

Diversity of Living Things Chapter 4, Section 3

How are organisms organized?

- Organisms are divided into six Kingdoms based on characteristics.
- Members of different kingdoms
 1. get their food in different ways.
 2. Are made up of different types of cells.
- Kingdom Names:

Archaeobacteria	Protists
Eubacteria	Plants
Fungi	Animals

Bacteria are everywhere!

Properties of Bacteria:

- Microscopic
- Single-celled organisms with cell walls but no nuclei
- Reproduce by dividing in half
- Examples: methanogens, blue-green algae

Two Types of Bacteria:

- Archaeobacteria: live in harsh environments
- Eubacteria: most bacteria is this type

Functions of Bacteria:

- Break down wastes and return nutrients to soil
- Convert Nitrogen to a form plants can use
- Aide in digestion
- Cause disease

Fungi: More than one fungus

Properties of Fungi:

- Cells have nuclei, cell walls and no chlorophyll
- Cell walls are like a skeleton allowing fungi to stand upright
- Absorb food from their surroundings
- Obtain food by releasing chemicals that break food down and then absorbing it.
- Example: Mushrooms, yeast

Functions of Fungi:

- Cause disease like athlete's foot
- Add flavor to food like blue cheese
- Make bread rise (yeast)

Protists

Properties of Protists:

- Mostly one celled, microscopic organisms
- Most live in water
- Examples: Algae (pond scum), seaweed, phytoplankton, kelp (multi-celled)

Functions of Protists:

- Cause malaria (plasmodium)
- Source of food in ecosystems (phytoplankton)

Plants

Properties of Plants:

- Many celled organisms with cell walls
- Make their own food using the sun's energy
- Most plants live on land because the resources they need are there (sun, minerals, carbon dioxide)
- Roots and leaves
 - Used to tap the resources in the ground and air
 - Connected by vascular tissue (like plumbing)

Plants

Types of Plants:

- Lower Plants: Live in damp places
 - Ex: Ferns and mosses
- Gymnosperms: Woody plants whose seeds are not enclosed in fruit. Can live in drier conditions due to adaptations: Produce pollen and seeds.
 - Source of lumber and paper
 - Ex: pine trees, evergreens
- Angiosperms: Flowering plants that produce seeds and fruit. Flower is the reproductive structure. Depend on animals to disperse seeds and pollen.
 - Source of food for most land animals
 - Ex: Wheat, oranges, lettuce, cotton, oak

Animals

Properties of Animals:

- Many celled organisms with no cell walls, so bodies are soft and flexible
- Some have evolved skeletons that aide movement.
- More mobile than plants, moving around their environment
- Cannot make their own food

Animals

Types of Animals:

- Invertebrates: Lack backbones
 - Many live attached to hard surfaces in the ocean
 - Get their food from the water
 - Only mobile when they are larvae
 - Ex: Coral, worms, clams and oysters
 - Some are mobile, Ex: Squid, insects, slugs
- Vertebrates: Have backbones
 - Include animals that live in air, land and water
 - Reptiles: Water proof eggs that can hatch on land away from predators
 - Birds: Warm blooded, feathers, eggs
 - Mammals: Warm blooded, have fur, feed their young milk