Lecture 1

Biology Chapter 1

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Cells

- **Every thing around us is made up of something verys small**
- **Cells**
- **Building blocks of life**
- **We cannot see the cells from our naked eye**
- **Microscope needed to see the cells**
- **Where are the cells present?**
- **Cell are present in living organisms**
- **Human beings**
- **Animals**
- **Bacteria**

Two types of cells

- **Eukaryotic cells**
- **Prokaryotic cell**

Eukaryotic cells:

- **They are complex**
- **They are found in animals and plants**
- **They have nucleus, it is the brain of cell or it controls the cell**
- **Living organisms with these type of cells are eukaryotes**

Prokaryotic cells:

- **Simple cells**
- **They donot have nucleus**
- **They are found in bacteria**

- **Living organisms with these type of cells are prokaryotes**

Animal Cells:

- **Nucleus: Holds DNA and it controls the cells**
- **Cytoplasm: Jelly like structure in which chemical reactions take place**
- **Mitochondria: Power house of cells, it provides energy to the cells using oxygen**
- **Cell membrane: Outer layer, it controls what goes in and what is coming out of the cell**
- **Ribosomes: Make proteins for the cells**

Plant Cells:

- **Cell wall ; Hard outer layer, Supports the cell , it protects the cell**
- **Chloroplast: Green pigment is called chlorophyll**

Bacteria Cell:

- **Only has one cell**
- **No nucleus**
- **It may have extra small DNA loops called plasmids**
- **No chloroplast and no mitochondria**

Eukaryotic cells

Big and complex cells.

- ✅ Nucleus
- ✅ Cell wall
- ✅ Cell membrane
- ✅ Cytoplasm
- ✅ Membrane-bound organelles





Prokaryotic cells

Small and simple cells.

- ✅ Loop or small rings of DNA
- ✅ Cell wall
- ✅ Cell membrane
- ✅ Cytoplasm
- ❌ Membrane-bound organelles

