Name_____ Date_____ Section_____

Cell Structure and Function Analogy Project

Direction:

An *analogy* is a comparison in which an idea or a thing is compared to another thing that is quite different from it. It aims to explain that idea or thing by comparing it to something that is familiar. Consider the following example:

"The structure of an atom is like a solar system. The nucleus is the sun and electrons are the planets revolving around the sun."

Here an atomic structure is compared to a solar system.

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 a(n) animal or plant cell to the part and functions of an entire city. To do this, you must complete the following tasks:

1. Create analogies between an animal or plant cell's parts and a city's parts by completing the Cell Analogy WS. Think of a city and the functions of its parts:
    a. How does a city operate?
    b. Who protects the city?
    c. Who runs the city?
    d. How does the city manage its trash?
    e. How does the city get food?
    f. How does the city get its power?
    g. How do you know when you are in the city limits?

Your analogies must be in complete sentences and submitted with the model drawing of your city. (**Important**: *When making the analogies between your cell and your city, the functions of the city part and cell part must match, not the appearance!*) (25 points)

2. Draw a detailed model of your cell city. This drawing must be neat and turned in as final draft form. Use a ruler for your straight edges. You must label both the part in the cell city and the cell part that is represented. Your city must have a creative and relevant name. Your drawing must be neat, colorful, correctly labeled, and creative. (25 points)

Cell Analogy WS

Cell Part	Function of Cell Part	Part in City	Explanation of Analogy
cell wall			
cell membrane			
ribosome			
endoplasmic reticulum			
Golgi apparatus			
nucleus			
nuclear membrane			
lysosome			
mitochondria			
chloroplast			
vacuole			
cytoplasm			