

Chapter Nine: Classification

Section 2: The Six Kingdoms

Organisms are classified by their characteristics

Scientists agree on a 6 Kingdom Classification System

Bacteria: extremely small, single-celled organisms that are prokaryotes (lacks a nucleus)

- Classified into two separate kingdoms

The Six Kingdoms:

1. Kingdom Archaeobacteria:

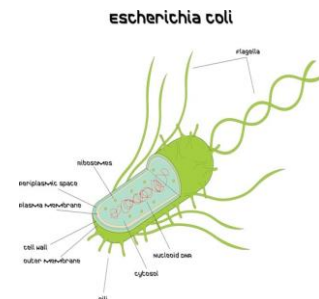
- Live in extreme environments where most organisms couldn't survive (ex. Yellowstone National Park)
- *Archae*- comes from the Greek word meaning "ancient"



Yellow and orange rings contain Archaeobacteria

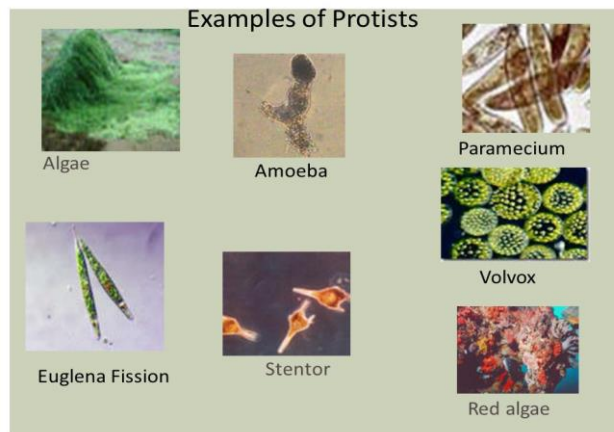
2. Kingdom Eubacteria

- Prokaryotes that live in the soil, in water, and either on or inside the human body
- Ex. *Escherichia coli* lives in human intestines and produce vitamin K
- Another converts milk into yogurt
- Another causes pneumonia



3. Kingdom Protista

- Called protists
- Single celled or simple multicellular organisms that are eukaryotes (have a nucleus and membrane-bound organelles)
- Contains all eukaryotes that are not plants, animals, or fungi
- Ex. Protozoans, algae, and slime molds



4. Kingdom Fungi

- Complex multicellular organisms – molds and mushrooms
- Do not perform photosynthesis (unlike plants) and do not eat food (unlike animals)
- Absorb nutrients from substances in their surroundings and use digestive juices to break down the substances
- NEVER eat wild fungi!



5. Kingdom Plantae

- Consist of organisms that are eukaryotic, have cell walls, and make food through photosynthesis
- Found on land and in water where light can penetrate
- Most life on Earth is dependent on plants
- Provide habitat for other organisms

6. Kingdom Animalia

- Complex, multicellular organisms that don't have cell walls, are usually able to move around, and have specialized sense organs
 - These sense organs help most animals respond quickly to their environment
- Called *animals*
- Depend on the organisms from other kingdoms
 - Animals depend on plants for food and bacteria and fungi to recycle the nutrients found in dead organisms
- Ex. Dog, cat, parrots, worms, insects, and corals

