

Name: _____ Date: _____ Period: _____

Cell Analogy Project

As a learning tool for our study of the cell, we will be embarking on an in class project. Your final product will be a reflection of your learning experience in this unit. Be creative and show what you know!

Directions:

A cell has many organelles, just as a town or school has many parts. Different people supply the needed services in a town or school. Each person has a special job. Each building has a special function. All these components work together to make a town or school run properly. The different parts of a cell have special jobs and each part helps carry out its life processes.

Using the idea of an analogy, you will be producing a written and pictorial description of the parts of a cell and their functions. You will complete a plant cell to devise your analogy. Your correlation should be creative and thought-provoking.

1. You will use a plant cell for your analogy.
2. Determine the cell parts (see cell structure worksheet) and each of their functions.
3. Brainstorm ideas to use for a parallel comparison (this cannot be a town, school or any similar analogy examples given in class). Determine the parts and functions within your object.
4. Decide how the parts of your item compare with each part of your selected cell.
5. Written Description: **Type** your analogy, explaining how your item compares with the cell. This should include a comparison of the functions of the cell and your item.
6. Visual Descriptions: On one sheet of paper, draw the cell and its parts that are in your analogy. On the other sheet, draw your item and its parts that being used as the comparison. Make a key to show how these parts are parallel. Both visuals should be in color.
7. Create a new organelle OR research an organelle not discussed in class. The organelle you develop should tackle a task that is not currently completed by another organelle. If you decide to research an organelle, depth should be provided about its structure and function. A detailed written description and drawing of the new OR researched organelle should be provided.
8. See rubric for grading criteria before and after you finish this project.

Due Date: _____

Cell Project Analogy Rubric

Criteria: The student...	Below the Standard	Approaching the Standard	Meets the Standard	Exceeds the Standard	Score
Demonstrates knowledge of the cell parts and their functions within the cell.	The student can identify a few of the parts of the cell and describe the function of each structure. (10 points & under)	The student can identify some of the parts of the cell and describe the function of each structure. (11-13 points)	The student can identify the nucleus, cytoplasm, cell wall, cell membrane, chloroplasts, lysosomes and mitochondria and describe the function of each structure. (14 points)	The student can identify <u>all</u> 11 parts of the cell and the function of each structure. (25 points)	/25
Shows a logical connection between the cell and an "unlikely" comparative counterpart.	The analogy shows very few logical connections to the comparative counterpart. (17 points & under)	The analogy shows some logical connections to the comparative counterpart. (18-20 points)	The analogy shows many logical connections to the comparative counterpart. (21-24 points)	<u>All</u> connections are logical between the cell and the comparative counterpart (as well as its cohesive role within the cell) (25 points)	/25
Creates a colored visual of both the cell and the comparative object with a corresponding key.	Visuals are not neatly drawn, colored. No key to show comparative parts. (17 points & under)	Visuals are somewhat neatly drawn and may or may not be colored. Key is not complete. (18-20 points)	Visuals are mostly neat and complete with corresponding key. (21-24 points)	Visuals are neatly drawn and colored. Key is complete with <u>all</u> corresponding parts. (25 points)	/25
Provides a typed description with correct spelling and grammar usage.	Written description is not typed. May contain 4 or more errors in spelling or grammar usage. (5 points & under)	Written description is typed. Contains 3 errors in spelling or grammar usage. (6-7 points)	Written description is typed. Contains 2 errors in spelling or grammar usage. (8-9 points)	Written description is typed. Contains 1 or no errors in spelling or grammar usage. (10 points)	/10
Displays originality in development of new organelle or researched organelle (not discussed in class). Provides detailed written description and drawing about new organelle	The new organelle displays very little creativity and originality. No written description or drawing are included. (10 points and under)	The new organelle displays some creativity and originality. Written description and/or drawing may not be included. (11-12 points)	The new organelle is unique with some details in the written description and includes a drawing. (13-14 points)	The student creates a unique organelle. Written description includes the type of cell and the function of the new structure. A drawing of the new organelle is complete with labels and colored. (15 points)	/15

Total Score _____/100