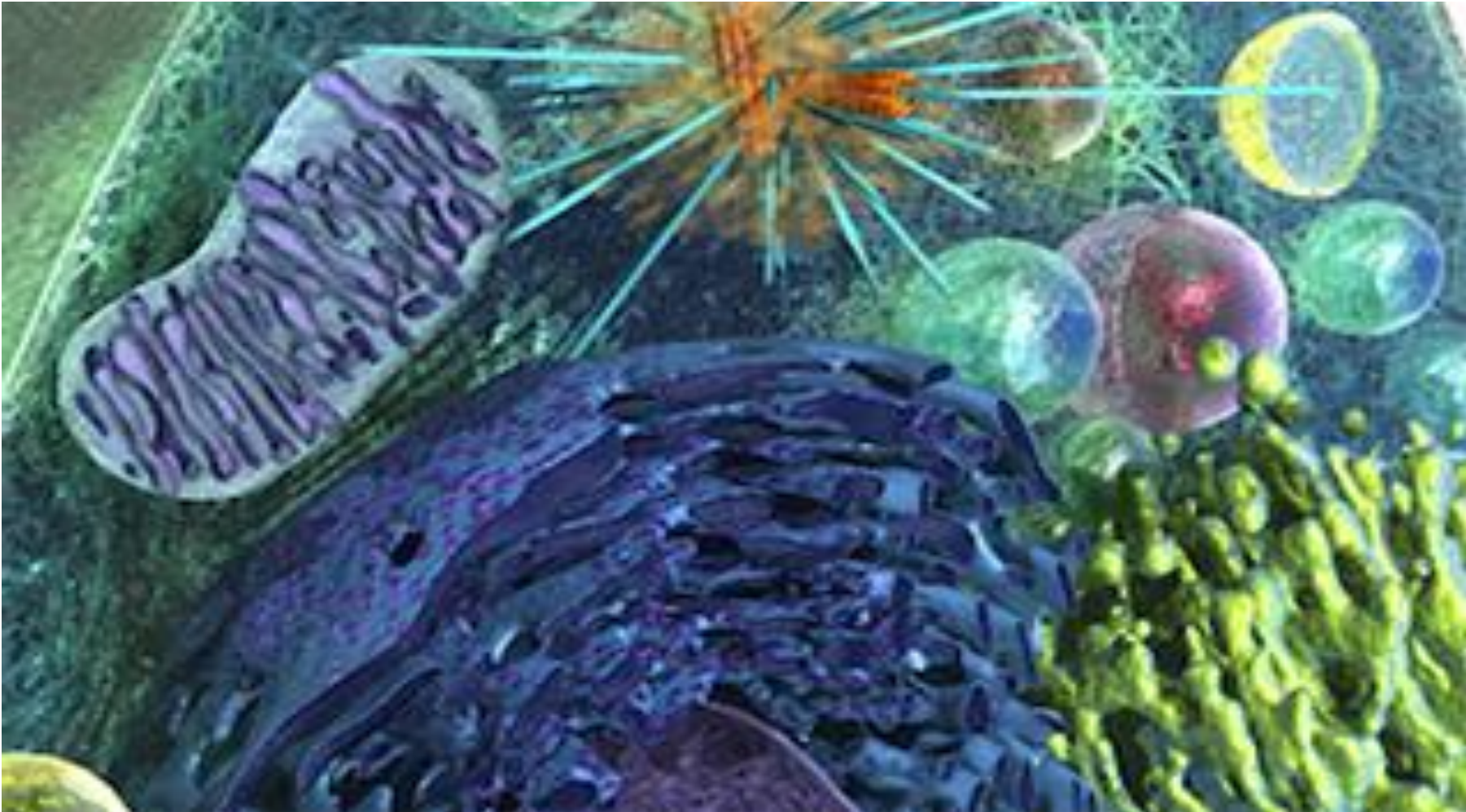


May 26, 2020

Cell Parts and Their Functions



Learning Target: I can identify major cell structures and their function.

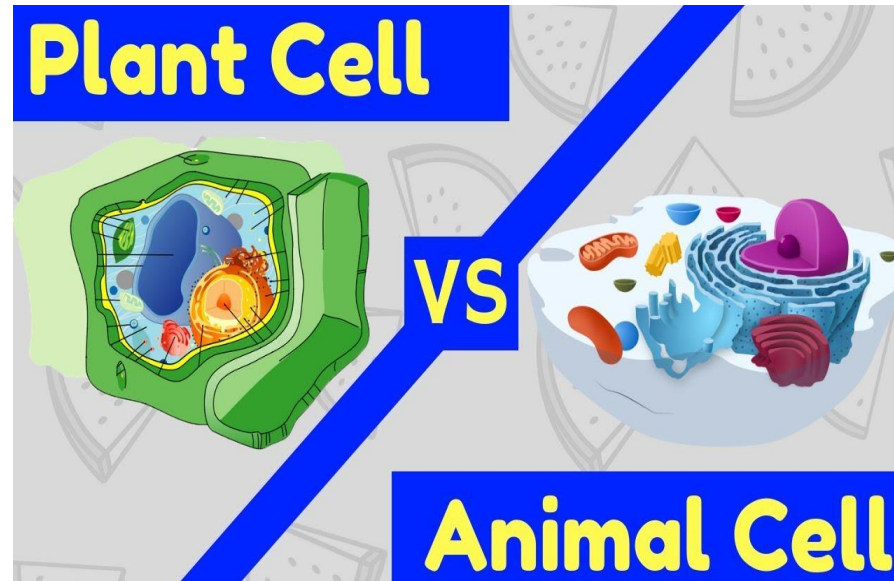
I can use analogy to describe the function of cell organelles and structures.

Criteria for Success

- Understand the functions of the major parts of a cell
- Understand what an analogy is
- Use this information to draw an analogy between the structure of a school & the structures of a plant cell
- Recognize the various cells in the human body
- Enrichment- Extend this model to develop my own analogy between a plant or animal cell and another system

Do Now: Copy and complete:

- Animal cells and plant cells differ because...
- Animal cells and plant cells differ but ...



Learning Target: I can identify major cell structures and their function.

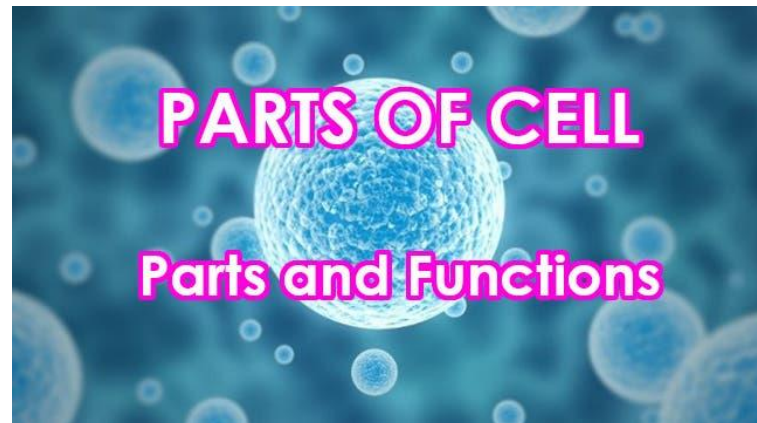
I can use analogy to describe the function of cell organelles and structures.

Tool Box #52 Cell Parts & Their Functions

I Cells consists of many structures called organelles (little organs).

II These organelles:

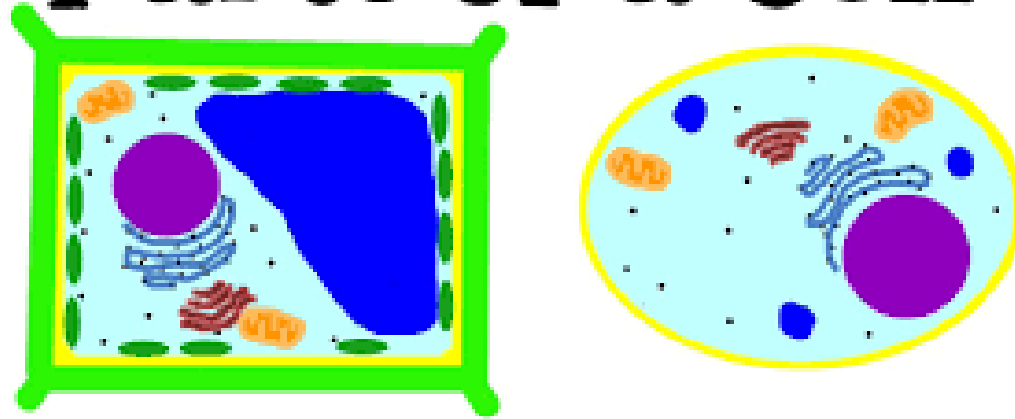
- exist within the cell
- each have their own specific job/function
- work together as a **system** (a combination of parts that form a whole) in order for the cell to function properly



Let's Watch the Video Clip "All About Cells" to Help Us Understand the Functions of Cell Structures !

Before watching the video, copy or print the charts on the next two slides . As you watch , take notes on the jobs of each of the cell parts mentioned.

Parts of a Cell



<https://www.youtube.com/watch?v=3nBtY6LR030>

While watching the You- Tube video “All About Cells”, fill in the Part III of the tool box by noting the function of each of the following organelles:

Tool Box #52 Continued

III

Cell Structure

Function

Cell membrane	
nucleus	
mitochondria	
vacuoles	
cytoplasm	
Cell wall (plant)	
Chloroplasts (plant)	

Continued
on next
slide



Tool Box #52 Continued

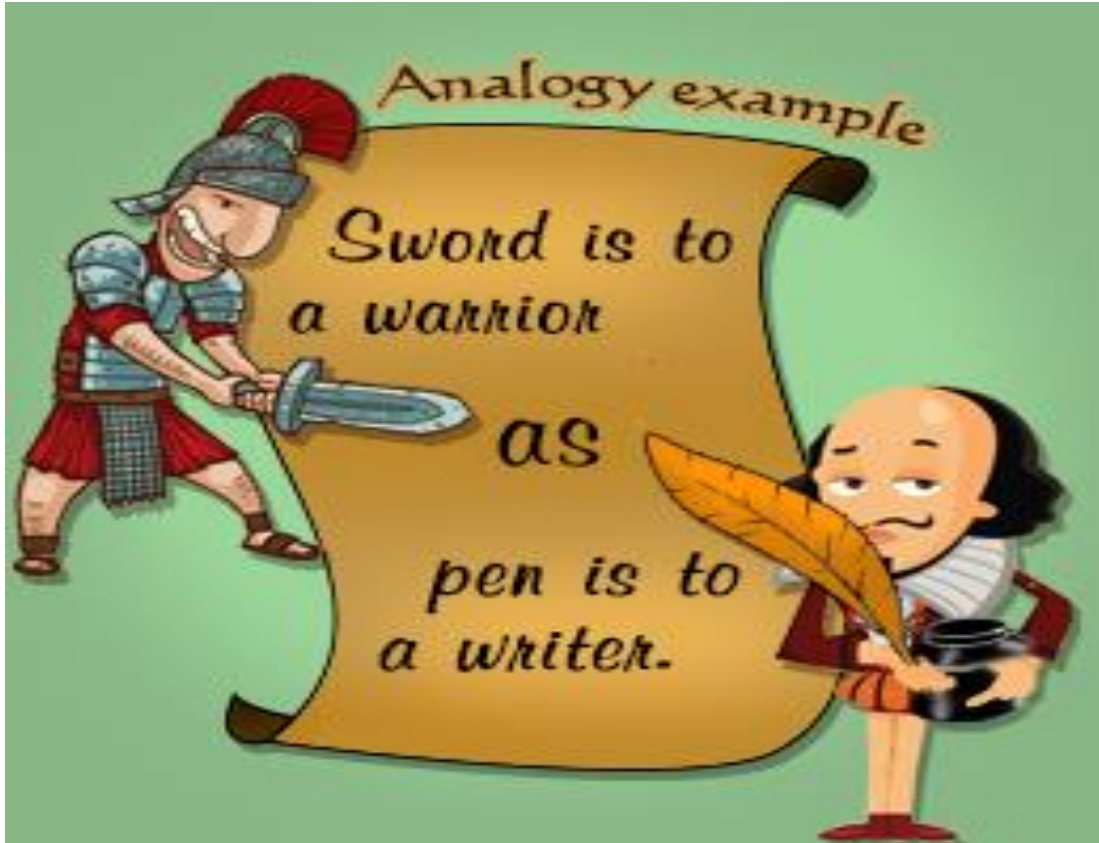
CELL STRUCTURE	FUNCTION
Lysosomes	
Endoplasmic Reticulum	
Ribosomes	
Golgi Bodies	

STRUCTURE	FUNCTION
Cell membrane	Holds cell together, lets oxygen in & carbon dioxide, waste out
nucleus	Controls cell- directs activities & has the genetic material (DNA) passed to new cells
mitochondria	Energy factory - take in chemical energy & converts it to usable energy
vacuoles	Store water, food, nutrients & waste
cytoplasm	Jelly-like, cushions the cell & its organelles
Cell wall (plant cell only)	Stiff outer layer gives support & structure
Chloroplasts (plant cell)	Food makers - have chlorophyll for photosynthesis

Check your work!

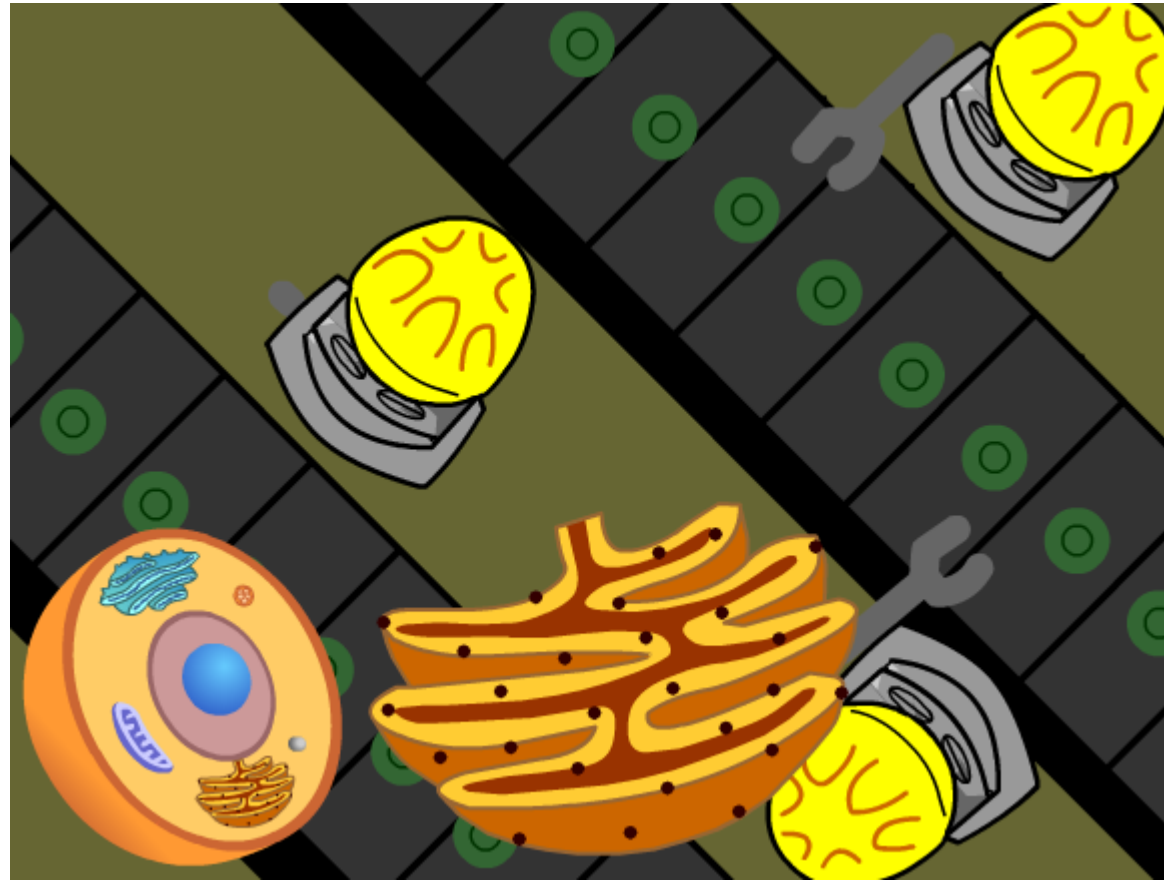
CELL STRUCTURE	FUNCTION
Lysosomes	Breakdown food & cell waste
Endoplasmic Reticulum	Builds & transport proteins & other substances
Ribosomes	Make proteins
Golgi Bodies	Processes & packages proteins to be sent within and out of the cell

Analogy= comparison of 2 things/ usually to aid in clarification or understanding



Let's Watch the Brain pop Video Clip- **Cell Structures**
Let's see how Tim uses an analogy and compares the cell and its parts to a factory!

Brain pop Login:
UN= Spartan51
PW= brainpop



<https://www.brainpop.com/science/cellularlifeandgenetics/cellstructures/>

Check For Understanding: CELL / SCHOOL ANALOGY

Match the cell structure with the part of a school system it might be compared with. Then, briefly explain your thinking.



Plant Cell

Cell wall

Mitochondria

Nucleus

Lysosomes

Vacuoles

School

Main Office

Custodial staff

Storage closets

Electrical Room

Brick outer walls

Hint: Think of the job that the cell part does and compare it to the job of the parts of the school! Refer to the chart for help!

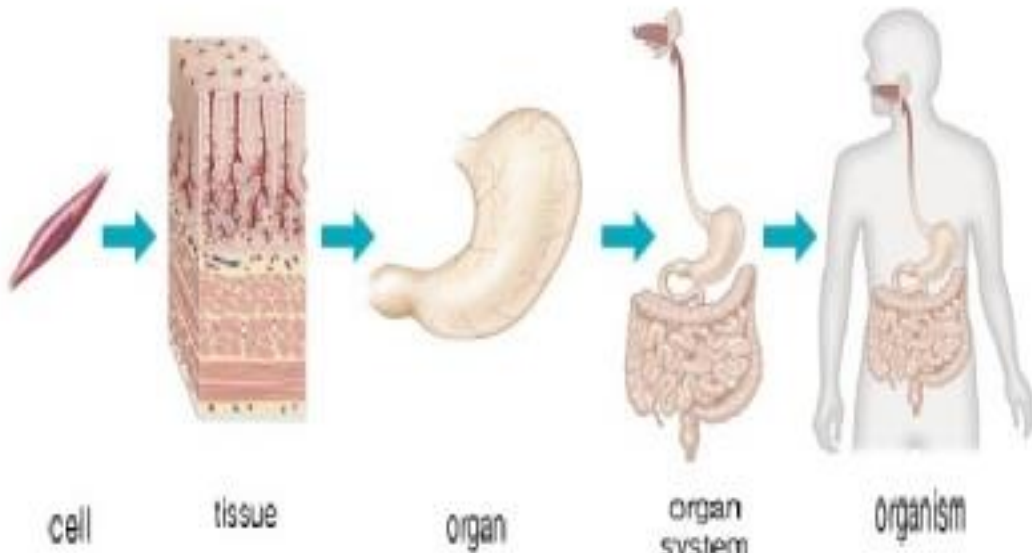
Tool Box #52 Continued

IV Organization of living things- it all starts with the cell!

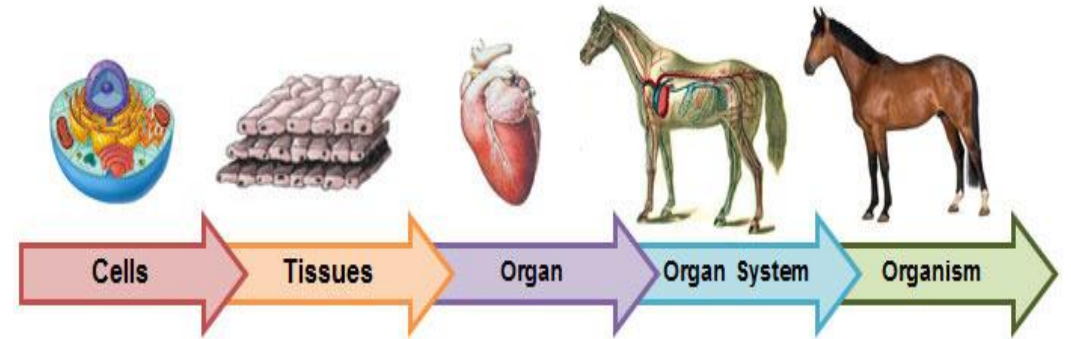
- multicellular organisms are made of many parts that are needed to survive. These parts are divided into 5 levels:

cells **tissues** **organs** **organ systems** **organism**

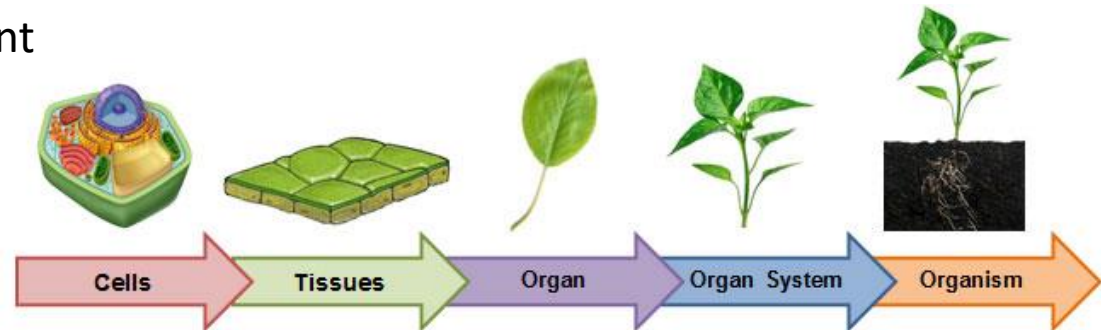
Example 1- Humans



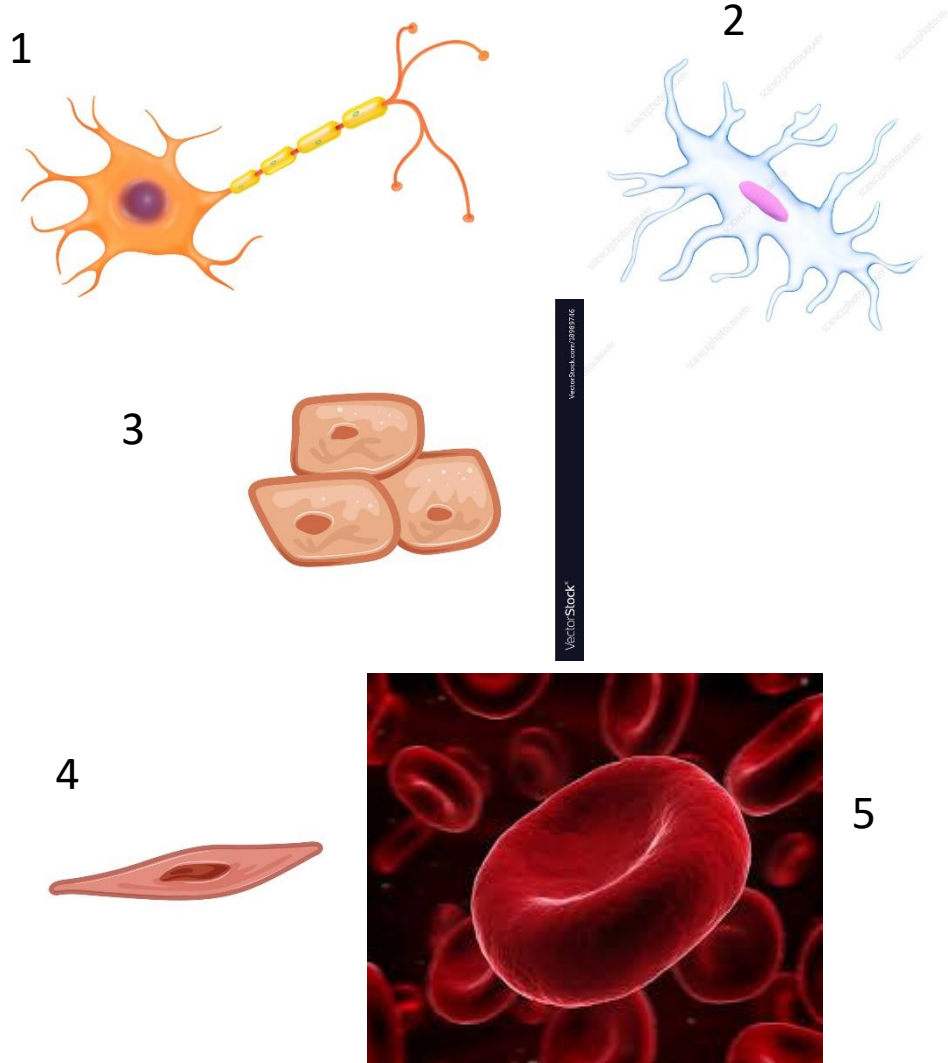
Example 2 - Horse



Example 3- Plant



Exit Slip: We are able to see and learn about cells because of the microscope.
The human body contains trillions of cells. Below are some of various types of cells present in the human body . Try and match the image with its cell type. (Hint: Think about the cells function!)



A--Muscle cells

B-- Bone cells

C-- Nerve cells

D-- Blood cells

E--Skin cells

Enrichment Part I - Watch the video “Cell City Tour” and see how the cell parts are compared to a city!



https://www.youtube.com/watch?v=eG7v_5VtHt4

Now Go To Next Slide!

Enrichment Part II: Now you try!

- Choose a place and compare its parts to the parts of the cell- If you want, you can draw a diagram to show the comparison. I listed some suggestions below:

Restaurant

Mall

Castle

Factory

Theater

Hotel

Stadium

Your home

Circus

Bakery

Supermarket

Zoo

Have Fun, Be Creative!