

Nagtatrabahong mag-aaral essay sample

[Science](#), [Chemistry](#)



The light and dark reactions both really need light to occur.

In the light reactions, sunlight splits H₂O to produce H⁺ (for energy) and O₂ (waste). The end products are NADPH and ATP, which are both energy sources that drive the dark reactions.

The dark reactions don't need sunlight directly, but use the energy produced during the light reactions. Here, CO₂ is fixed from the air and converted into starches and sugars using NADPH and ATP to power the conversion. Light Reaction (involves the sun)

The roots suck up water from the ground, into the chloroplasts. In there, the water is sun-heated and gets split into hydrogen, oxygen and ATP. The oxygen then gets released for us to breath and the hydrogen is put to a different part of the leaf. Dark Reaction (doesn't involve the sun)

After the hydrogen gets to the other part of the leaf, the CO₂ (carbon dioxide), that we breath out, mixes with the hydrogen and gets fused using ATP, making sugar/starch

The raw materials are carbon dioxide (CO₂) and water (H₂O); the process of photosynthesis is a complex series of chemical reactions resulting in the production of glucose and oxygen (O₂). Glucose is a simple sugar, which is further processed into fructose and sucrose, and any sugars not required immediately to be metabolized for their energy are converted into starches: complex carbohydrates used to store these essential sources of energy for when they are required. The process of photosynthesis is summarized in a series of reactions called the Calvin Cycle; and you can find this process

summarized in relatively simple steps, or described in it's full complexity down to the movement of every electron. The organ of photosynthesis in the plant cell is the CHLOROPLAST.