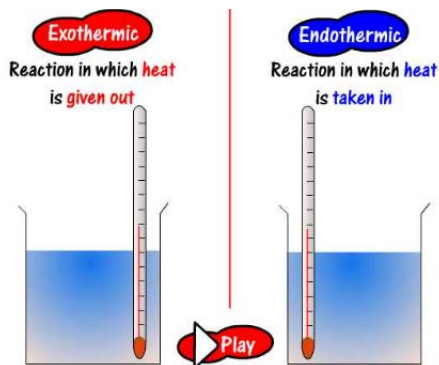


Y8 - Knowledge organiser – 8.3 - Chemical Energy & Types of Reaction

Endothermic/ Exothermic

1



Reactions and Bonds

2

- Chemical bond: forces that hold atoms together in molecules.
- During a chemical reaction, bonds are broken and new bonds are made.
- Breaking bonds require energy
- Making bonds releases energy.

Catalysts

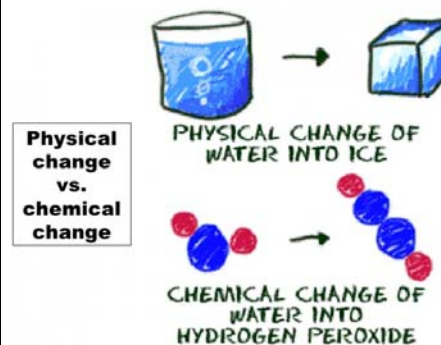
3

- Catalysts: substances that speed up chemical reactions but are unchanged at the end.
- Lowers the amount of energy required to start a reaction

Chemical/Physical

4

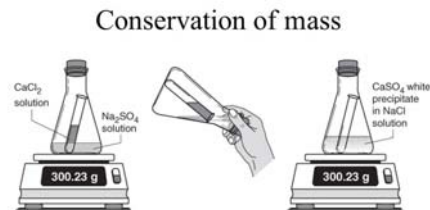
- Physical changes can be reversed.
- Chemical reactions are permanent.



Conservation of Mass

5

- Atoms and molecules in reactions are rearranged to make new substances.



mass (g) of reactants = mass (g) of products

Combustion

6

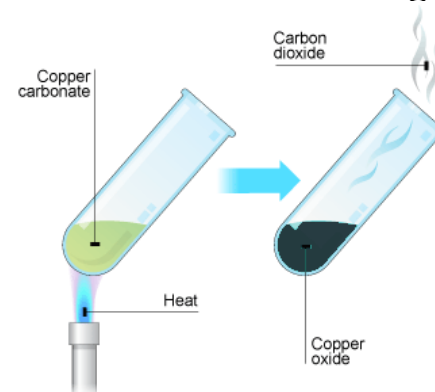
- Energy is transferred to the surroundings as heat and light.
- Fuel: stores energy in a chemical store which can release as heat.



Thermal Decomposition

7

- A single reactant is broken down into simpler products because of heating.



Word Equations

8

- Reactants: substances that react together.
- Products: substances that are formed during a chemical reaction.
- Written as reactants before an arrow, with the products after.