

A EUKARYOTIC CELL ANALOGY

You have embarked on a study of the CELL. Understanding the cell has been the springboard for understanding genetics, the development of medicine, and the treatment of disease. This graphic assignment will test your ability to communicate your understanding of the inner workings of the cell. You will explore the roles of key cellular organelles and illustrate the interdependence of these organelles in the cell's life.

PROCEDURE

1. Choose a partner (or as assigned) with whom you can work effectively.
2. Decide on the type of cell you and your partner will focus on in this exercise (PLANT or ANIMAL)
3. Find out the **function** (or main job) each structure has in the cell (use your notes, book, internet, etc.) and fill in the definition sheet. Google, "Cells Alive" or just "Cell".
4. Select an analogy for the functioning of the cell and fill in the definition sheet.

"A (plant or animal) cell is like a _____." (You will be presenting this creation)

5. Within the analogy of the entire cell (step 4), choose analogies for the **FUNCTION** of each organelle. (not analogies for the shape, appearance, etc.). You will explain each analogy part.
6. a. Create your cell analogy on your I-Pad using Google Sheets or PowerPoint. Begin with a simplified sketch of the location your chose. Continue to add a new organelle in each of the proceeding slides. Be sure to include the following, a. title the drawing: "My (animal/plant) cell is like a" b. Make a key of the parts, i.e. Boss = Nucleus, etc. and c. Send it to Google Classroom and share a copy with me.
7. Attach brief statements (one to two sentences) explaining your different analogies. Example: "Just as a security gate determines what enters or leaves a factory, so the cell membrane determines what can enter or leave the cell."

The following table lists the organelles found in each type of cell. Use the appropriate list to create your analogical details.

Animal Cell		Plant Cell	
Cell Membrane	Centrioles	Cell Wall	Ribosomes
Cytoplasm	Ribosomes	Cell Membrane	Nucleus
Golgi Apparatus	Chromatin (DNA)	Cytoplasm	Chromatin (DNA)
Lysosomes	Mitochondria	Golgi Apparatus	Central Vacuole
Endoplasmic Reticulum		Lysosomes	Chloroplasts
Nucleus		Endoplasmic Reticulum	
Nucleolus		Mitochondria	
<i>and other organelles</i>		<i>and other organelles</i>	

HELPFUL HINTS

- A. Plan your creation before you start to draw.
- B. You don't have to be a natural artist to be a visual learner!

EC: Make up a poem (that rhymes and makes scientific sense) about one or more of your organelles.

CELL ANALOGY ACTIVITY (CREATION) ON YOUR I-PAD

CELL PART	IS LIKE A . . .	BECAUSE . . .
Cell membrane		
Cytoplasm		
Golgi apparatus		
Lysosomes		
Endoplasmic reticulum		
Nucleolus in nucleus		
Cell wall (plant cell only)		
Centrioles (animal cell only)		
Ribosomes		
Chromatin (DNA) in nucleus		
Mitochondria		
Central vacuole (in plant cell only)		
Small vacuole (in animal cells)		
Chloroplasts (in plant cell only)		

These are the **basic** organelles you need to use for a minimum grade. **Use others and your grade will improve.**