SCIENCE INSTRUCTIONAL MODEL

GRADE 7

Strand/Week: Cells - LS.2/ Week 2

Lesson Introduction

LS.2 All living things are composed of cells; these cells have different structures and organelles that support life processes. Cell theory describes the current understanding of cells.

There have been many discoveries over the years that allow scientists to understand cells. It was the invention of the microscope that first allowed scientists to see a **cell,** or the basic unit of structure and function in living things. As time has passed, microscopes have gotten better. The **compound microscope** is a microscope with more than one lens. It is the most commonly used microscope because it offers better **resolution**, or the ability to clearly see details in a microscope. Study of the cell also allowed many scientists to create the cell theory. The **cell theory** is an explanation of the relationship between cells and living things.

There are many different kinds of organelles found in cells. Many of the **organelles** are found in both plant and animal cells, but some are specific to only plant or animal cells. Bacterial cells, on the other hand, lack many of the organelles found in plant and animal cells.

Resources

- Google Classroom: Life Science Learning Modules / Class Code: _____
  https://meet.google.com/lookup/gqjjxfuclf
- Classtag: Ask Your Teacher
  www.classtag.com
- Cell Theory for Kids
  https://www.coolaboo.com/biology/cell-theory/
- Cells Alive
  https://www.cellsalive.com/cells/cell_model.htm
- Quizlet
  https://quizlet.com/57007/cell-parts-flash-cards/

Week-Long Agenda

Monday: View the Google Slides Presentation on the Discovery of Cells. Fill in the blanks on the corresponding notes. Also, watch the video links for more information about the Discovery of Cells.

Tuesday: Students should complete the Cell Theory Graphic Organizer. They should answer the following questions:

1) Explain why the development of the cell theory is a good example of the true nature of science.
2) Explain how advances in microscope technology have improved our understanding of cells and their parts.
3) Identify the three components of the original cell theory.
4) What is the difference in a scientific hypothesis, theory, and law?

Wednesday: View the Google slides Presentation on Cell Organelles. Fill in the blanks on the corresponding notes. Also, watch the video links for more information on Cell Organelles.

Thursday: Complete the Cell Organelle Matching Worksheet by cutting out the function/descriptions and memory items and match them to the correct organelle. Also, answer the Comparing a Cell to a School assignment.

Friday: In order to understand the roles that each organelle plays in a cell, you will make a Cell Project. In this project we'll be focusing on the functions of each organelle. Choose one of the following ways to display your knowledge: 1: Cell Brochure, 2: Haiku, 3: Cell Collage, 4: Cell Journey Story, or 5: Cell Trading Cards.

You must include the following organelles and their functions:
Animal Cell: Cytoplasm, Golgi Apparatus, Mitochondria, Cell Membrane, Endoplasmic Reticulum, Vacuole, Nucleus, Ribosomes, and Lysosomes
Plant Cell: Animal Cells Organelles, plus, Chloroplasts and Cell Wall