

SfS Away from the Classroom!

AP01: Cells and Organelles (Recommended for Grades 6-8)

Please use the following resources to learn about cells and organelles.

Watch this Video: <https://www.youtube.com/watch?v=3nBtY6LR030>

Answer these questions:

- What two types of cells does the video show?
- What is the purpose of the cell nucleus?
- Name 3 things that are different in plant cells than in animal cells.

Activities: Follow these directions to make a model of a cell.

You will need:

• 4 feet of yarn or string	• 10 post-it notes (or small squares of paper)	• pencil
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1. Make a large circle with the yarn. It should be on a flat surface like a table or the floor.
2. Label a separate Post-it with each organelle (see list below) and its function.
 - a. Nucleus - store DNA and coordinate the cell's activities
 - b. Mitochondria - create energy
 - c. Ribosomes - make protein
 - d. Cytoplasm - contains all of the organelles
 - e. Endoplasmic Reticulum (ER) - make proteins
 - f. Golgi Apparatus - sorts and packs proteins
 - g. Vacuoles - structural support, storage, waste disposal
 - h. Chloroplast - converts light energy to glucose
3. Label the last two Post-its with "Cell membrane" and "Cell Wall"
4. Create a model of an animal cell with Post-its labeled with the correct organelles. (see picture)
 - a. The yarn is your cell membrane so label that first.
 - b. You may not use all of the labels you made. Why?
5. Take a picture or draw your finished diagram.
6. Next, create a plant cell with the labeled Post-its.
 - a. The shape should have changed and the yarn should have two labels.
 - b. Did you use all of the organelle labels for this model?

Make observations & use Claims, Evidence, and Reasoning!

1. **Claim:** Each organelle in a cell has a different function.

- **Evidence:**

- **Reasoning:**

2. **Claim:** Plant cells and animal cells have many of the same organelles.

- **Evidence:**

- **Reasoning:**