

Name:

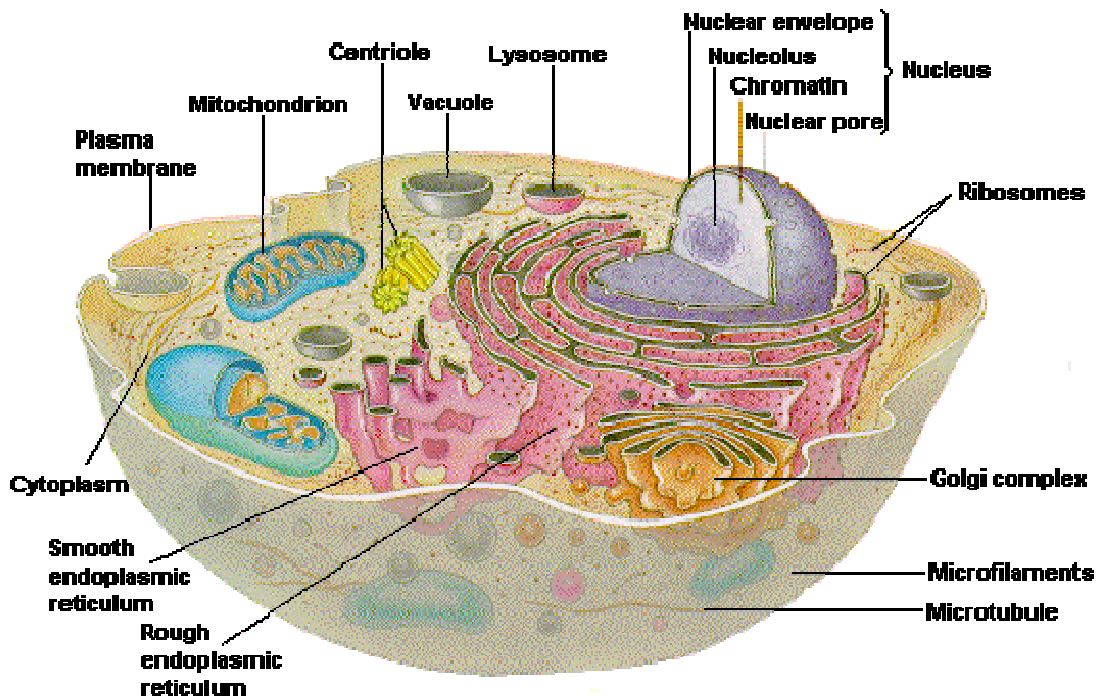
Period:

## Cell Analogy Project

Task: Cells have many organelles that help it function properly. We have studied the main parts of the cell. Now it's your turn to invent a creative way to explain cells to the rest of the class.

An analogy is a comparison that draws attention to the similarity of two or more basically different things. You are going to choose something that represents the cell and its organelles, and explain why each organelle is symbolized that way. An example of a cell analogy is a city. Parts of the city represent organelles inside a cell. The task is to come up with your own analogy.

You may work in groups of 2-3. No more than 3 people per group. You can choose to work independently if you want to.



# Day 1

Step A: Go to [http://www.cellsalive.com/cells/cell\\_model.htm](http://www.cellsalive.com/cells/cell_model.htm). Choose either the animal or plant cell model.

Step B: Select the following organelles and fill out the cell questionnaire.

Step C: Select your groups and brainstorm analogy ideas.

Organelle	What is its function?	What does it look like? (Draw or describe it)	Where is it located?
Nucleus			
Lysosome			
Mitochondria			
Endoplasmic Reticulum			
Vacuole			
Cell membrane			
Cytoplasm or cytoskeleton			
Golgi apparatus			
Nucleolus			
Ribosomes			

If you choose animal or plant cell:

Cell wall (plant)			
Chloroplast (plant)			
Centriole (animal)			

## Day 2

Step A: Continue to brainstorm ideas with your partners. Choose an analogy model.

Step B: Fill out the chart below to help you organize your ideas.

Step C: Begin work on your cell analogy using butcher paper.

Organelle	What part of your model has a similar job to your organelle?	Where in your model will this be located?	What will this look like on your model?
Nucleus			
Lysosome			
Mitochondria			
Endoplasmic Reticulum			
Vacuole			
Cell membrane			
Cytoplasm or cytoskeleton			
Golgi apparatus			
Nucleolus			
Ribosomes			

If you choose animal or plant cell:

Cell wall (plant)			
Chloroplast (plant)			
Centriole (animal)			

## Days 3-4

Work on your cell analogy projects. Make them very visual. Use color.

## Day 5

Group presentations. You need to display your analogy and explain why you chose that analogy to the class. Explain what the organelles represent in your model.

### **Grading Rubric (100 points total)**

#### **Content (30 points possible)**

- **30 Points:** All organelles present and properly labeled with their name. This paper is attached and complete.
- **25 Points:** Most organelles present and properly labeled with their name. This paper is attached and mostly complete.
- **20 Points:** Over half organelles present and properly labeled with their name. This paper is attached and mostly complete.
- **15 Points:** Half of the organelles present and properly labeled with their name. This paper is attached and mostly complete.
- **10 Points:** Less than half of the organelles present and labeled completely labeled, **incomplete or missing key.**

**Accuracy (30 points possible)**- *NOTE- this section is mostly based on the above chart. It is also based on the poster labels.*

- **30 Points:** All organelles described and labeled accurately; analogies explained clearly.
- **25 Points:** Most organelles described and labeled accurately; analogies explained clearly.
- **20 Points:** Over half organelles described and labeled accurately; analogies explained clearly.
- **15 Points:** Half of the organelles described and labeled accurately; analogies explained clearly.
- **10 Points:** Less than half of the organelles described and labeled accurately; analogies unclear.

#### **Aesthetics (20 points possible)**

- **20 Points:** Colorful, legible font/writing on labels, Good attention to detail.
- **16 Points:** Mostly colored (otherwise drab), legible font/writing on labels, mostly durable, good attention to detail.
- **12 Points:** Little color, labels unclear, not very durable, Some care and attention to detail.
- **8 Points:** No color, illegible, sloppy, not durable, no care or attention to detail.
- **5 Points:** No color, illegible, sloppy, not durable, looks rushed and unplanned.

#### **Creativity (10 points possible)**

<b>10</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>1</b>
Highly Original		Somewhat Original		Not Original

#### **Presentation (10 points possible)**

<b>10</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>1</b>
Presentation clear		Presentation unclear		No presentation

**TOTAL:** \_\_\_\_\_ = \_\_\_\_\_ (100 summative points possible)