**Cell Analogy Project**

**What is an “analogy”?**

Analogy = a comparison between two things, typically on the basis of their structure or function, and for the purpose of explanation or clarification

Ex. I feel like a fish out of water when I get put into a new situation that I’m not familiar with

**Overview**

Cells, the basic units of life, are often **compared** to a pizza parlor, a factory, or even an entire city. In this project, you will need to make **analogies** to compare the **function** of the **plant cell** to the part and functions of an **entire city**. To accomplish this, you must complete the following tasks:

* **Task 1**
  + Create analogies between a plant cell’s parts and a city’s parts by **completing the cell analogy worksheet** (below).
  + **A MUST**: when making the analogies between your cell and your city, the **functions** of the city part and the cell must match, **not the appearance**!
* **Task 2**
  + **Draw** a detailed model of your cell city using the materials provided. This drawing must be **neat** and ready to be **presented** to the class in final draft form! **Make a rough draft** on regular paper (page 3) before transferring to your poster board. **Use a ruler** for straight edges and **label all parts clearly**! You must label **both** the part in the cell city, **and** the cell part that’s represented (organelle).

**Cell Analogy Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cell Part (organelle)** | **Function of Cell Part** | **Part in City** | **Explain the analogy between the cell part and city** |
| Cell Wall | Homework |  |  |
| Cell Membrane | homework |  |  |
| Ribosome |  |  |  |
| Endoplasmic Reticulum |  |  |  |
| Golgi Apparatus |  |  |  |
| Nucleus |  |  |  |
| Mitochondria |  |  |  |
| Chloroplasts |  |  |  |
| Vacuole |  |  |  |
| Cytoplasm |  |  |  |

**Space for Rough Draft of Poster**

(Have Mr. Tran Approve before beginning final project)

Cell Analogy Project Rubric

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CATEGORY | 5 | 4 | 3 | 2 |
| **Organelles** | All organelles listed in the handout are easily found on the poster | One organelle listed in the handout is missing | Two organelles listed in the handout are missing | Three or more organelles listed in the handout are missing |
| **Function of Organelles (analogy)** | All analogies are appropriate and align to the function of the organelles in supporting cellular life | All but one of the analogies are appropriate and align to the function of the organelles in supporting cellular life | All but two of the analogies are appropriate and align to the function of the organelles in supporting cellular life | Three or more of the analogies are inappropriate or fail to align to the function of the organelles in supporting cellular life |
| **Use of Graphics** | All graphics are attractive (size and colors) and support the structure and function of each organelle. Both the cell organelle and part in city name are clearly labeled and easy to read | All graphics are attractive (size and colors) and support the structure and function of each organelle. Both the cell organelle and part in city name are labeled but may not be easy to read from a distance | Most graphics are attractive (size and colors) and mostly support the structure and function of each organelle. Both the cell organelle and part in city name are labeled but may not be easy to read from a distance | Most graphics are not attractive (size and colors) and fail to support the structure and function of each organelle. Either the cell organelle or part in city name are not labeled |
| **Presentation and Neatness** | Poster is neat, in color, and easily visible at a distance of over 5 feet. Care was taken to reduce erasures and/or smudges | Poster is somewhat neat, in color, and visible at a distance of over 5 feet. A few erasures and/or smudges are visible | Poster lacks neatness, is not in color, but is visible at a distance of over 5 feet. A few erasures and/or smudges are visible | Poster lacks neatness, is not in color, is not easily visible at a distance of over 5 feet and erasures and/or smudges are visible |
| **Spelling and Grammar** | Poster has no misspellings or grammatical errors. | Poster has 1-2 misspellings, but no grammatical errors. | Poster has 1-2 grammatical errors but no misspellings. | Poster has more than 2 grammatical and/or spelling errors. |

Total Points Earned \_\_\_\_\_\_\_\_\_\_ out of 25