

# WHAT IS A CELL MADE OF?

A cell is the basic structural unit of all living things. Living beings that are made up of just one cell are known as unicellular organisms, while those that are made up of multiple cells are known as multicellular organisms.

A group of cells forms a tissue, a group of tissues forms an organ, and a group of organs forms a system. Each type of cell has a different role. The division of different work between the different cells helps keep complex organisms, such as human beings functional.

Animal cells and plant cells are different from each other. Plant cells are covered by a cell wall, while animal cells have only cell membranes. This is the main distinguishing feature between animal cells and plant cells.

There are a lot of small particles within a cell.

**The following are some important parts of a cell:**

## **Mitochondria**

The mitochondria is the powerhouse of the cell. It provides the cell with the required energy.

## **Nucleus**

The nucleus is the brain of the cell. It controls the functions of the cell.

## **Golgi apparatus**

The golgi apparatus is also known as the post office of the cell. It collects simple molecules and processes them to make bigger complex molecules. It can store these molecules for future use or send them out of the cell as and when needed.

## **Ribosomes**

Ribosomes are tiny factories located in the cell. They contain ribonucleic acid (RNA) and important proteins that help the cell function and survive.

## Cytoplasm

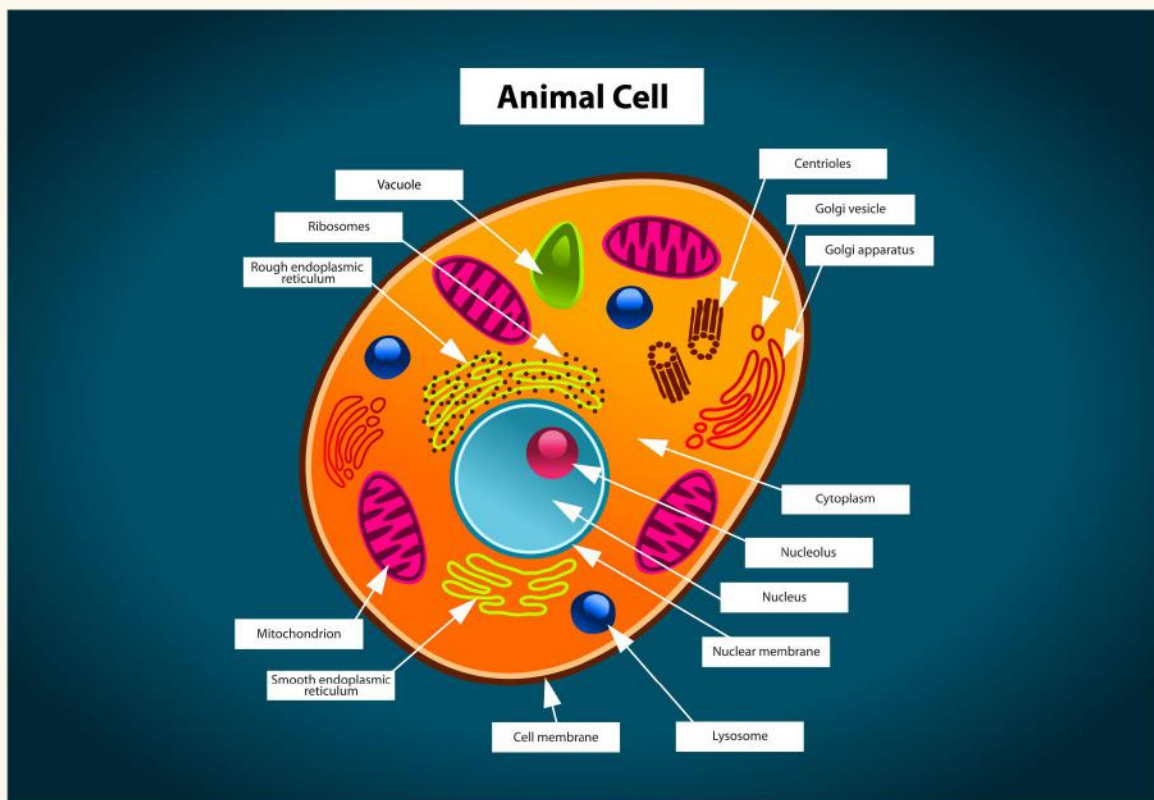
The cytoplasm is the liquid that fills the entire cell. All other components of the cell float in this liquid.

## Lysosome

Lysosomes clean up the waste products of the cell and help remove other foreign particles that enter the cell.

## Cell membrane and cell wall

A cell membrane is a semi-permeable porous layer that covers the cell. The cell wall is made of cellulose and found only in plant cells. This cell wall covers the cell membrane of the plant cell and provides rigidity and shape to the cell. It also allows the selective passage of a few things in and out of the cell.



## Vacuole

Vacuoles are membrane-bound spaces in the cell. The fluid contained in them is known as sap. The vacuoles give turgidity or a swollen look to the cell.

## Granules

Granules are small crystal particles present in the cytoplasm. They contain starch and glycogen.



**Based on your understanding of the structure of a cell, tick the correct answer from the options given:**

**1.** Living beings made up of one cell are known as

- Eukaryotic                       Prokaryotic  
 Unicellular                       Multicellular

**2.** Living beings made up of many cells are known as

- Prokaryotic                       Unicellular  
 Multicellular                       Prokaryotic

**3.** A group of cells combines to form a

- Organ                               System  
 Tissue                               Human body

**4.** The powerhouse of the cell

- Lysosomes                       Mitochondria  
 Golgi apparatus                       Cytoplasm

**5.** The post office of the cell

- Golgi apparatus                       Mitochondria  
 Lysosomes                       Cell membrane

**6.** The brain of the cell

- Mitochondria                       Nucleus  
 Cytoplasm                       Lysosomes

**7.** The factories in the cell

- Ribosomes                       Nucleus  
 Mitochondria                       Golgi body

**8.** They help in cleaning up the cell

- Lysosomes                       Mitochondria  
 Cytoplasm                       Vacuoles



**9.** They produce starch and glycogen

- |                                    |                                    |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> Vacuoles  | <input type="checkbox"/> Granules  |
| <input type="checkbox"/> Lysosomes | <input type="checkbox"/> Cytoplasm |

**10.** The porous membrane of the cell

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> Cell membrane | <input type="checkbox"/> Cytoplasm    |
| <input type="checkbox"/> Nucleus       | <input type="checkbox"/> Mitochondria |

**11.** Membrane-bound spaces in the cell

- |  |                                   |
|--|-----------------------------------|
| <input type="checkbox"/> Cytoplasm     | <input type="checkbox"/> Vacuoles |
| <input type="checkbox"/> Cell membrane | <input type="checkbox"/> Granules |

**12.** The cell wall is present in the

- |  |  |
|--|--|
| <input type="checkbox"/> Plant cell        | <input type="checkbox"/> Animal cell       |
| <input type="checkbox"/> Both of the above | <input type="checkbox"/> None of the above |

