



VIDYA BHAWAN, BALIKA VIDYAPITH

SHAKTI UTTHAN ASHRAM, LAKHISARAI - 811311

STUDY NOTES

Teacher's Name: Anjani Kaushik

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Science

CHAPTER: 6 Structure and functions of cells

Today's Topic: The Cells

All living organisms are made up of one cell or numerous cells. You already know that in the body of multicellular organisms, different sets of organs perform various functions. The basic structural unit of an organ is the **cell**. A cell can be compared to a brick. To make a building bricks are assembled one by one. In the same way cells are assembled to make bodies of living organisms. For this reason cells are known as the building blocks of life.

How cells were discovered:

In 1665, Robert Hooke discovered cells. He observed a slice of cork under a microscope. Cork is actually, a bark of a tree. He discovered and saw that the slice of Cork is made up of many partitioned boxes or compartments. These boxes seemed like a honeycomb. He also observed that, one box or compartment was separated from the other by a wall or partition.

He coined these boxes or compartments as cells. Actually what Hooke observed as boxes or cells were infact dead cells.

About 150 years later, with the discovery of improved microscopes, cells of living organisms were discovered.

In 1838, two German biologists **Mathias Schleiden** and **Theodor Schwann** put forward the cell theory of life. According to this theory:

- * All living things are made of cells.
- * All cells are not identical but are similar in their basic structure.
- * Due to division in old cells new cells are formed.
- * The way an organism function depends the way the cells work

The Cells:

You already know that both bricks in a building and cells in the living organisms are basic structural units. The buildings, though made of bricks may have different designs, shapes and sizes. In the same way there are millions of organisms on the earth, they differ from one another but all these organisms are made up of cells. Non-living bricks are made up of one or two substances but the living cells are complex structures.

If you watch a peel of onion cell under a microscope you will find that the arrangement of cells is similar to the arrangement of a brick wall.

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