

Discovery of Photosynthesis

Is about ...

how the experiments of Van Helmont, Priestley, and Ingenhousz reveal that in the presence of light, plants transform C_2O and H_2O into carbohydrates and release O_2 .

This

Van Helmont experiment

- Led to the discovery of the "hydrate," or water portion of the carbohydrate produced by photosynthesis
- Created an experiment to find out if plants grew by taking material out of the soil – massed dry soil and a small seed, after five years the mass of the soil was the same → concluded that the mass of the plant gained came from the water, did not realize air changed it too

Caused the...

John Priestly experiment

- Led to the discovery of the oxygen portion of the photosynthesis equation
- Placed a lit candle inside a jar, it burned out. Then, he placed a mint leaf inside the jar and the candle remained lit because of the production of oxygen by the leaf

Which led to ...

Jan Ingenhousz experiment

- Led to the discovery that plants need light to produce oxygen
- Performed Priestly's experiment and discovered that the candle only remained lit in the presence of light

So what? What is important to understand about this?

Photosynthesis is a series of reactions that uses energy from the sun to convert water and carbon dioxide into sugars and oxygen