

Cell City “Design Your Own” Project

A city can be a metaphor, or model, for a cell, if you consider each city structure to provide a similar structure and function in the cell. For example, a fence around a city could act like the cell wall. A power plant could act like a mitochondria because the mitochondria provides energy for the cell. Remember that a model must be able to explain how a phenomenon works, and not just be a structural similarity.

Directions:

1. Design your own city, house, building, or other structure as a model of a plant cell, using the “Cell City” diagram as help and inspiration. [See the cell structure labels that go with it.] *Do not just copy the Cell City.*
2. Draw and label structures to represent the following 10 cell organelles-
 - a. Cell wall
 - b. Cell membrane
 - c. Nucleus
 - d. Chromosomes
 - e. Ribosome
 - f. Lysosome
 - g. Chloroplast
 - h. Mitochondria
 - i. Endoplasmic reticulum
 - j. Vacuole
3. Label each structure and the organelle it represents. Be sure your choices help explain the function of each organelle.
4. Quality-
 - a. Use white printer paper or construction paper (not lined paper)
 - b. Print neatly in ink or dark colored pencil
 - c. Use accurate spelling
 - d. Color the entire project