Stages of photosynthesis -

1. First stage of photosynthesis =

This is the light dependant stage. The light energy is absorbed by chlorophyll. Some of this energy is used to manufacture ATP from ADP. *This is done by the splitting of water into hydrogen and oxygen*.

The *hydrogen* is oxidised to provide the energy to make the ATP. ATP is used as the electrical transport in membranes. E.g. ATP fetches the ribosome in protein synthesis.

Chloroplasts also consist of fluid-filled sacs called thylakoids. These stacks up like piles of coins and form a structure called grana. This grana contain the photogenetic pigments and election carriers so that this light dependant stage can occur. They also allow for the chloroplasts to change orientation so that they can receive the lightest.

2. The second stage of photosynthesis –

This is also called the the light independent stage. It us is the energy received in the chloroplast to convert carbon dioxide integracose (sugars). This takes place in a solution in the strona, this is where sugars are stored. in solution in the stroma (sugar are stored) Black spheres can be seen in the stroma, these are receives of lipids in order to make membranes or to destrop chloroplast memoranes.

Cell Wall

- Cell walls are thick and strong.
- They are freely permeable.
- Made mainly of cellulose. Some also contain other polysaccharides like pectin.
- There are often channels through plant cell walls called **plasmodesmata**. They link the cytoplasm's to adjacent cells.

Plasmodesmata

• Small channels that connect the cytoplasm of plant cells to each other. They form a living bridge.

Prokaryotic Cell

- Prokaryotes do not have a nucleus i.e. bacteria. •
- Do not contain any membrane-bound organelles such as mitochondria. •
- Circular and freely floating in the cytoplasm.
- Some have a flagellum. •
- Always asexual (doesn't involve the fusion of gametes) •

Virus

- Do not have a cell structure.
- They are not surrounded by a partially permeable membrane containing They can only reproduce by infecting and taking a canother cell – parasitic
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