

# Diffusion

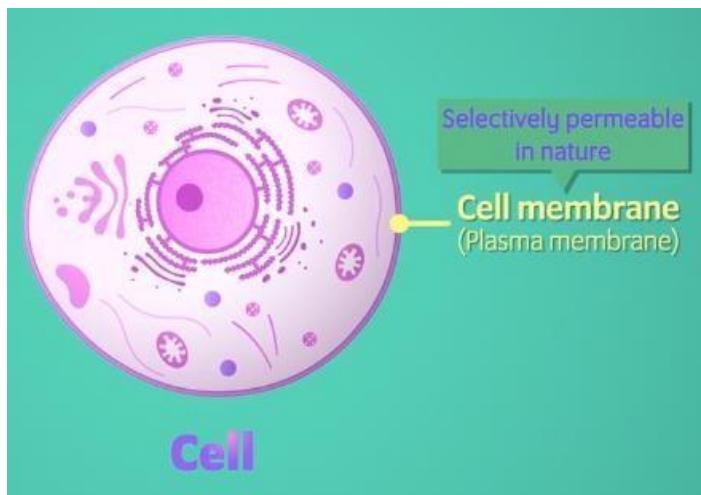
## Table of Contents

- Diffusion - Introduction
- Summary
- What's Next?

In the previous segment of the chapter 'Cell - The Fundamental Unit of Life', we studied about **The structure and components of a cell**. In this segment, let us get acquainted with Diffusion.

## What is Diffusion?

The movement of a substance from an area of high concentration to an area of low concentration is called **Diffusion**.



The cell membrane is selectively permeable in nature. It only allows specific materials to enter and leave the cell.

It is made up of

- Lipids
- Proteins
- Carbohydrate chains

Gases and water freely move in and out of the cell.

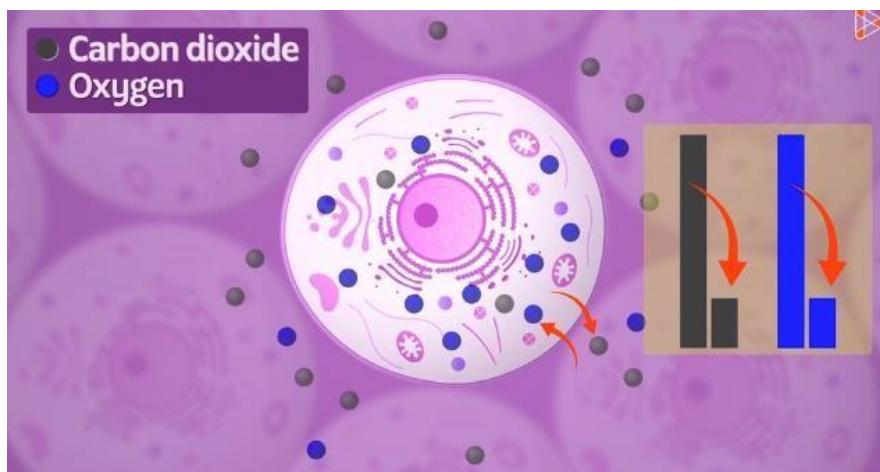
For example,

Carbon dioxide molecules can freely diffuse in and out of the cells as follows:

- When cells undergo cellular respiration, a lot of carbon dioxide accumulates in the cells, and there is very little carbon dioxide present outside the cells.
- Thus, carbon dioxide molecules move outside the cells.
- Now, there is very little oxygen left in the cells, after respiration.
- So, the oxygen from outside the cells moves in through the plasma membrane.

- Thus, both the gases move from their area of higher concentration to an area of lower concentration. This process is called **Diffusion** which does not require energy.

Thus, diffusion is a process in which transportation of several substances is carried out across the cell membrane without expenditure of energy.



**Diffusion**

## Summary

### Diffusion

- The movement of a substance from an area of high concentration to an area of low concentration is called **Diffusion**.
- No energy is required.

## What's next?

In our next segment of Class 09 Science, we will get introduced to **Osmosis**.