Photosynthesis is the process by which green plants and some other organisms use sunlight to synthesize foods with the help of chlorophyll.

The process typically involves the green pigment chlorophyll and generates oxygen as a byproduct.

The overall equation for photosynthesis is:

This means that six molecules of carbon dioxide and six molecules of water, using sunlight, are converted into one molecule of glucose and six molecules of oxygen.

Photosynthesis takes place in the chloroplasts of plant cells. It is essential for life on Earth as it produces the oxygen we breathe and forms the base of the food chain.