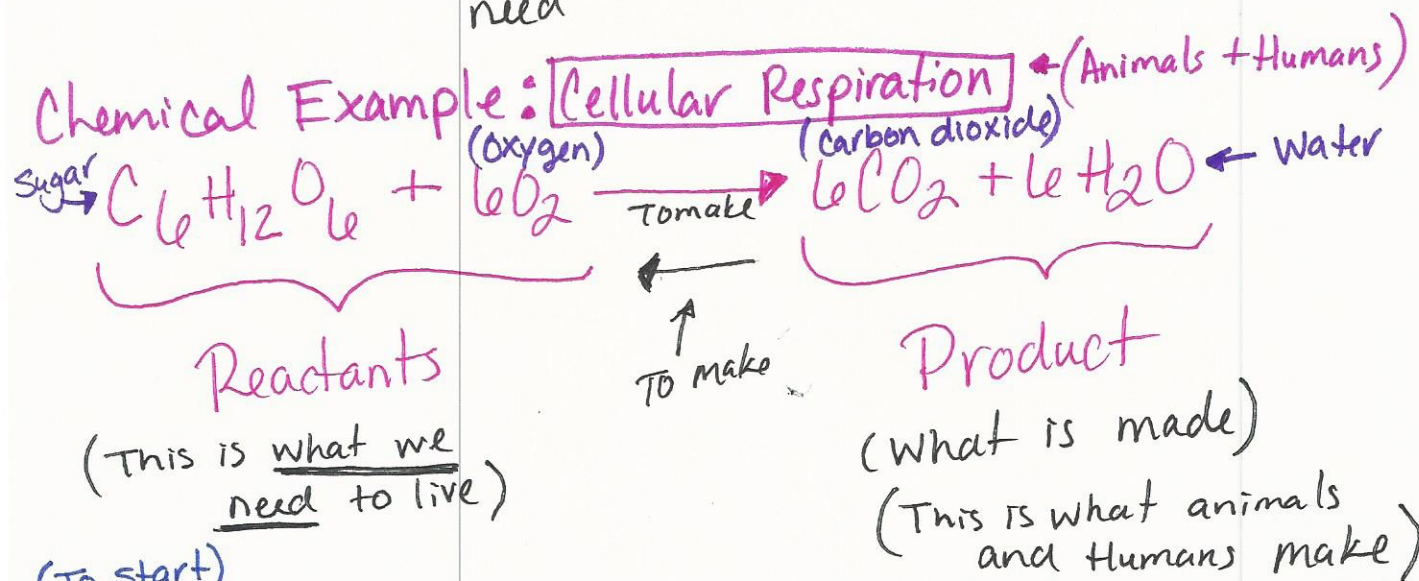
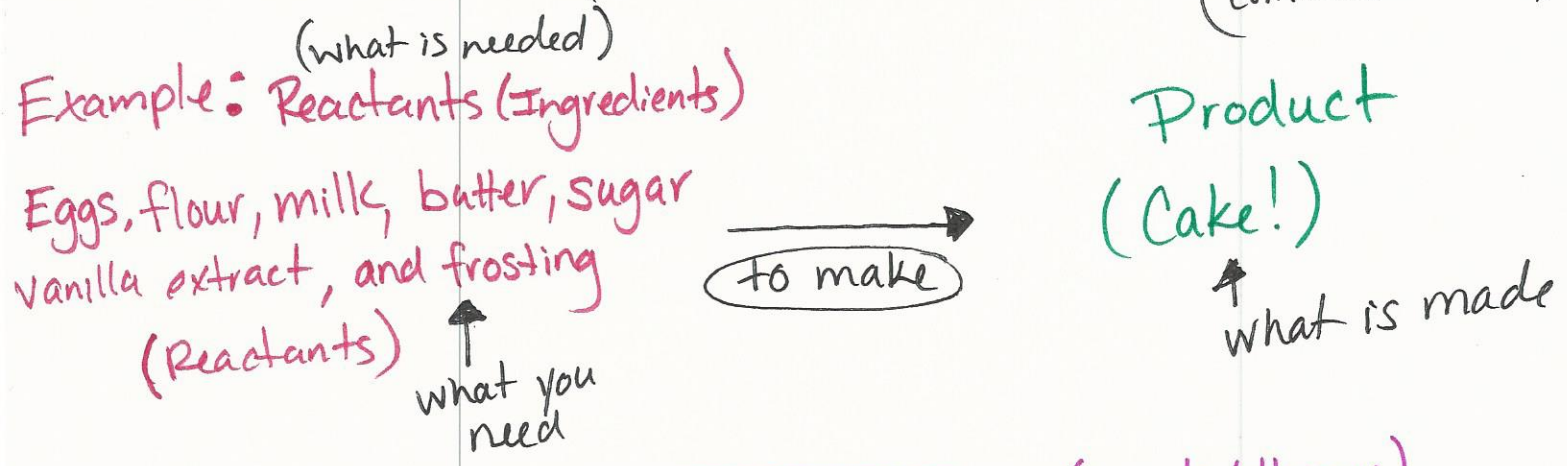
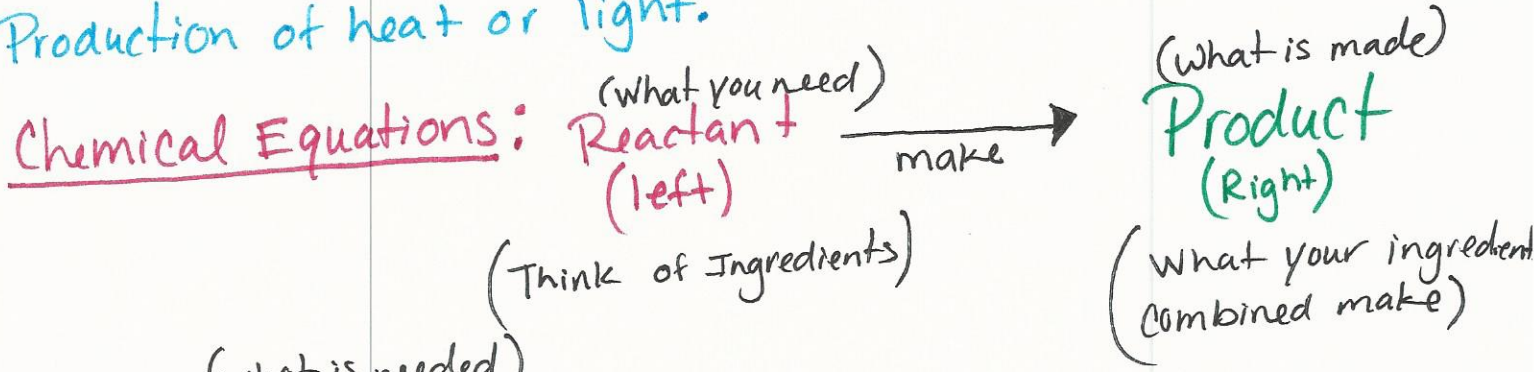


Chemical Reaction: is a process by which atoms or group of atoms in substances are reorganized into different substances.

- Clues of Chemical Reactions:
- Change in color
 - Physical Change
 - New formation of gas, liquid, or solid.
 - Change in substance
 - Production of heat or light.



Activation Energy: The minimum amount of energy needed to form a product. Ex: Chewing your food to start your chemical reaction of digestion. (Exit)

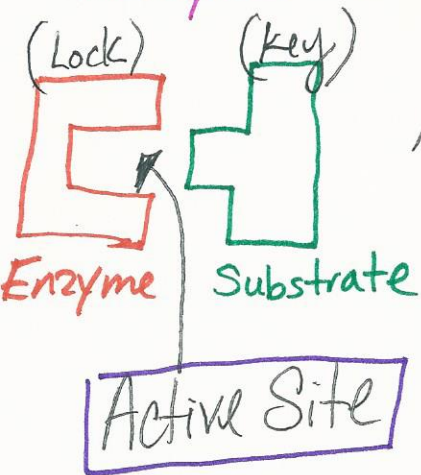
- Reactions that release energy in the form of heat: Exothermic
- Reaction that absorbs energy in the form of heat: Endothermic (Enter)

Catalyst - a substance that lowers the activation energy and reaction time, needed to start a chemical reaction.

Ex: Saliva - The more saliva that is in your mouth, the faster our food is broken down. (This helps us not have to chew as much, lowering activation energy.)

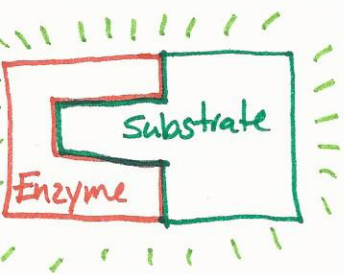
Enzyme: Is a biological Catalyst that speeds up the rate of chemical reactions in biological processes.

*Enzymes have a specific shape that is specific to one function/ reaction!



Enzyme must connect to a substrate in order for a chemical reaction to occur.

Substrate and Enzyme connect at the Active Site.



Substrate - Enzyme Complex → When your enzyme and substrate connect, you now have a chemical reaction (substrate-enzyme complex)

• Enzymes can be affected by Extreme Temperatures.

Ex: Too cold - Enzymes slow down and cannot function properly.

Too Hot: Change the shape of the enzyme, not allowing it to connect to a substrate, so no chemical reaction occurs.

pH - can also affect the function of enzymes.

When it comes to Enzymes + Substrates think of:

Puzzles, Leggols