

Notes 6.2 – Cells and Energy

Photosynthesis is the chemical reaction that takes place in plant cells

Chemical equation = $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
In English ☺ = Carbon Dioxide + Water → Glucose + Oxygen

Plants use energy from the Sun to make Carbohydrates (glucose)

Photosynthesis takes place in the chloroplasts (remember the Elodea)

LIGHT AND COLOR:

The sun provides Earth with a steady source of light

Your eyes see sunlight as white light but it is made up of different colors of light

Light is part of a collection of waves known as the electromagnetic spectrum

We see only a small part of the electromagnetic spectrum

CHLOROPHYLL is the main pigment in photosynthesis. A pigment is a molecule that absorbs some colors of light and reflects others.

It absorbs mostly blues and reds and reflects mainly green (this is why most plants are green)

CELLULAR RESPIRATION is a chemical reaction that occurs in all living things

Chemical equation = $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

In English ☺ Glucose + Oxygen → Carbon Dioxide + Water

Wow – this is the opposite of photosynthesis

It takes place in the mitochondria (powerhouses of the cell)

Energy is stored as ATP and some is released as heat