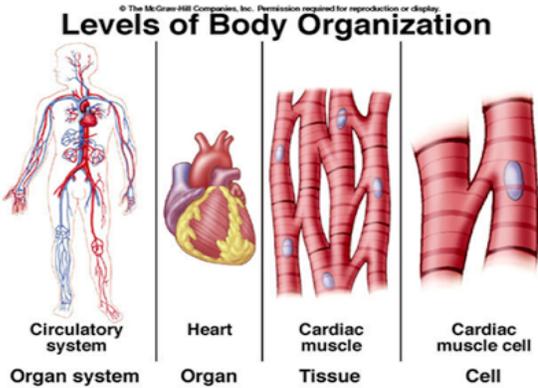


Look at the diagram below. Write 1-3 sentences describing the connection between body systems and cells



Read the following text. Fill in the table with information about the function of cell structures.

Organism - an individual plant, animal or other life form.

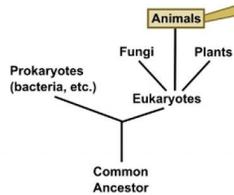
Organelles - a structure within a cell

All living organisms on Earth are divided into cells. Cells are the basic structural unit for all organisms. Cells are small compartments that hold the equipment necessary to keep an organism alive and successful. Living things may be single-celled or they may be very complex such as a human being. We will be looking at two types of cells: plant and animal.

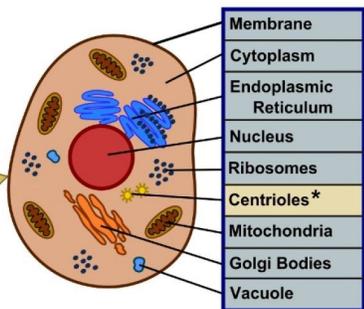
All cells have a cell membrane, which separates the cell from its environment. It also provides protection, support and controls where materials come in and out of the cell. Plant cells also have a cell wall that gives them extra support (think trees and plants growing up). Animal cells do not have cell walls. Plant and animal cells also have a nucleus. This is the control center of the cell and also contains its DNA. It is possible to see the nuclei of many types of cells under a microscope. Plants also have organelles such as the green chloroplasts. Chloroplasts are what help the cell make use of the sun's energy. Chloroplasts make glucose (sugar) that the plant cells can then use for energy. They are a key player in photosynthesis. Animal cells do not have chloroplasts. They get their energy in other ways. Mitochondria are also contained in most plant and animal cells. They are essentially the digestive systems of the cells, breaking down nutrients so the cells can use them for energy. Mitochondria have their own DNA and are thought to be a bacteria-like cells that became part of cells to gain protection. Obviously, the cell takes advantage of the relationship also as the mitochondria are responsible for the cell's energy. Both types of cells also have vacuoles. They are fluid-filled sacs that store food and water. They are much bigger in plant cells than animal cells. All of these structures are contained in the cytoplasm. This is a jelly-like substance that fills the inside of the cells and helps to protect the organelles and give structure to the cell.

Structures <i>List information about structure below the name of each structure</i>	Function <i>What does each structure do?</i>
<u>Cell Membrane</u>	
<u>Cell Wall</u>	
<u>nucleus</u>	
<u>chloroplasts</u>	
<u>mitochondria</u>	
<u>vacuoles</u>	
<u>cytoplasm</u>	

Eukaryotes
 Plant and animal cells are both Eukaryotic (which means that the cells contain a nucleus), and have many structures and functions in common. Compare this animal cell to the plant cell in the diagram below.

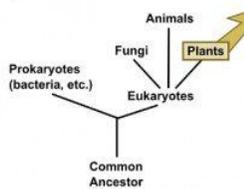


Animal Cell

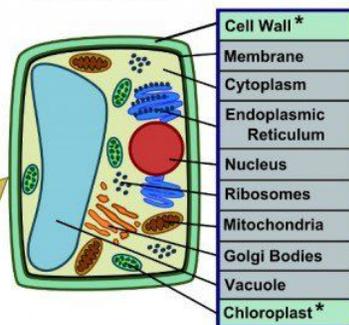


* Centrioles are unique to animal cells

Primary Differences
 Plant cells need to perform two functions not performed by animal cells:
 1. produce their own food
 2. support their own weight
 These account for the primary differences between plant and animal cells.



Plant Cell



* unique to plant cells