

Types of Chemical Reactions

There are five types of chemical reactions that we are going to study:

- 1) Combustion
- 2) Synthesis Reaction
- 3) Decomposition
- 4) Single Displacement Reaction
- 5) Double Displacement Reaction

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1) Combustion (burning, explosions etc)

- This is a reaction where oxygen and a fuel react in the presence of a spark or heat.
- As long as there is enough oxygen available the products are water and carbon dioxide.
- If oxygen levels are low then water and carbon monoxide are produced, this is much more dangerous!

Ex: butane + oxygen \rightarrow carbon dioxide + water



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2) Synthesis Reaction

- During this reaction two smaller molecules join together to make one, larger molecule.

Ex: copper + oxygen \rightarrow copper (II) oxide



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3) Decomposition Reaction

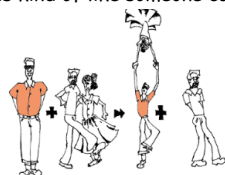
- During a decomposition reaction one larger molecule breaks down into two or more smaller molecules.

Ex: water \rightarrow hydrogen + oxygen

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4) Single Displacement Reaction

- In this reaction one element that is on it's own will take the place of another element in a molecule.
- It is kind of like someone cutting in on a dance.



Ex: magnesium + silver nitrate \rightarrow magnesium nitrate + silver

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5) Double Displacement Reaction

- In this case the metals in the ionic compounds switch places.
- It is kind of like 2 couples trading partners while dancing.



Ex: lead (II) nitrate + potassium iodide \rightarrow lead (II) iodide + potassium nitrate

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