

# Cell Analogies

Using abstraction to show off your creativity and knowledge of cells!

Name: \_\_\_\_\_

Today, you are going to begin a project on cells. In your project, you are going to use abstraction to represent a cell through the use of an analogy. You will represent each organelle that we have learned within your analogy.

## Practice

1. Circle the statement below that you think is best:

If the cell were Seattle, the Golgi Apparatus would be the schools, because they teach students important knowledge.

If the cell were Seattle, the Golgi Apparatus would be the postal service because they deliver things around the city.

2. Circle the statement below that you think is best:

If the cell were the Golden State Warriors, the cytoplasm would be the court, because that's where all the playing happens.

If the cell were the Golden State Warriors, the cytoplasm would be the coach because he tells the players what to do.

## Possible analogies

- A real or fictional place - city, amusement park, store, restaurant, sports arena, school...
- An existing or made up game - Monopoly, Candyland, video game...
- An existing or made up story - movie, TV show, book...
- An app - SnapChat, Instagram, YouTube...
- If you have other ideas - just ask!

**STEP 1:** Brainstorm what analogy you want to use, and how each cell part fits into your analogy

1. What analogy are you thinking of using?

2. Are you making an analogy of an animal cell or plant cell?

3. Cell parts - what will represent each part?

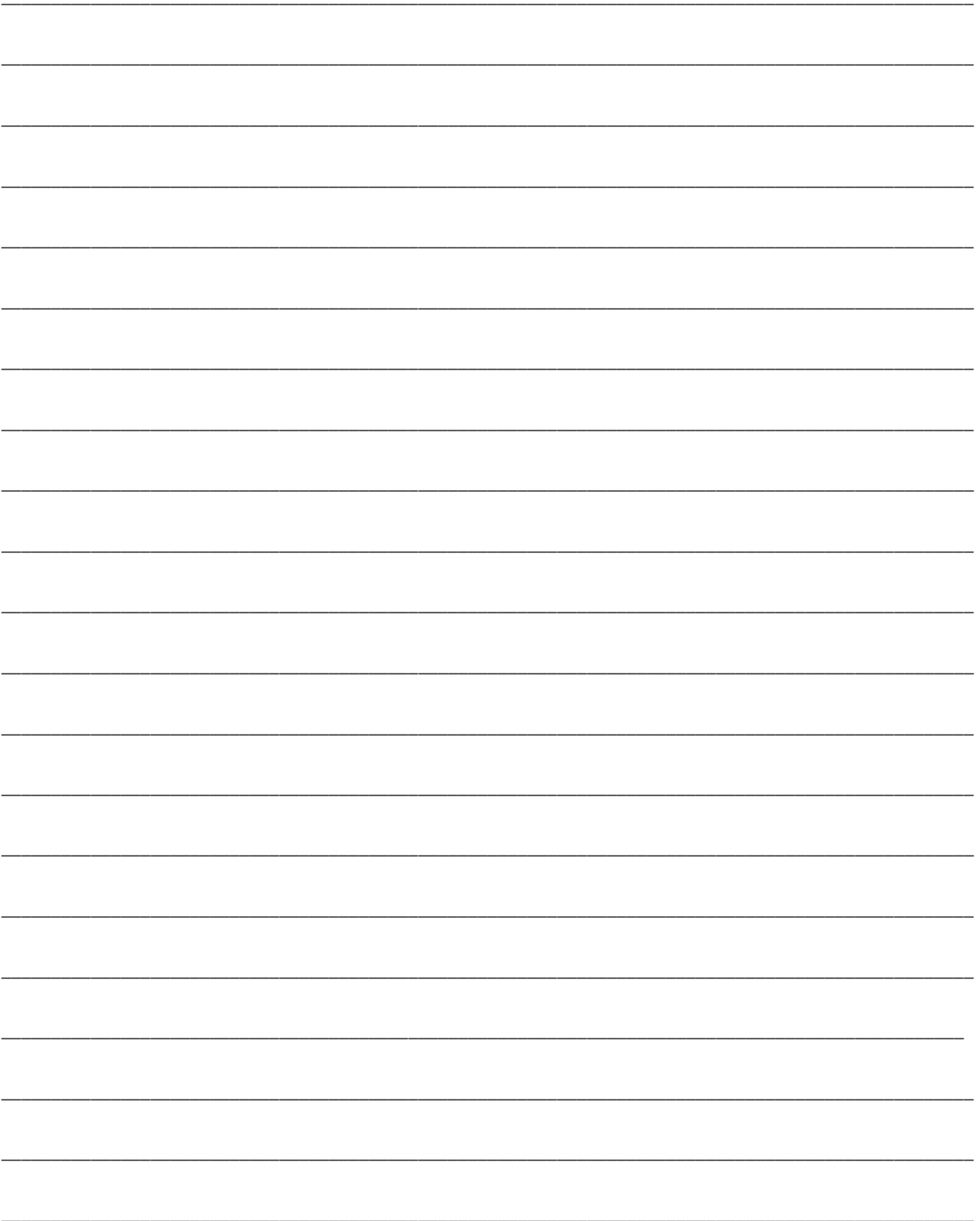
Cell Organelle	Represented by...
A. Cell	
B. Cell Membrane	
C. Cytoplasm	
D. Nucleus	
E. Ribosomes	
F. Endoplasmic Reticulum	
G. Golgi Apparatus	
H. Mitochondria	
**Lysosomes	
**Cell Wall	
**Chloroplasts	
**Vacuole	

\*\* Depends on whether you choose an animal cell or plant cell.

**STEP 2:** Visually create your analogy. This could be a map, a board game, an illustrated story, a labeled app walkthrough, etc. This can be done on an 11x17" piece of paper, in a Google Presentation, or in Scratch. Make it colorful and creative, and don't forget to include something to represent each cell part! You may label cell parts directly, or label them with letters and include a legend or map key.

**STEP 3:** Explain your analog in complete sentences. Justify why you selected each component of your analogy to represent that part of the cell and what that analogy part and the cell part have in common

- Identify the type of cell you picked by writing down whether it is a plant or animal cell
- List all of the components of your analogy and for each part write in complete sentences:
  - The name of the component
  - The name of the cell part it corresponds to
  - Why you selected that component to represent the cell part. For example, the Town Hall represents the nucleus because it controls the town's activities.







# Rubric

ELEMENTS	10	8	5	0
<b>Organelles</b>	Every organelle is included and labeled  Student states whether project is based on plant or animal cell; all correct organelles are used	Most organelles are included and labeled  Student states whether project is based on plant or animal cell; almost all correct organelles are used	Some organelles are included and labeled  Student states whether project is based on plant or animal cell; some correct organelles are used	Few or no organelles are included and labeled  Student does not state whether project is based on plant or animal cells
<b>Analogy Rationale</b>	Overall analogy makes sense  Every component representing a cell part is well explained	Overall analogy makes some sense  Most components representing a cell part are well explained	Overall analogy makes a little sense  Some components representing a cell part are well explained	Overall analogy makes no sense  Few or no components representing a cell part is well explained
<b>Visual Appeal &amp; Creativity</b>	Very colorful, extremely neat, no spelling errors  Creative use of analogies!	Colorful, neat, few spelling errors  Good use of analogies	Some color, fairly neat, some spelling errors  Okay use of simple analogies	Little to no color, not neat, many spelling errors  Poor use of overly simple analogies

\*\* Every organelle (9 for animals, 11 for plants)

\*\* Most organelles (6-8 for animals, 7-10 for plants)

\*\*Some organelles (3-5 for animals, 7-10 for plants)

\*\*Few or no organelles (0-2 for animals, 0-2 for plants)

Score: \_\_\_\_\_ / 30