

Topic: Cell Types

Learning Objective/Outcome: distinguish between prokaryotic or eukaryotic cells; specifically the presence or absence of a nucleus.

Keywords/Questions	Notes
What is a prokaryotic cell?	Prokaryotic cells have no membrane-bound organelles so there is no nucleus therefore the genetic material and ribosomes float freely throughout the cell.
What is a eukaryotic cell?	Eukaryotic cells have a nucleus and membrane bound organelles. These cells support complex life forms.
Give an example of a prokaryotic and eukaryotic cell.	Prokaryotic: Bacteria Eukaryotic: Plant, Animal, and Fungus Cells
List organelles found in eukaryotic cells.	Organelles in a eukaryotic cell include but are not limited to: <ul style="list-style-type: none">- Nucleus- Mitochondria- Lysosome- Golgi Apparatus- Endoplasmic Reticulum
What can be found in prokaryotic cells?	Prokaryotic cells often have appendages such as: Flagella – a tail that whips back and forth for movement Pili – which help prokaryotic cells hold onto other surface

<p>Compare and contrast prokaryotic and eukaryotic cells.</p>	<p>Both have the following in common:</p> <ul style="list-style-type: none"> - Genetic Material - Ribosomes - Single Cell Organisms - Cytoplasm <p>Differences Include the following:</p> <ul style="list-style-type: none"> - Eukaryotic cells are more evolved and have complex organization with compartmentalization - Eukaryotic cells are 10x larger than prokaryotic cells - Eukaryotic cells use cellular respiration and photosynthesis to gain energy
<p>What is a plant cell?</p>	<p>A unit of life that creates complex structures that gain energy from the sun through a process called photosynthesis.</p>
<p>What is an animal cell?</p>	<p>A unit of life that can live as a single cell or build a complex organism from various tissue types.</p>
<p><u>Summary</u></p> <p>There are two main divisions of cells consisting of prokaryotes and eukaryotes. They are similar in the fact that they support life and can reproduce; however, eukaryotic cells are much more complex and have higher levels of organization including membrane bound organelles that perform specialized functions.</p>	