

## Structure and Components of Cells - Part 1

### Table of Contents

- Cells - Structure and Components
- Summary
- What's Next?

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

### How do Cells appear under a microscope?

Cells form the basic units of life. These cells are observed and studied with the help of a microscope. The entire process of setting up the microscope along with the slide of any specimen is called **Mounting**.

The materials needed for this are:

- Microscope
- A slide
- Coverslip
- Iodine solution
- Water
- Forceps
- Specimen - onion peel

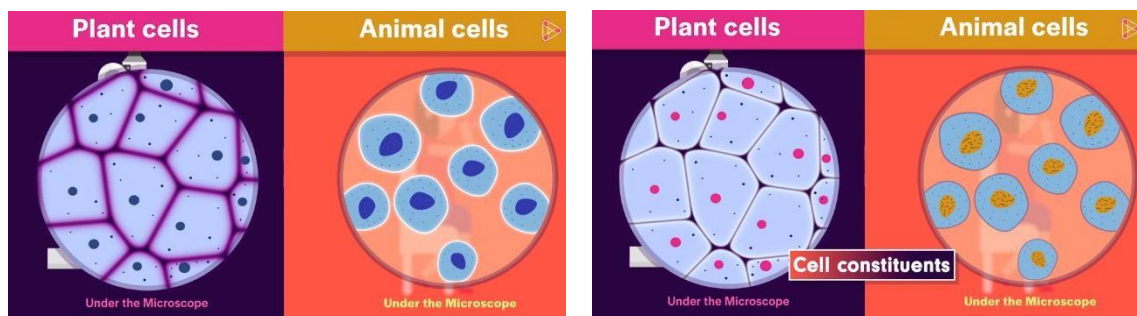


The experiment of observing the onion cells under the microscope is carried out in the following way:

### Procedure

1. Take the onion peel and pull the thin lining away from the inner surface with the help of forceps.
2. Before placing the peel on the slide, add a drop of water and then place the onion peel on it. Do not touch the peel or slide it with fingers.

3. Add two drops of dilute iodine solution. This is used to clearly see all the parts of the cell as they are transparent.
4. Place a coverslip on the specimen such that no air bubbles are formed on the slide.
5. Check if there is enough light falling on the mirror of the microscope.
6. Observe the cells under the microscope.



**Cell borders**

**Cell constituents**

## Observations

- There are many cells which have thick and distinct borders which differentiate one cell from the other.
- Some tiny dark spots are scattered all over.
- There are some prominent, circular structures which are very darkly stained. These structures are called **Cell constituents**.

Plant and animal cells are slightly different. When cells from a human cheek are scraped with a sterile cotton bud and mounted, similar but not exactly the same cells are seen under the microscope.

## Summary

|                                       |  |
|---------------------------------------|--|
| <b>Mounting</b>                       | The entire process of setting up the microscope along with the slide of any specimen is called <b>Mounting</b> . |
| <b>Observation under a microscope</b> | <ul style="list-style-type: none"> <li>• Thick and distinct borders</li> <li>• Cell constituents</li> </ul>      |

## What's next?

In our next segment of Class 09 Science, we will learn about the **Structure and Components of Cells - Part 2**.