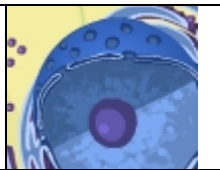
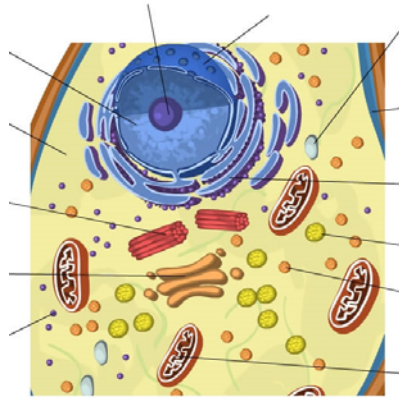


## Student Exploration: Cell Structure

<p><b>Activity A:</b> <b>Animal cells</b></p>	<p><u>Get the Gizmo ready:</u></p> <ul style="list-style-type: none"> <li>• Check that an <b>Animal cell</b> is mounted on the microscope.</li> <li>• Check that the <b>Zoom</b> is set to 2000x.</li> </ul>	
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**Question:** **Organelles** are specialized structures that perform various functions in the cell. What are the functions of the organelles in an animal cell?

1. Label: Locate each organelle in the animal cell. Label the organelles in the diagram below.



2. Match: Read about each organelle. Then match each organelle to its function/description.

- |                                  |  |
|----------------------------------|--|
| ___ <b>Cytoplasm</b>             | C. Membrane that protects the nucleus.               |
| ___ <b>Lysosome</b>              | D. Membrane that surrounds and protects the cell.    |
| ___ <b>Mitochondria</b>          | E. Sac filled with digestive chemicals.              |
| ___ <b>Centriole</b>             | F. Structures that converts nutrients to energy.     |
| ___ <b>Endoplasmic reticulum</b> | G. Passageways where chemicals are made.             |
| ___ <b>Vacuole</b>               | H. Jelly-like substance within the plasma membrane.  |
| ___ <b>Cell membrane</b>         | I. Structure that manufactures ribosomes.            |
| ___ <b>Nucleus</b>               | J. Structure that contains DNA and directs the cell. |
| ___ <b>Ribosome</b>              | K. Package created by the Golgi apparatus.           |
| ___ <b>Nuclear membrane</b>      | L. Small structure that synthesizes proteins.        |
| ___ <b>Golgi apparatus</b>       | M. Sac that stores                                   |
| ___ <b>Vesicle</b>               | N. water, nutrients, or waste products.              |
| ___ <b>Nucleolus</b>             |  |
- A. Structure that organizes motion of chromosomes.
- B. Stack of membranes that packages chemicals.

<b>Activity B:</b> <b>Plant cells</b>	<u>Get the Gizmo ready:</u> <ul style="list-style-type: none"> <li>• Select the PLANT CELL tab, and click <b>Sample</b>.</li> <li>• Set the <b>Zoom</b> to 2000x.</li> </ul>	
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**Question: What functions do the organelles in a plant cell perform?**

1. Compare: What structures are present in an animal cell, but not in a plant cell? \_\_\_\_\_

\_\_\_\_\_

What structures are present in a plant cell, but not in an animal cell? \_\_\_\_\_

\_\_\_\_\_

2. Fill in: Name the organelle or organelles that perform each of the following functions.

A. \_\_\_\_\_ convert sunlight to chemical energy.

B. The \_\_\_\_\_ and the \_\_\_\_\_ help to support the plant cell and help it to maintain its shape.

C. \_\_\_\_\_ store food or pigments.

D. The \_\_\_\_\_ converts food into energy. It is found in both plant cells and animal cells.