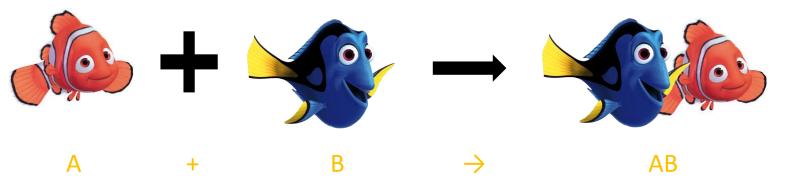
## **Classifying Reactions Comic**

# 1. Synthesis (Combination) Reactions

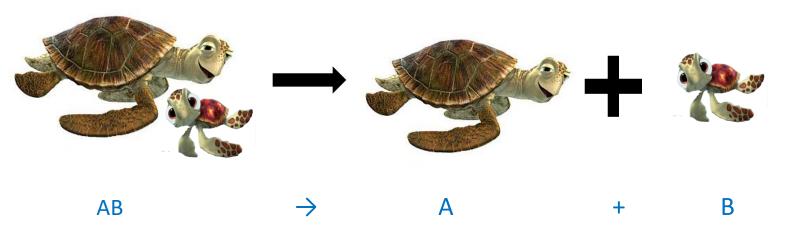
Two or more reactants (A and B) combine to produce a single product (AB)



 $2Na + Cl_2 \rightarrow 2NaCl$ 

## 2. Decomposition

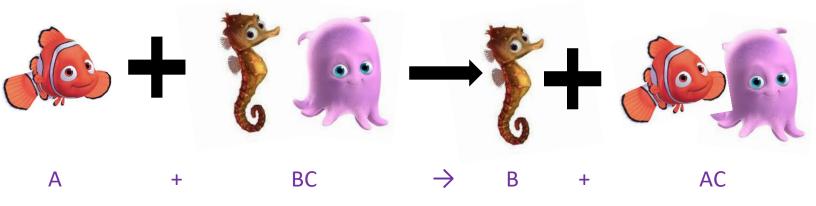
The breaking down of a compound (AB) into smaller compounds or separate elements (A and B)



 $2H_2O \rightarrow 2H_2 + O_2$ 

#### 3. Single replacement

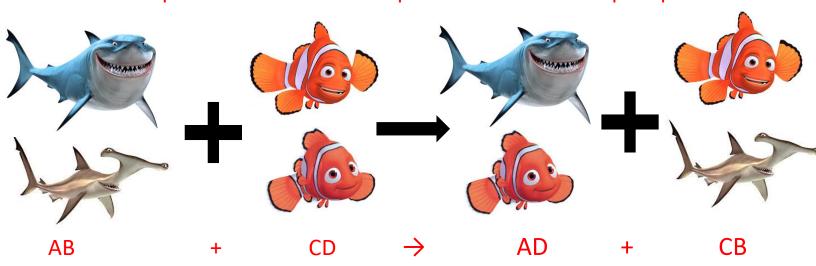
A reactive element (metal or non-metal by itself) and a compound react to produce another element and compound. One of the elements is "replaced" by another element.



 $2AI + 3CuCl_2 \rightarrow 3Cu + 2AICl_3$ 

#### 4. Double replacement

Involves two ionic solutions that react to produce two other ionic compounds. One of the compounds often forms a precipitate.



 $Pb(NO_3)_2 + 2Nal \rightarrow 2NaNO_3 + Pbl_2$