

## Are All Animal Cells the Same?

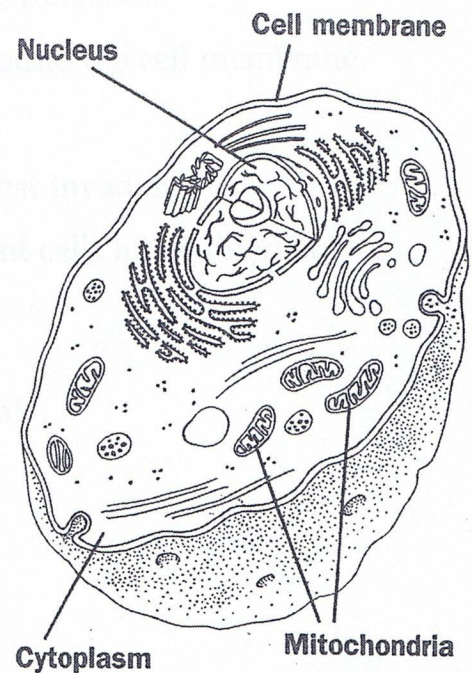
How are the cells of an oak tree like the cells of an elephant? How are they different? Plant and animal cells have many of the same organelles. Like plant cells, an animal cell has a cell membrane that contains the organelles. Inside the membrane is the cytoplasm where the cell's work is done. The largest organelle in the cell, the nucleus, acts as the cell's control center. And the animal cell also has mitochondria that work as the power plants for the cell, changing food molecules into energy.

But plant and animal cells do have differences. Animal cells do not have chloroplasts, the food-making organelles found in plant cells. Without chloroplasts, animal cells are unable to produce their own food. Animals must eat plants and other animals for food. Their bodies break down the food into simpler forms that their cells can absorb and use for energy.

Another important difference between plant and animal cells is the cell wall. You learned that plants have a thick, tough cell wall that provides support. Animals must move to live. Because cell walls would make movement difficult, animal cells do not have cell walls.

An animal is made of many kinds of cells, such as nerve, muscle, and blood cells. Animal cells, like plant cells, are specialized. Each cell has a particular job to do. The size, shape, and behavior of each cell help it do its job. For example, red blood cells carry oxygen to all other cells. Their round shape lets them carry a lot of oxygen through small spaces. White blood cells are defenders. To protect the body from illness, they attack and destroy foreign invaders like bacteria. They move to where invaders are, change their shape to surround the invaders, and then absorb or eat them.

### Animal Cell





**A.**

Write True if the sentence is true. Write False if the sentence is false.

- \_\_\_\_\_ 1. Organelles are a cell's working parts with special jobs.
- \_\_\_\_\_ 2. The nucleus and mitochondria are two examples of animal cell organelles.
- \_\_\_\_\_ 3. Both plant and animal cells contain cytoplasm and mitochondria.
- \_\_\_\_\_ 4. Animal cells and plant cells have no differences.
- \_\_\_\_\_ 5. In animal cells, the cell wall wraps around the cell membrane.
- \_\_\_\_\_ 6. Animal cells produce their own food.
- \_\_\_\_\_ 7. Red blood cells defend the body against invaders.
- \_\_\_\_\_ 8. Cells are specialized, meaning different cells have different jobs.

**B.**

Put a ✓ next to each cell part that is found in animals.

- \_\_\_\_\_ 1. cell wall
- \_\_\_\_\_ 2. cell membrane
- \_\_\_\_\_ 3. nucleus
- \_\_\_\_\_ 4. chloroplasts
- \_\_\_\_\_ 5. cytoplasm
- \_\_\_\_\_ 6. mitochondria

**C.**

Write one or more sentences to answer the question.

Although plants make their own food and animals don't, both plant and animal cells have mitochondria. Why?

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