Levels of Organization

Body Building

How are living things organized?

- An **organism** is a living thing that can carry out life processes by itself.
- *Unicellular organisms* are made up of just one cell that performs all the functions necessary for life.
- Unicellular organisms do not have levels of organization.

How are living things organized?

- Unicellular organisms need fewer resources and some can live in harsh conditions.
- They are very small and are easily eaten by other organisms.
- If the single cell dies, the entire organism dies.

How are living things organized?

- *Multicellular organisms* have multiple cells that are grouped into different levels of organization.
- Multicellular organisms are larger, more efficient, and have a longer lifespan than unicellular organisms.
- Multicellular organisms need more resources than unicellular organisms.
- The cells are specialized and must depend on each other for survival of the organism.

How are living things organized?

- A **tissue** is a group of similar cells that perform a common function.
- Humans and other animals are made up of nervous, epithelial, connective, and muscle tissues.
- Plants have transport, protective, and ground tissues.

How are living things organized?

- An **organ** is a structure made up of a collection of tissues that carries out a specialized function.
- Different tissues can work together to accomplish a function, such as digesting food.
- Plants have organs such as leaves, stems, and roots.

How are living things organized?

- An **organ system** is a group of organs that work together to perform body functions.
- Each organ system in the body has a specific job to do for the organism.

How are living things organized?

- What are the levels of organization in this tree?

What tasks do systems perform to meet the needs of cells?

- A unicellular organism must perform all functions necessary for life.
- A multicellular organism has specialized cells, tissues, organs, and organ systems that perform specific functions.
- Some plants have a vascular system that transports water and nutrients to and from cells throughout the plant.