through the slides for examples and/or use the following slide.


TREE OF LIFE
PLANTAE
ANIMALIA
ANGIOSPERM
FISH
MAMMAL
BIRD
REPTILE
LYCOPSID
FILICOPSID
AMPHIBIAN
CHORDATA
BRACHIOPOD
GYMNOSPERM
BRYOZOA
ECHINODERM
SPHENOPSID
FUNGI
BRYOPHYTA
ARTHROPOD
MOLLUSCA
GREEN ALGAE
CNIDARIA
ANNELID
BROWN-GREEN ALGAE
PORIFERA
EUBACTERIA
ARCHAE-
BACTERIA
PROTISTA