

# BIOLOGY

- ST019** Photosynthesis  
**ST020** Typical Plant Cell  
**ST021** T.S. Stem - Monocot  
**ST022** T. S. Root - Monocot  
**ST023** The Seed: Structure & Germination  
**ST024** T. S. Leaf  
**ST025** Fungi  
**ST026** Algae  
**ST027** Viruses  
**ST028** Bacteria  
**ST029** Life History of Mosquito  
**ST030** T.S. Dicot Stem (Sun flower)  
**ST031** T.S. of Dicot Root  
**ST032** Root Modification  
**ST033** Stem Modification  
**ST034** Root Systems  
**ST035** Pollination  
**ST036** Levels of Organisation  
**ST037** Body's Defense  
**ST038** Double Fertilization  
**ST039** Hydrophytes  
**ST040** Mesophytes  
**ST041** Xerophytes  
**ST042** Animal Cell Organelles  
**ST043** Plant Cell Organelles  
**ST044** Structure of Flower

Price Rs. 175.00 each

**Photosynthesis**

The process of photosynthesis starts by plants capturing energy from the sun or from light energy produced by other organisms. Chlorophyll, a green pigment found in leaves, captures the light energy and uses it to produce glucose and oxygen. The glucose is used by the plant for energy and growth, while the oxygen is released into the atmosphere.

**Requirements for Photosynthesis:**

- Light
- Water
- Carbon Dioxide
- Chlorophyll

**T. S. Leaf**

This section contains detailed diagrams of various types of plant leaf sections, labeled as follows:

- T.S. of Dicot Leaf
- T.S. of Dicot Root
- T.S. of Monocot Leaf
- T.S. of Monocot Root
- T.S. of Epidermis Leaf
- T.S. of Epidermis Root
- T.S. of Mesophyll Leaf
- T.S. of Mesophyll Root
- T.S. of Vascular Leaf
- T.S. of Vascular Root
- T.S. of Stomata Leaf
- T.S. of Stomata Root
- T.S. of Guard Cells
- T.S. of Palisade Mesophyll
- T.S. of Spongy Mesophyll
- T.S. of Endodermis
- T.S. of Xylem
- T.S. of Phloem

**Viruses**

Dr. W. Stanley: For every third one to twelve virus from infected tobacco leaf.

**Classification based on shape:**

**Classification based on composition:**

**Classification based on their hosts:**

**Classification based on covering:**

**Virus diseases:**

**Bacteria**

Microscopic view of bacteria shows them to be unicellular prokaryotes. They have different shapes like spherical, rod-shaped, and spiral. Bacteria can be found in almost all environments.

**Classification of Bacteria:**

- Prokaryotes
- Diplococcus
- Proteobacteria
- Actinomycetes
- Monococcus
- Gram Positive
- Gram Negative

**Cell Shape:**

- Pole-like Buds
- Spherical Cells
- Spiral-shaped Cells
- Conical-shaped Cells

**Respiration In Bacteria:**

- Aerobic respiration
- Anerobic respiration (does not require oxygen)

**Chemical Nature of Cell Wall:**

- Gram Positive Wall
- Gram Negative Wall
- Prokaryotic Wall

**Bacterial Growth and Reproduction:**

- Binary Fission
- Conjugation
- Spore Formation

**Useful Activities:**

**Some Bacterial Diseases:**

**Pollination**

The transfer of pollen grains from the anthers of a flower to the stigma of the ovule on another flower. It is a process of reproduction. Pollination can be done by wind, water, or animals.

**Diagram of Pollination:**

**Types of Pollination:**

- Self-pollination
- Cross-pollination

**Agents of Pollination:**

- Wind
- Water
- Animals (Insects, Birds, Mammals)

**Advantages of Pollination:**

- It increases the chances of survival of species.
- It helps in the production of hybrid plants.
- It helps in the production of new varieties of plants.
- It helps in the production of new species.