Vocabulary: Photosynthesis Lab

Vocabulary

- Carbon dioxide – a colorless, odorless gas that is produced during respiration and combustion (burning).
  - Carbon dioxide is used by plants during photosynthesis.
  - The chemical formula of carbon dioxide is CO_2.
  - Average CO_2 concentrations in Earth's atmosphere are about 390 ppm (parts per million).
- Chlorophyll – a green pigment in plants that absorbs light energy and converts it into a form the plant can use for photosynthesis.
- Glucose – a simple sugar that is a major energy source for cells.
  - Glucose is produced in photosynthesis.
  - The chemical formula of glucose is $C_6H_{12}O_6$.
- Limiting factor – the required substance that is in shortest supply and therefore limits growth or other life processes.
  - In many ecosystems, food is the limiting factor that keeps populations in check.
  - For plants, nutrients such as phosphorous and nitrogen are often limiting factors in the spring and summer. Cold temperatures limit growth in the winter.
- Nanometer – a tiny unit of distance, equal to one billionth of a meter.
  - The symbol for a nanometer is "nm."
- Photosynthesis – a process in which plants use energy from light to produce glucose and oxygen from carbon dioxide and water.
  - The chemical equation for photosynthesis is: $CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2$

    This reads: Carbon dioxide and water react to yield glucose and oxygen.
  - Glucose is used by the plant for energy. It can also be used as a building block for complex sugars such as cellulose.
  - Some oxygen is used by the plant, but most is released.
- Wavelength – the distance between two consecutive crests of a wave.
  - The wavelength of visible light ranges from 400 nanometers (violet) to 700 nanometers (red).