

Life Processes (Mind Map)

MIND MAP

NUTRITION

Autotrophic (e.g. Plants)

Heterotrophic (e.g. Animals)

• Photosynthesis

$$6CO_2 + 6H_2O \xrightarrow{Chlorophyl \ l} C_6H_{12}O_6$$

$$+ 6O_2$$

- **Digestion** in human beings (Catabolic Process)
- (a) Carbohydrate $\xrightarrow{\text{Amylase}}$ Glucose
- (b) Fats $\xrightarrow{\text{Lipase}}$ Fatty acids + Glycerol
- (c) Protein Protease → Amino acids

TRANSPORTATION

- In Plants:
- (a) Food is transported through phloem (Translocation)
- (b) Water and minerals are transported through xylem (Ascent of Sap).
- In Human Beings:
- (a) Blood circulatory system consists of Heart, Arteries, veins and blood
- (b) Lymphatic system consists of Lymph, Lymphatic Vessels and Lymph Nodes.

RESPIRATION

(Catabolic process)

• Aerobic Respiration

- (a) Glucose $\xrightarrow{\text{Glycolysis}}$ Pyruvate
- (b) Pyruvate $\xrightarrow{\text{Kreb's cycle}} CO_2 + H_2O + 38$ ATP
- Anaerobic Respiration
- 1. In yeast
- (a) Glucose Pyruvate
- (b) Pyruvate \longrightarrow Ethanol + CO_2 + Energy
- 2. In human muscles
- (b) Pyruvate → Lactic acid + Energy

EXCRETION

- **In Plants:** Plants use different techniques for the removal of waste products.
- In Human Beings: Metabolic nitrogenous waste products are removed by nephrons in the kidneys.