

## Cell City Analogy Assignment

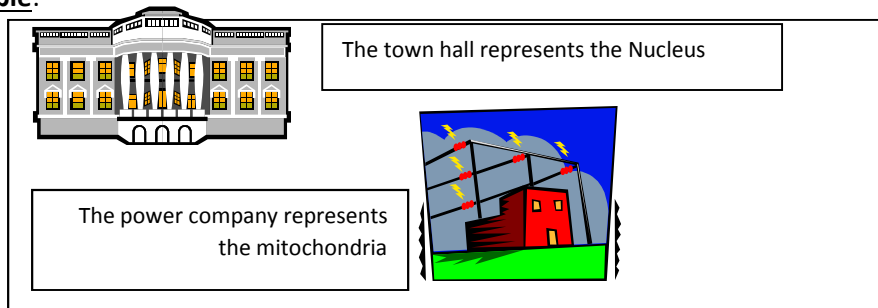
**Learning Objective** – I can explain the structure and function of cells

**Directions:** You will create an analogy (comparison) for a cell using a city or other item. Your analogy will include –

1. Drawing where you label each part of the city and it's corresponding cell part (organelle) on the **front** of your blank sheet
2. Written description of each city part and how it is similar to its corresponding organelle. This should be included on the **back** of the sheet and written in complete sentences.
3. Choice: You may choose to complete this as a plant or an animal cell.
4. Comparison: Create additional parts for the opposite cell and describe their role in the city on the back of the paper. Make sure that you are separated from the other organelles so that I and you can easily see the difference.

Draw your cell city on a blank piece of white paper. The cell should take up the entire front of the page and each part of the city should be labeled with the city part and the cell part. Your drawing should be full of color. Make sure that you give your city an interesting name!

**Example:**



We have created a check list to help make sure you include all the required information. Check each box when you complete the requirement. Some

| Cell Part                                   | Drawn | Labeled | Explained(written description) |
|---|-------|---------|--------------------------------|
| Cell membrane (animal)<br>cell wall (plant) |       |         |                                |
| Nucleus                                     |       |         |                                |
| Mitochondria                                |       |         |                                |
| Ribosomes                                   |       |         |                                |
| Endoplasmic Reticulum                       |       |         |                                |
| Golgi body                                  |       |         |                                |
| Vacuole                                     |       |         |                                |
| Cytoplasm                                   |       |         |                                |
| Chloroplast / Plasmid                       |       |         |                                |
| Lysosome (animal)                           |       |         |                                |
| Cytoskeleton                                |       |         |                                |
| Vesicle                                     |       |         |                                |
| Centriole                                   |       |         |                                |
| Chromatin/Chromosomes                       |       |         |                                |
| Nuclear Membrane                            |       |         |                                |
| Nucleoplasm                                 |       |         |                                |

|                         | Distinguished<br>(4 points)   | Satisfactory<br>(3 points)   | Borderline<br>(2 points)  | Unsatisfactory<br>(1 points)  |
|-------------------------|---|--|---|---|
| All parts are drawn     | All parts are drawn   | All but one part are drawn   | All but two parts are drawn   | All but three parts are drawn   |
| All parts are labeled   | All parts are labeled   | All but one part are labeled   | All but two parts are labeled   | All but three parts are labeled   |
| All parts are explained | All parts are explained   | All but one part are explained   | All but two parts are explained   | All but three parts are explained   |
| Explanations            | All parts are written is complete sentences and fully compares how the city structure relates to cell organelle                               | All but one part are written is complete sentences and fully compares how the city structure relates to cell organelle                               | All but two parts are written is complete sentences and fully compares how the city structure relates to cell organelle                               | All but three parts are written is complete sentences and fully compares how the city structure relates to cell organelle                                     |
| Drawings are colored    | All Drawings are colored  | All but one part Drawings are colored  | All but two parts Drawings are colored  | All but three parts Drawings are colored  |
| Neatness                | Hand writing is neat and legible  | Hand writing is sloppy but legible   | Hand writing is sloppy and illegible  | No effort was put into hand writing   |
| All directions followed | Use labeling model as shown on the rubric on the front sheet. Written descriptions on the back on the sheet. Name on both project and rubric. | Use labeling model as shown on the rubric on the front sheet. Written descriptions on the back on the sheet. Name is not on both project and rubric. | Use labeling model as shown on the rubric on the front sheet. Written descriptions are not on the back on the sheet. Name on both project and rubric. | Did not use labeling model as shown on the rubric on the front sheet. Written descriptions are not on the back on the sheet. Name on both project and rubric. |
| Extra Credit (5 pts)    | Students used analogy other than a city.  |  |   |   |