

Name: _____ Period: _____ Due Date: _____

Cell City Analogy Project Choices

(7.LS.1, 7.LS.5)

- You will be working to create a cell analogy in order to **understand cell forms and structures and the functions each part of a cell performs** in order to keep an organism alive.
- This will also allow you to **understand the differences between plant and animal cells.**

FOCUS QUESTION:

How does the function of a cell's organelles compare to another object or thing?

- You will compare a cell and how its organelles **function** to something else whose parts also have similar functions. (Use your DATA sheet.)

GRADING RUBRIC:

Project Choice: _____	4 – Above and Beyond Requirements	3 – Meets requirements	2 – Meets part of requirements	0 – Did not meet requirement at all
neat, detailed and colorful				
organelles labeled/represented on model/drawing	(all 14)	(at least 11)	(at least 7)	(less than 7)
structures labeled/represented on model/drawing	(all 14)	(at least 11)	(at least 7)	(less than 7)
accuracy of organelle FUNCTION compared to structure FUNCTION on drawing/model (3x)	(all 14) (x3)	(at least 11) (x3)	(at least 7) (x3)	(less than 7) (x3)
Language Conventions: <ul style="list-style-type: none"> • word spelling • capitalization • punctuation • grammar or word usage • paragraphing • full sentences (no run-on or sentence fragments) 	There are few or no errors. None of the errors impact the flow of communication.	Errors are occasional. They do not impede the flow of communication.	Errors are frequent. They may cause the reader to stop and reread part of the writing. Flow of communication is impaired.	Errors are serious and numerous. They cause the reader stop often to figure out writer's meaning.
7.LS.1 ...provide examples of eukaryotic organisms 7.LS.5 Compare and contrast the form and function of the organelles found in plant and animal cells.				TOTAL _____/28

Organelles and structures to include:

- | | | |
|--|--|---|
| <input type="checkbox"/> cell wall | <input type="checkbox"/> chromatin | <input type="checkbox"/> Golgi apparatus/Golgi body |
| <input type="checkbox"/> cell membrane | <input type="checkbox"/> ribosomes | <input type="checkbox"/> vacuole |
| <input type="checkbox"/> cytoskeleton | <input type="checkbox"/> cytoplasm | <input type="checkbox"/> chloroplasts |
| <input type="checkbox"/> nucleus | <input type="checkbox"/> mitochondria | <input type="checkbox"/> lysosome |
| <input type="checkbox"/> DNA | <input type="checkbox"/> endoplasmic reticulum | |

EXTRA CREDIT: cilia (2) flagella (2)

Cell City: DIRECTIONS AND GUIDELINES

1. Research plant and animal cell structures and their functions.
2. Use multiple resources and record this on the data sheet.
3. There is also a place to plan what you are comparing each organelle to. Save this for when you are done recording ALL of the functions.

Project Choices and Details		
Cell "City"	Collage	ThingLink or Lift-the-Flap Mini Poster
<ol style="list-style-type: none"> 1. Create a detailed drawing (on paper; digital doesn't work too well for this project), or a 3D model of this "thing" you are comparing cells to. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> You can create a model of anything to KNOW and LIKE! Examples might include: a city, a mall, Hogwarts, a computer, a video game, an amusement park, pool, skateboarding park, Bikini Bottom on Sponge Bob... 2. <u>It must be neat, detailed, and colorful.</u> If creating a model, please use recycled materials or items you already have at home. (DO NOT SPEND ANY MONEY!!!). 3. All structures in the drawing or model must be labeled: <ol style="list-style-type: none"> a. <u>name of structure in the drawing/model</u> b. <u>what the structure represents in the cell</u> c. both structures must have similar functions 4. You will turn in the data sheet or create a graphic organizer like a data table to explain <u>how each "thing" in your model represents each cell organelle.</u> <ol style="list-style-type: none"> a. Explain your reasoning clearly. b. This includes describing the function of the part AND the function organelle as part of your evidence. 	<ol style="list-style-type: none"> 1. Create a collage out of MAGAZINE pictures (do not print from the Internet). <ol style="list-style-type: none"> a. Your collage must fit on no more than TWO 8.5X11 inch sheets of paper. 2. Each picture must represent a part of a cell. They MUST have or represent the SAME FUNCION as the part of the cell to which you are comparing them. 3. Since this is a collage, your pictures don't need to all relate to the same "thing." 4. Give each picture a number. Then create a graphic organizer (such as a data table) where you label the following: <ol style="list-style-type: none"> a. The number from the collage. b. What the picture actually is. c. Which organelle or structure the picture represents. d. An explanation of how each picture represents each cell organelle. <ol style="list-style-type: none"> i. Explain your reasoning clearly. ii. This includes describing the function of the part AND the function of the organelle as part of your evidence. iii. If you turn in your data sheet, add the numbers from your collage to each organelle. 	<ol style="list-style-type: none"> 1. Create a ThingLink or a Lift-the-Flap mini poster (like a ThingLink, except on paper and hand-drawn). 2. The central image can be the "thing" to which you are comparing the cell (similar to cell city) OR a "generic" cell image. 3. For each structure in the city or cell, create a "link". <ol style="list-style-type: none"> a. If the central image is of a cell, the link should be a picture and description of what you are comparing each cell part to. b. If the central image is a thing or an object, the link should be an image and description of cell part you are comparing that structure to. c. An explanation of how each picture represents each cell organelle. <ol style="list-style-type: none"> i. Explain your reasoning clearly. ii. This includes describing the function of the part AND the organelle as part of your evidence.
<ul style="list-style-type: none"> • If you have a better idea for project choice, or an app to use, see me first for approval. (: 		

