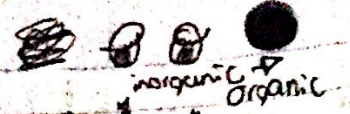


Photosynthesis

- Started at least 3.6 Billion years ago
- all O_2 came from photosynthesis and most fixed carbon comes from photosynthesis



Autotrophs = plants

photo autotrophs
photosynthesis

Chemo autotrophs
deep sea vents

Aristotle = plants eat soil to grow, leaves shade roots

1610 Helmont = chemist, wealthy, claimed he had a philosopher's stone. He weighed soil in a pot w/ plants, measured soil after 5 years, found tree gained weight cause it grew but soil didn't lose weight so tree doesn't eat soil; he concluded tree eats water.

1771 Joseph Priestly - minister in England, pen pal of Franklin, interested in air. Plants turned bad air into good air, ~~and~~ burning ~~the~~ good air into bad air.

1779 Jan Ingenhousz - also Ben Franklin pen pal - invented lightning rod. Plants w/ ~~ex~~ light make bad air good. Plants at night would suck all O_2 out.

1789 Lavoisier - chemist, got his head chopped off.

1864 Julius von Sachs - Plants store carbon as starch.

1883 ~~the~~ Theodor Engelmann - animal & plant physiologist. Which lights chloroplasts like (not green, like blue/purple & red/orange).

Bioassay - using bacteria to draw conclusions in an experiment.
Action Spectrum - which light color action happens under absorption spectrum -
Pigment - something that absorbs light