Name:

Block:

**Miniproject: A Comparative Analogy of a Cell**

Welcome to the world of analogies. Around here, nothing is as it seems. Everything relates to something else – somehow. Your job is to make it all connect. In this project, you will be using analogies to compare the cell to other things in your everyday life. An analogy is ***“A comparison between two things which are similar in some aspects, but otherwise different, typically for the purpose of explanation or clarification”***

For example: The human body is like a car engine. They both require fuel to make energy, they both use the energy to move things and then give off waste.

**TASK**:

1. Choose to do an **animal** OR **plant** cell – NOT both (plants can make their own energy whereas animal cells have to ‘eat’)
2. Choose 10 cell parts from the following list: Choose only 10

|  |  |  |  |
| --- | --- | --- | --- |
| Cell membrane | Cell wall | Cytoplasm | Nucleus |
| Vacuoles | Mitochondria | Chloroplasts | Vesicles |
| Endoplasmic Reticulum | Ribosomes | Golgi Body | Lysosomes |

1. You may have to research (use your textbook, internet and other resources) to learn what is the structure and function of each organelle.
2. Use your imagination, creativity and humor to come up with a large analogy for the cell. Be sure that your analogy will work with **all** of the cell parts your chose. For example, if the human body is like an engine, I should be able to explain how each of the organs in the human body compare to the individual parts of an engine.
3. Write a list or paragraphs that describe your analogy. State which cell organelle you are comparing, what you are comparing it to and describe how the comparison is related to the function of the organelle. Be creative!
4. Draw and colour a diagram that shows **labelled** illustrations or set of illustrations for your 10 comparison statements. Be sure it is colorful and interesting to look at. Remember the more creative, interesting, or humorous the better!

Here is an (incomplete) example:

**Scholastic Cells: By Ms DeBou**

A **plant cel**l is like a school because both have many parts that work together. The walls of the school are like the **cell wall** because the cell walls support plant cells and the mortar and bricks provide the foundation for the school. The students moving around the school (when there isn’t a pandemic) are like the **cytoplasm** because they can move fluidly through the halls to perform their daily functions. Mr. Kamide is like the **nucleus** of the cell because he controls the activities and functions of the entire school…….

Cell Analogies Rubric

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute  | Emerging  | Competent  | Exemplary  |
| Words and Definitions  | Defines fewer than 7 organelles correctly  | Defines 7-9 organelles correctly  | Defines all 10 organelles correctly  |
| Analogies  | Fewer than 7 of the analogies are illustrated, neat and appropriate for the word  | 8-9 of the analogies are illustrated, neat and appropriate for the word  | All 10 of the analogies are illustrated, neat and appropriate for the word  |
| Descriptions  | Fewer than 7 of the comparisons of the cell parts to the analogies make sense. Little to no detail.  | 8-9 of the comparisons of the cell parts to the analogies make sense and are detailed  | 10 of the comparisons of the cell parts to the analogies make sense, are detailed and go above and beyond in their descriptions  |
| Overall appearance of the final product  | Illustration is incomplete, messy, lacks effort and is poorly organized | age10image1110141856Most of the organelles are illustrated, diagram is not original, the diagram is neat, clearly organized, and a good effort is apparent  | All of the organelles are illustrated, neat, original and well organized. An excellent effort is apparent!  |
| Spelling and Grammar  | More than 3 spelling or grammatical errors  | age10image1110171040More than 2- 3 spelling or grammatical errors age10image1110204752 | No more than 1 spelling or grammatical error  |
| WOW |  |  |  |

Total \_\_\_\_\_\_\_\_\_\_/

Example of an illustration: A Plant cell in Comparison to an Amusement Park

