Inside a Cell

Logistics

Time Required

- **Class Time:** 30 minutes
- **Prep Time:** 10 minutes

Materials

Student handouts, computers with internet access

Prior Knowledge Needed

None

Appropriate For:

Primary Intermediate Secondary College

Abstract

An optional fill-in-the-blank table to use in conjunction with the interactive activity of the same title (url above). Students navigate the inside of a cell to see the organelles in action and learn their function. An answer key is provided.

Learning Objectives

- Cells have internal parts, each with a specific function.
- The interior of a cell is a dynamic and busy environment.

Credits

Kerry Geisen, Jordan High School, Jordan, MN
Molly Malone, Genetic Science Learning Center
Harmony Starr, Genetic Science Learning Center (illustrations)

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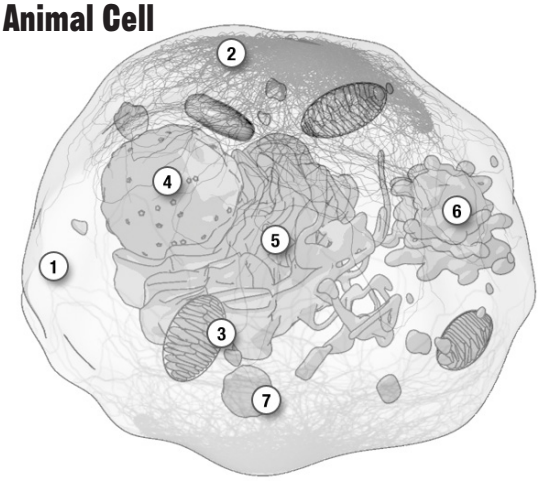
SEPA SCIENCE EDUCATION PARTNERSHIP AWARD
Supported by the National Center for Research Resources, a part of the National Institutes of Health

Module
Amazing Cells

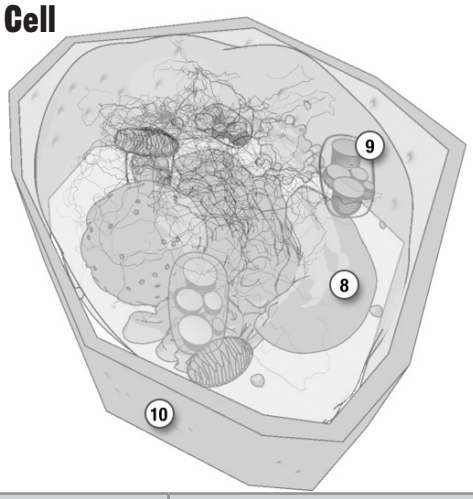
Inside A Cell

Answer Key

Animal Cell



Plant Cell



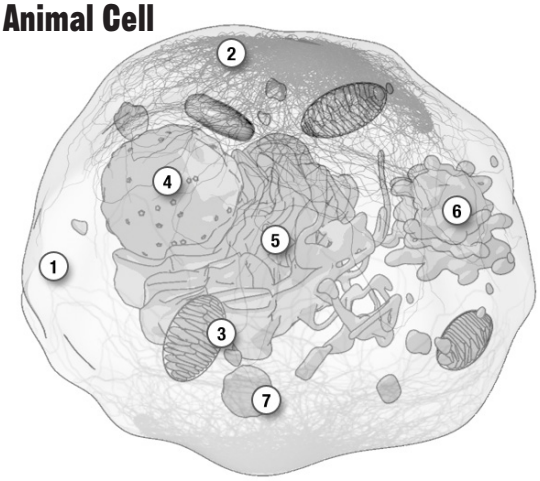
	Organelle	What does it do?	Other Notes
1	Cell Membrane	Allows molecules to pass in and out of the cell.	Formed by lipid molecules that naturally arrange themselves into spheres.
2	Cytoskeleton	Provides structure, helps organize cell division, functions as a system of roads for motor proteins.	
3	Mitochondrion	Generates a cell's energy.	Has its own genome, and circular DNA similar to bacteria.
4	Nucleus	Stores and protects DNA, DNA is copied to RNA here.	Pores selectively allow molecules in and out.
5	Endoplasmic Reticulum	Provides a place for ribosomes to carry out protein synthesis, stores enzymes, and provides a surface upon which chemical reactions can occur.	1/2 the total amount of membrane in a cell.
6	Golgi Apparatus	Provides an area where macromolecules are tagged with labels.	Transport proteins use these labels to deliver the macromolecules to the proper place in the cell.
7	Lysosome	Contains digestive enzymes that break down discarded proteins.	This is only one example of many types of vesicles.
8	Vacuole	Stores nutrients, breaks down waste, helps cell grow, provides pressure.	Only in plants.
9	Chloroplast	Converts energy from the sun into sugar.	Have their own genome. Only in plants.
10	Cell Wall	Protects cell from injury and provides support.	Only in plants.

Name _____

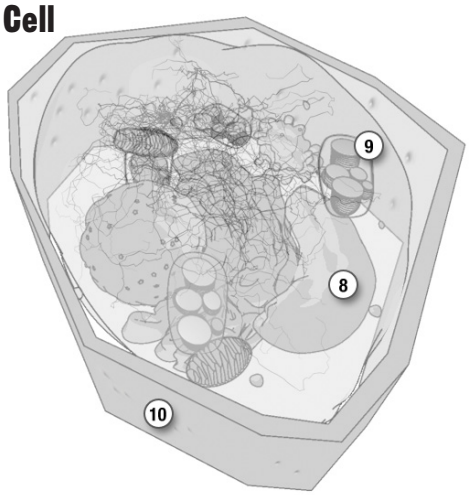
Date _____

Inside a Cell

Animal Cell



Plant Cell



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