Photosynthesis

How do we define food?

- FOOD is a nutrient that contains energy
  - May also contain inorganic nutrients
- All FOODS are considered nutrients
- Not all NUTRIENTS are considered foods

Inorganic versus organic

Inorganic molecules do not provide energy

- Carbon dioxide
- Water
- Oxygen

Organic molecules provide energy

- Sugar (glucose)

Energy Production

Autotrophs- organisms that can make their own food.

- Also called **producers**
- Example: Plants

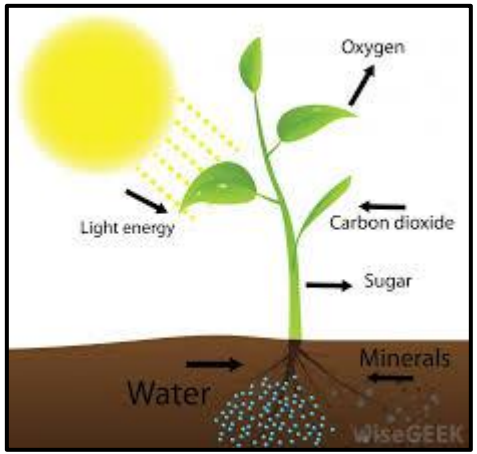
Heterotrophs- organisms that cannot make their own food

- Also called **consumers**
- Must eat other organisms for energy
- Example: Animals

Autotrophs

How do plants (autotrophs) make their own food?

PHOTOSYNTHESIS!



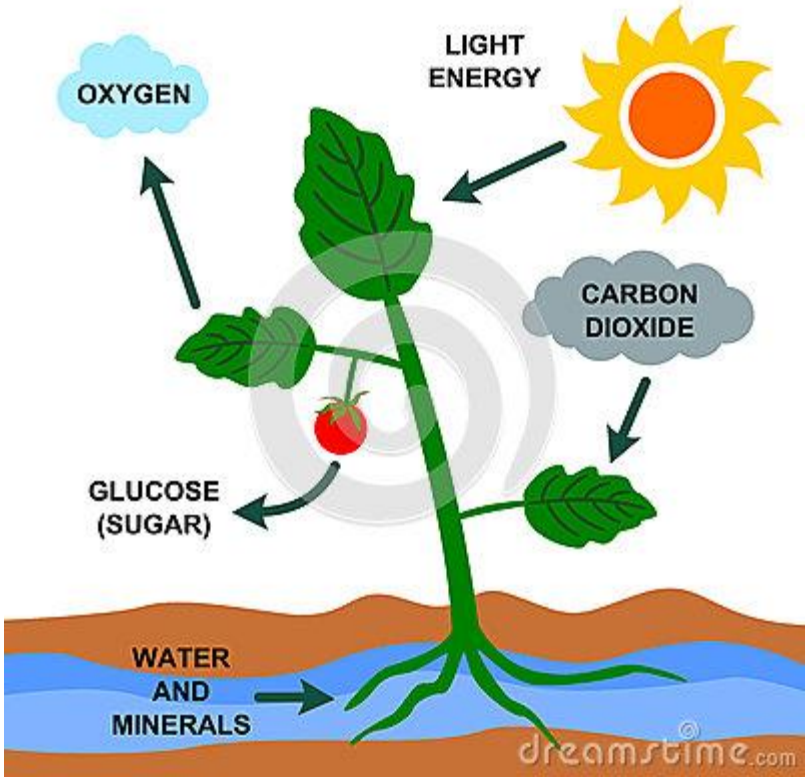
Types of Energy

- Solar Energy = radiant heat and light from the sun *(calor radiante y la luz del sol)*

- Chemical Energy = the potential of a substance to change into another substance through a chemical reaction *(el potencial de una sustancia para cambiar en otra sustancia a través de una reacción química)*

Photosynthesis

In photosynthesis, solar energy is transferred into chemical energy

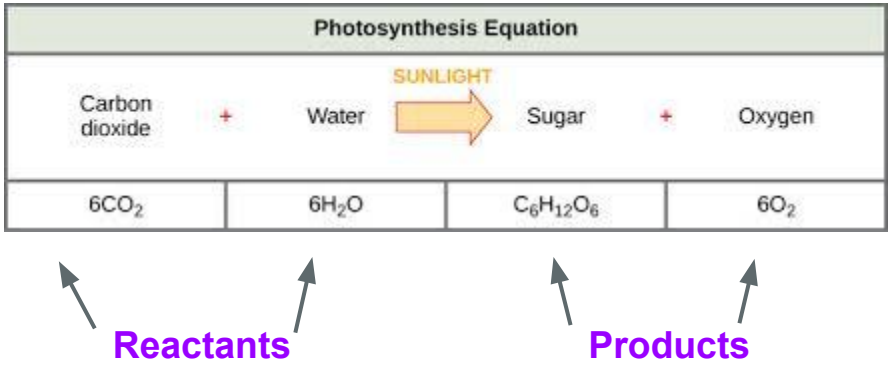


Photosynthesis

- **Reactants** are the starting materials for a reaction
  Los reactantes son los materiales de partida para una reacción

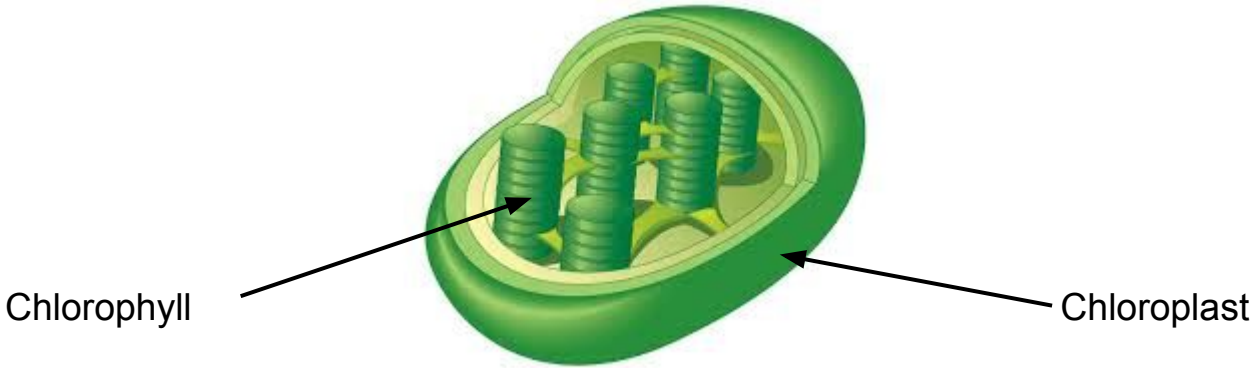
- **Products** are what we have at the end of the reaction.
  Los productos son lo que tenemos al final de la reacción.

Photosynthesis



Photosynthesis

Photosynthesis occurs in the CHLOROPLAST, a pigment called CHLOROPHYLL



Photosynthesis

Could we survive without photosynthesis?

NO! We need the oxygen to breath and the plants to eat!