Monday, October 5, 2015

Biology - Chapter 3

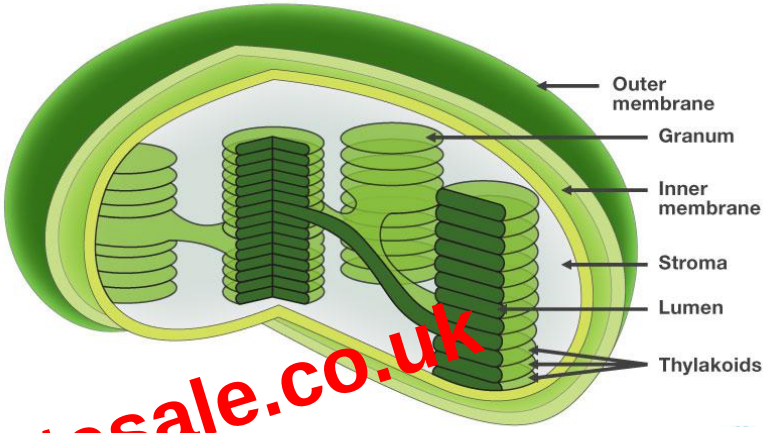
Energy For the Cells

Photosynthesis: *Photosynthetic organisms use light energy, carbon dioxide and water to make sugar (glucose) and oxygen.*

$6CO_2 + 6H_2O$ —-> $C_6H_{12}O_6 + 6O_2$

The carbohydrates ($C_6H_{12}O_6$) will be used to

- Grow the plant
- Provide glucose to the mitochondria for cellular respiration

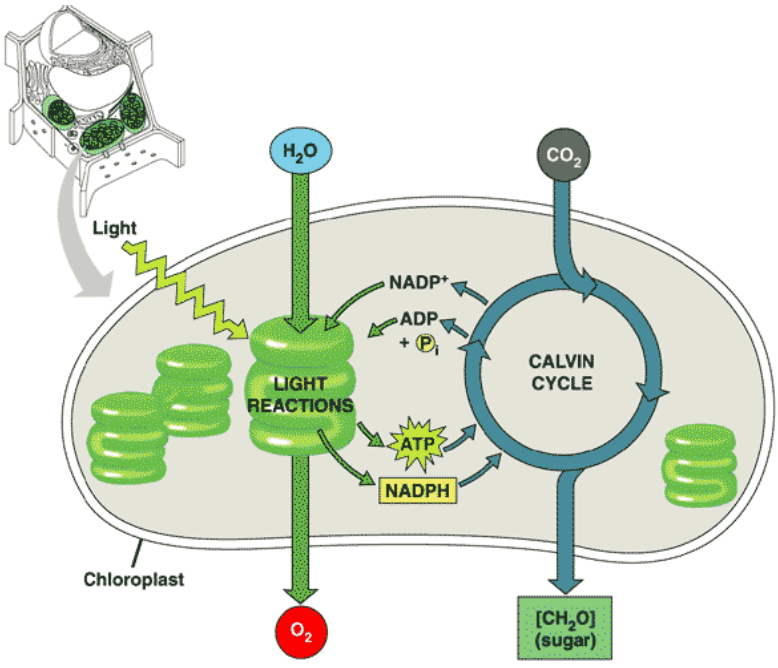


Chlorophyll: *Found on the membrane of the thylakoids in the chloroplast and is needed for photosynthesis. Gives plants their green colour, and captures light energy from the red and blue ends of the visible light spectrum and uses it to produce carbohydrates (glucose), water, and carbon dioxide.*

Photosynthesis is a two step process:

1) ***Photo Stage (light) :*** *Chlorophyll captures sunlight and converts it into energy to run the synthesis stage. Oxygen is released during this stage.*

2) ***Synthesis Stage (Calvin Stage)*** *: The energy captured from the photo stage is used to combine carbon dioxide and water to make glucose.*



In every plant there is an optimal temperature where the photosynthesis works best. Generally between 2-25°C