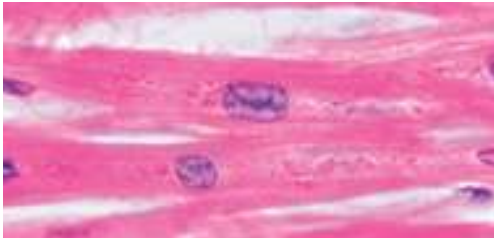


The size and shape of a cell are related to the cell's job.



A group of one type of cell is a tissue. Each kind of tissue does a certain job.

A group of tissues that work together is an organ. The heart is one of many organs in an animal.



Organs and tissues that work together form an organ system. The heart, blood, and blood vessels are some parts of one system.



The Parts of a Cell

Beetles, eagles, and elephants look nothing alike. But the cells that make up these animals have many similar parts. All cells have a nucleus and a cell membrane. All cells have a gel-like liquid called cytoplasm. The different parts of a cell have special jobs.

Each part of a cell helps it carry out its life processes. The **nucleus** is the control center for the cell. The instructions for the cell's activities are stored in the nucleus. The cell membrane is the cell's outer border. It separates the cell from its environment. It also controls what substances move into or out of the cell. The **cytoplasm** contains the things that the cell needs to carry out its life processes.

Cells Working Together

If cells are the building blocks of life, what can they build? In a many-celled plant or animal, cells are organized to work together. Different types of cells do different kinds of work. Groups of the same type of cell form a tissue. Groups of tissues that work together form an organ. Groups of organs that work together form systems.

An organism is the highest level of cell organization. It is a complete living thing that is made from all parts in all of the systems working together.

Viruses

A virus is a very tiny particle that has characteristics of both nonliving and living things. Viruses are not made of cells. Viruses do not make or use food. A virus can reproduce only by using plant, animal, or other cells to make more viruses. Many scientists do not think a virus is a true living thing.

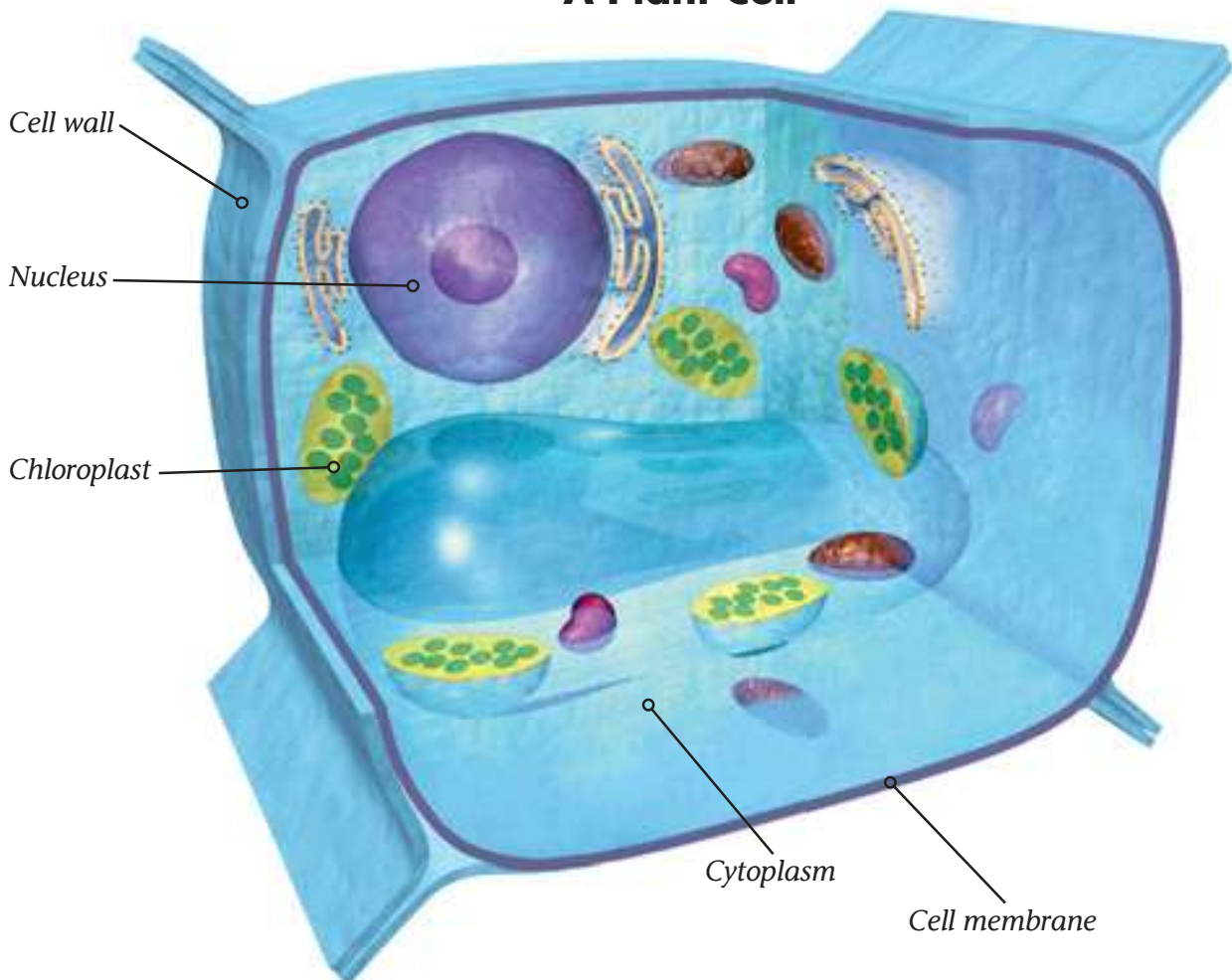


Like animal cells, plant cells have a cell membrane, cytoplasm, and a nucleus. But plant cells also have parts that animal cells do not have.

Plants make their own food. They need special parts to do this. **Chloroplasts** are the special parts in plant cells that trap the Sun's energy. The plant needs this energy to make food. Animal cells do not have chloroplasts.

The cell wall is another part of a plant cell that animal cells do not have. The cell wall is outside the cell membrane. It helps support and protect the cell.

A Plant Cell



✓ Lesson Checkpoint

1. Describe the difference between a cell, a tissue, and an organ.
2. Can a single-celled organism contain tissues? Explain.
3. 🎯 **Compare and Contrast** Make a graphic organizer to compare and contrast animal and plant cells.