

## Unit Overview – Plant & Animal Cells

### Essential Questions

- What are the similarities and differences in plant and animal cells?
- What are the functions of the organelles found in plant and animal cells?

- I totally get it
- I kinda get it
- I don't get it

### What Came First:

- (5<sup>th</sup> Grade) Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive.

### What Comes Next:

- (High School: Biology) Summarize the structure and function of organelles in eukaryotic cells (including: the nucleus, plasma membrane, cell wall, mitochondria, vacuoles, chloroplasts, and ribosomes) and ways that these organelles interact with each other and to perform the function of the cell.

Enduring understanding	Important to know and do	Worth being familiar with
<input type="checkbox"/> All living things are composed of cells <input type="checkbox"/> Plant and animal cells have cell membranes, nuclei (plural for nucleus), mitochondria, ribosomes, endoplasmic reticulum, golgi body, and vacuoles <input type="checkbox"/> Plant cells have cell walls and chloroplasts <input type="checkbox"/> Each organelle has a job that helps the cell function	<input type="checkbox"/> Label the structures of an animal cell <input type="checkbox"/> Label the structures of a plant cell <input type="checkbox"/> Compare/contrast plant and animal cells <input type="checkbox"/> Identify the jobs of each organelle <input type="checkbox"/> Use a microscope to examine the structure of a cell <input type="checkbox"/> Identify and explain examples of specialized cells	<input type="checkbox"/> Parts of a microscope <input type="checkbox"/> Correct technique for using a microscope <input type="checkbox"/> Origin of the word “cell” <input type="checkbox"/> Specialized organelles—ribosomes, protein, lipids, lysosomes, chromosomes/chromatin

### Vocabulary to master

<input type="checkbox"/> Cell*	<input type="checkbox"/> Endoplasmic Reticulum	<input type="checkbox"/> Nucleus	<input type="checkbox"/> Osmosis
<input type="checkbox"/> Organelles	<input type="checkbox"/> Golgi Body	<input type="checkbox"/> Nuclear Membrane	<input type="checkbox"/> Diffusion
<input type="checkbox"/> Cell Wall*	<input type="checkbox"/> Mitochondria	<input type="checkbox"/> Nucleolus	<input type="checkbox"/> Selective permeability
<input type="checkbox"/> Cytoplasm	<input type="checkbox"/> Chloroplast*	<input type="checkbox"/> Ribosome	<input type="checkbox"/> *Different in plant vs. animal
<input type="checkbox"/> Vacuoles*	<input type="checkbox"/> Lysosome	<input type="checkbox"/> Chromosome	<input type="checkbox"/>
<input type="checkbox"/> Cell Membrane	<input type="checkbox"/> Protein	<input type="checkbox"/> Chromatin	<input type="checkbox"/>