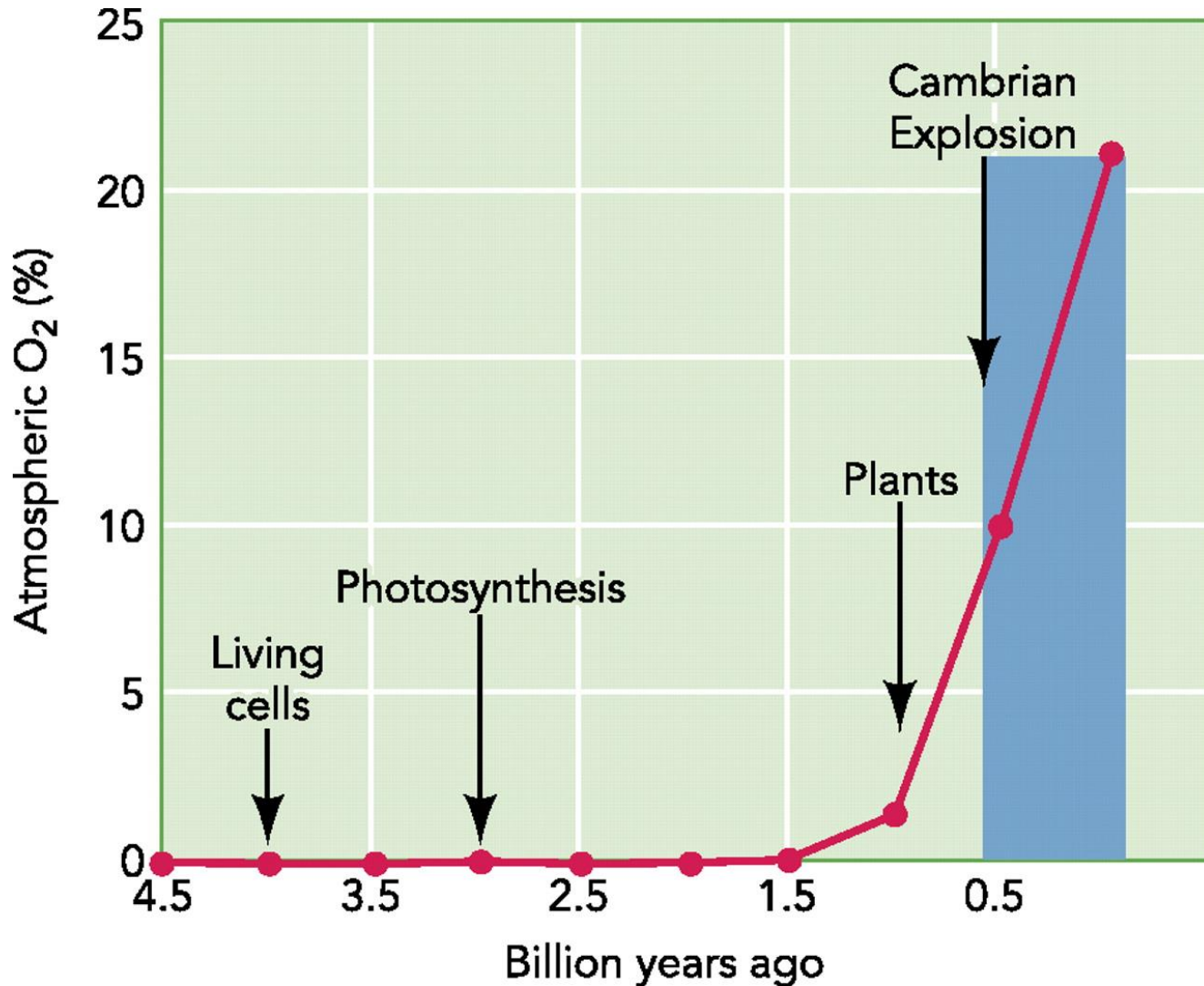
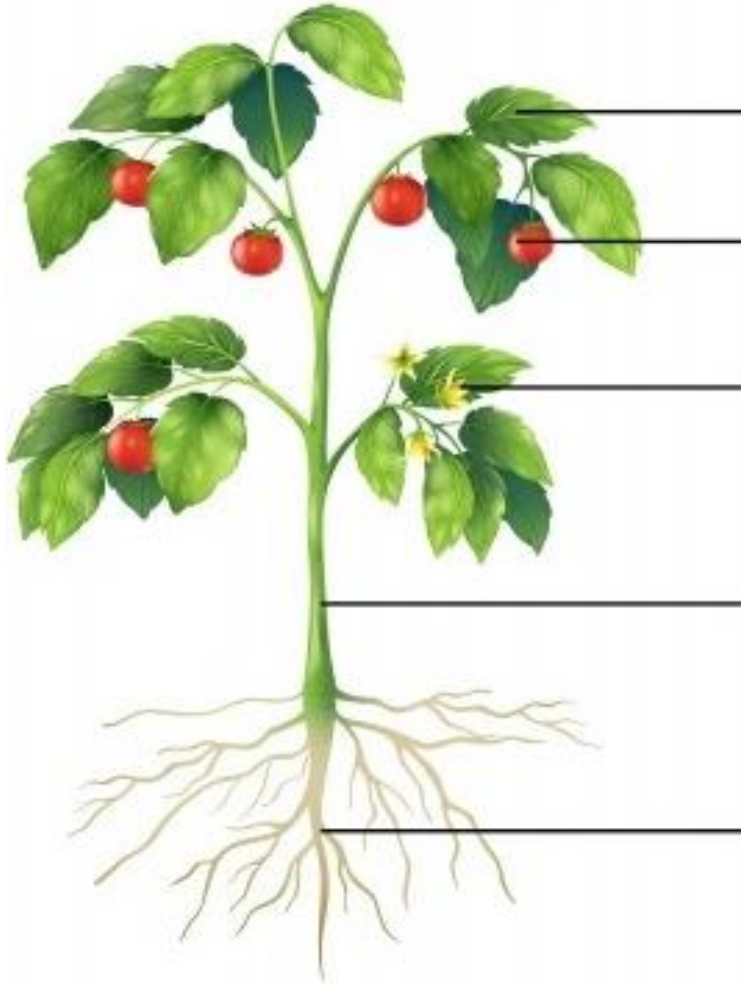


Photosynthesis and the History of Earth



Plant Structure and Function



Plants need...

1. Light
2. Water
3. Oxygen
4. Carbon Dioxide
5. Nutrients (Soil)



NOT FOOD!

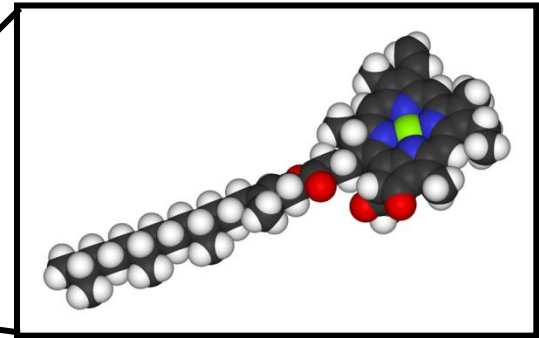
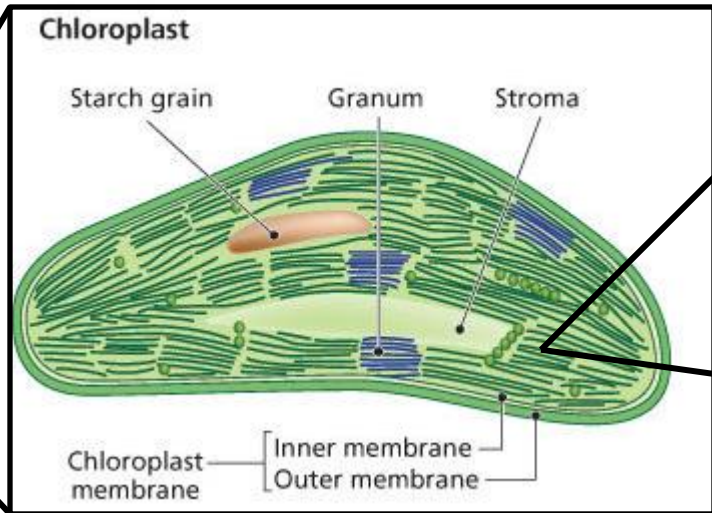
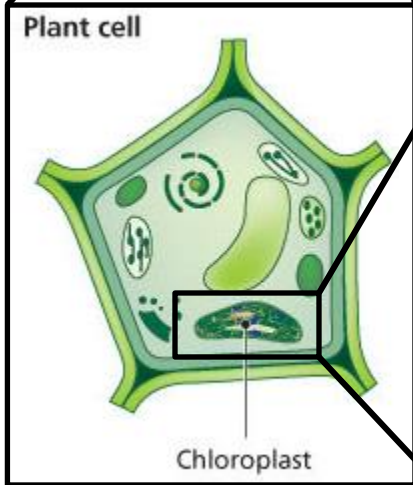
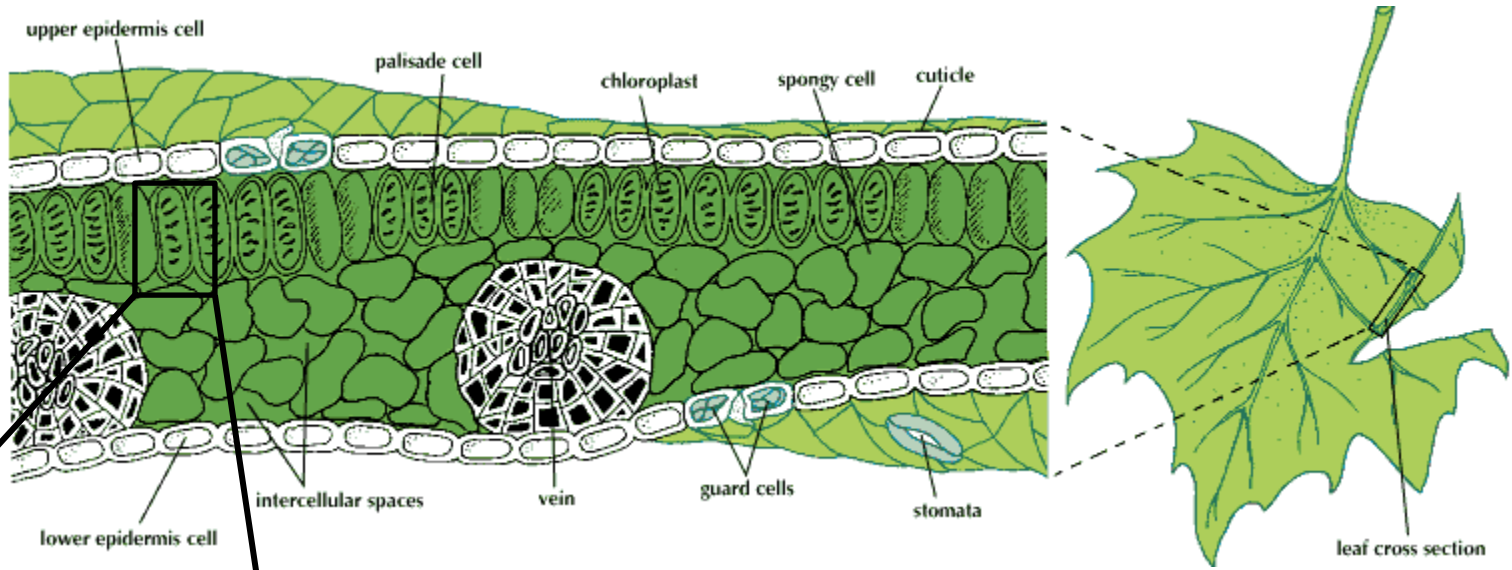
- **Photoautotrophs** – Produce own food using light energy
- Use **photosynthesis**

Photosynthesis...

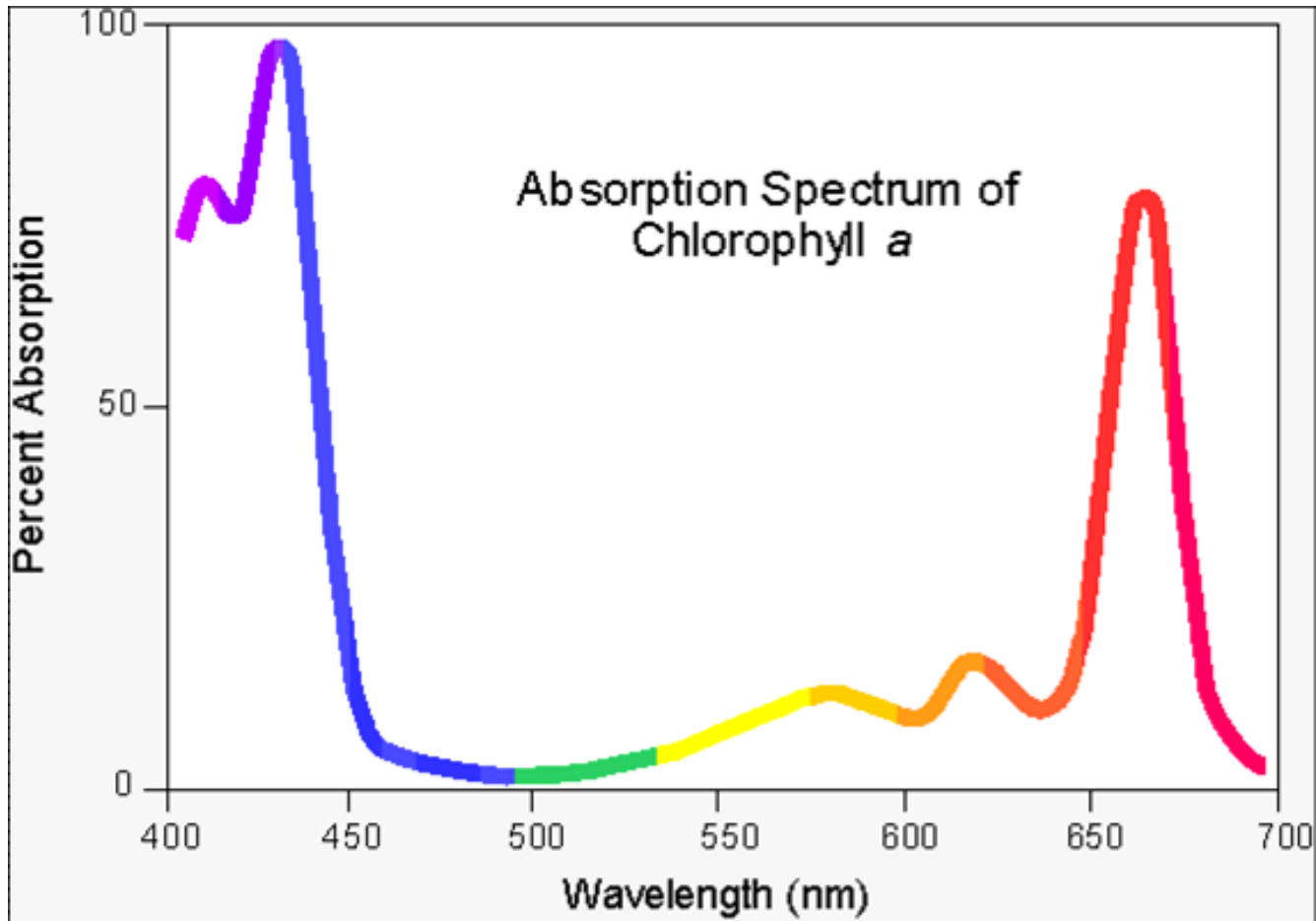


- Converts radiant energy to chemical energy
- Occurs In **plants** leaf cells
- Completed by **chloroplasts** (organelle)
- Needs Green pigment **chlorophyll** is required

Leaf → Cell → Chloroplast → Chlorophyll

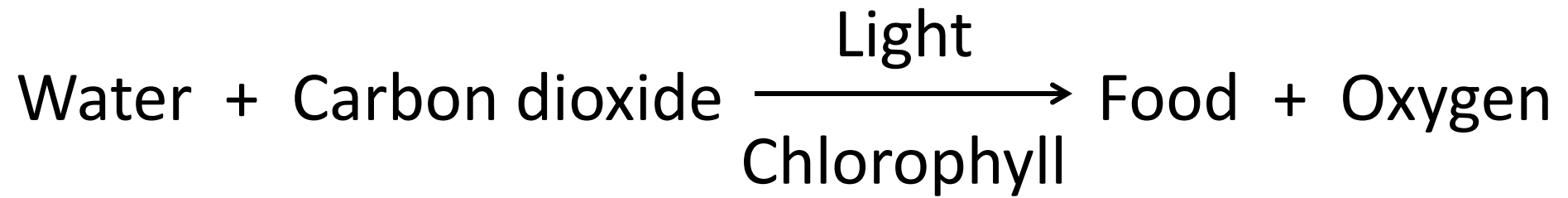


Chlorophyll Color Spectrum

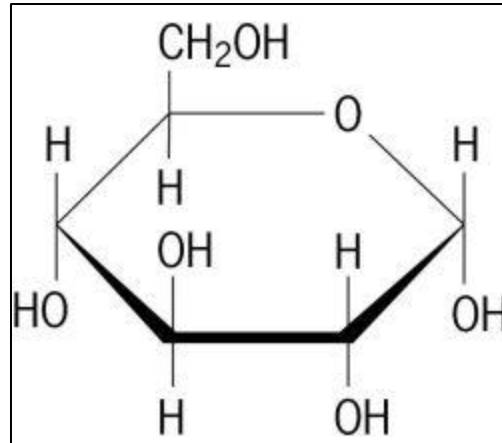




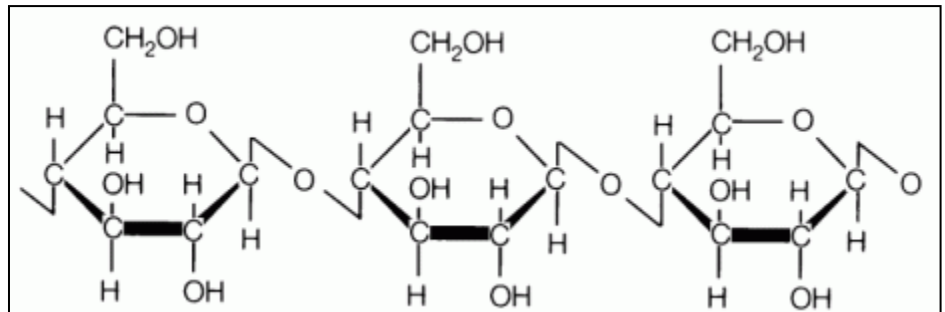
Photosynthesis



Plant Food: Glucose



- Used for
 - Immediate energy
 - Energy storage (starch)
 - Growth (cellulose)



Photosynthetic Organisms

- Plants
- Protists (Algae)
- Photosynthetic bacteria
 - No chloroplast, only chlorophyll



Source of all chemical energy on Earth

