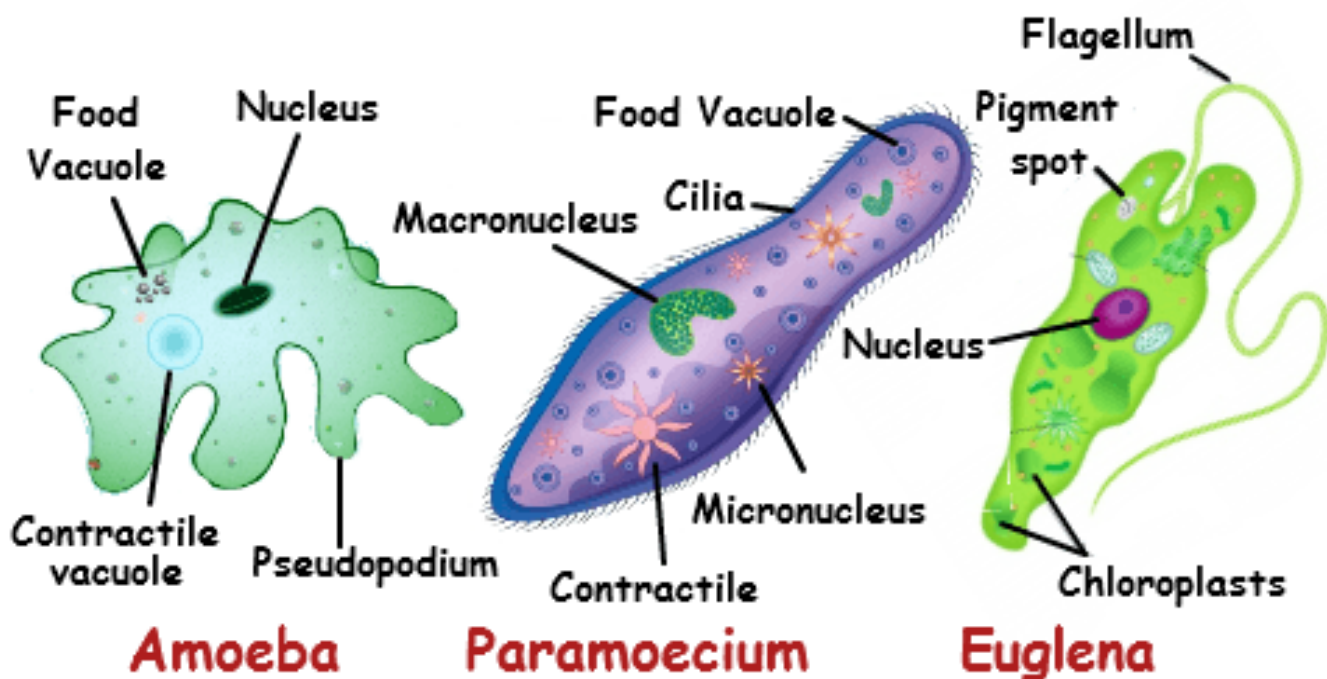


5.L.II STRUCTURES AND FUNCTIONS OF LIVING ORGANISMS

Cells are the basic building blocks of all living things or organisms. A cell is the smallest part of a living thing that takes in nutrients and gets rid of waste for the living thing.

MICROORGANISMS

A unicellular organism has only one cell. Some examples of unicellular organisms are bacteria, amoebas, euglenas, and paramecium (see diagram below). The single-celled organisms move using cilia or a flagellum, find food and make their own food. Most single-celled organisms are microscopic meaning that they are too small to be seen without a microscope. Single-celled organisms can be helpful and/or harmful. For example - Bacteria can help us digest food in our intestines is helpful. Microorganisms decompose dead organisms is helpful to the ecosystem. Some microorganisms can be harmful such as some bacteria are harmful pathogens.



Many Celled Organisms

Multicellular organisms are plants, animals and other living things that can be seen around you. Multicellular organisms are made up of more than one cell. Each cell has a specialized function and work together to allow the organism to survive. In multicellular organisms, such as plants and animals, only surface cells can take in nutrients and give off wastes. Plants and animals have systems (groups of parts that work together) for moving materials throughout their bodies

Multicellular Organisms Study Guide Multicellular Organisms are made of many different cells that work together to make the organism function. They are able to carry out many different life processes when needed. They are larger than unicellular organisms and have more than one cell. An example of a multi-cellular is humans. Humans need many cells to carry out life processes. Just like single-celled organisms, multi-cellular organisms need food for energy and growth.

Cell Organization

Cell ⇒ Tissue ⇒ Organ ⇒ Organ System ⇒ Organism

There are Simple and Complex multi-cellular organisms.

- Simple multicellular organisms are made of a collection of similar cells. The similar cells are not highly specialized, but they do work together. They only have a few different types of cells. Example: Sea Sponge
- Cells are organized into systems in complex animals and plants.
- In complex multicellular organisms, similar cells work together to form different types of tissue. Each tissue is made of only one type of cell.
- Different tissues work together to form organs. Organs work together to form systems, which perform a major function in an organism.
- Each type of cell, tissue, and organ has a distinct function. The human organism has many systems such as digestive, nervous, respiratory, circulatory, excretory, muscular, and skeletal. These systems interact all the time with one another.
- In the circulatory system, unique types of heart cells enable the system to pump the blood in an organism.
- Each system in a complex multicellular organism has unique cells that perform a specific task.

