





Classifying Chemical Reactions

Reaction Type	Sample Equation	Clues for Recognizing Reaction Type
Synthesis two or more reactants combine into one product analogy: make a couple	Gen: $A + B \rightarrow AB$  Ex: $Na + Cl_2 \rightarrow NaCl$	one product
Decomposition break into several products analogy: break up	Gen: $AB \rightarrow A + B$  Ex: $H_2O \rightarrow H_2 + O_2$	one reactant
Single Replacement one element replaces another element a compound (your friend your boo) analogy: single + couple	Gen: $A + BC \rightarrow B + AC$  Ex: $Mg + NaCl \rightarrow Na + MgCl_2$	one single element on each side
Double Replacement two compounds swap 1 part analogy: "wife swap"	Gen: $AB + CD \rightarrow CB + AD$  Ex: $AgNO_3 + NaCl \rightarrow NaNO_3 + AgCl$	two compounds on each side
Combustion (burning) reacting w/ O_2 gas	Gen: $A + O_2 \rightarrow AO$ $AB + O_2 \rightarrow CO_2 + H_2O$ Ex: $C + O_2 \rightarrow CO_2$ $C_4H_{10} + O_2 \rightarrow CO_2 + H_2O$	+ O_2 (reactant)

