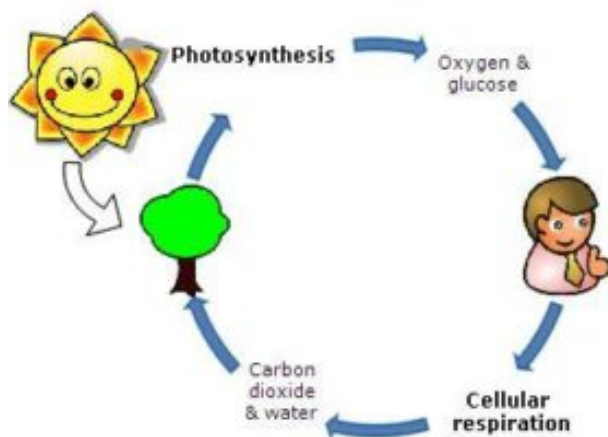


Introduction of Cellular Respiration & It's Significance !!

RESPIRATION

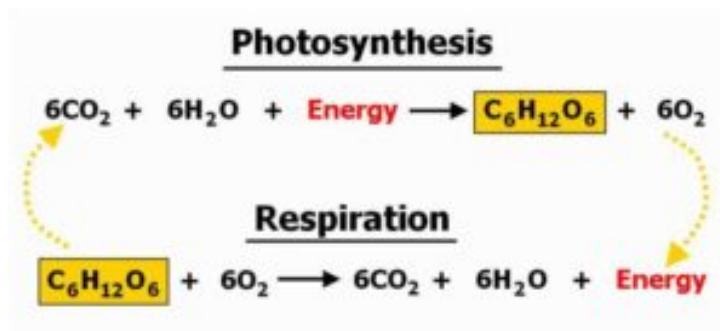
Respiration is the reverse process of [photosynthesis](#).

In the process of respiration it requires the products of photosynthesis and similarly photosynthesis requires the products of respiration.



DEFINITION

Respiration is the process where energy released from the breakdown of food particles ([glucose](#)).



PLACE OF CELLULAR RESPIRATION

Cellular respiration is a chemical process which happens in the cell membrane in prokaryotes and in eukaryotes it happens in the [mitochondria](#).

TYPES OF CELLULAR RESPIRATION

There are two types of cellular respiration.

- Aerobic respiration: Oxygen is present. Produce large amount of ATP (36 ATP).
- Anaerobic respiration: Oxygen is absent. Produce small amount of ATP (2 ATP).

STAGES OF CELLULAR RESPIRATION

There are mainly three stages in cellular respiration.

- Glycolysis.
- Krebs cycle.
- Electron transport chain (ETC).

Glycolysis is the common stage in aerobic and anaerobic respiration.

Glycolysis occurs in the cytoplasm where as the Krebs cycle and ETC Takes places in the mitochondria.

| Step | Location | ATP Produced | Products |
|-------------|------------------------------------|----------------|-------------------------|
| Glycolysis | Cytoplasm | 2 (Net) | 2 Pyruvic Acid |
| Krebs Cycle | Mitochondria Matrix | 6 | 6 CO₂ |
| ETC | Mitochondria inner membrane | 28 | 6 H₂O |

SIGNIFICANCE OF CELLULAR RESPIRATION

When a [cell](#) needs energy for a particular process, respiration must be supplied energy as a form of ATP.

Through the process of cellular respiration both the animal and plant cell released the energy stored in the form of glucose.

This is the introductory notes on cellular respiration.

Thank you for reading.