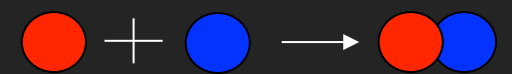







Types of Chemical Reactions

Types of Reactions

- There are five types of chemical reactions we will use:
 1. **Synthesis reactions**
 2. **Decomposition reactions**
 3. **Single displacement reactions**
 4. **Double displacement reactions**
 5. **Combustion reactions (THIS TYPE IS WEIRD)**
- You need to be able to identify the type of reaction!

Type of Reaction	Definition	★ Equation
Synthesis	Two or more elements or compounds combine to make a more complex substance	$A + B \rightarrow AB$ 
Decomposition	Compounds break down into simpler substances	$AB \rightarrow A + B$ 
Single Replacement	Occurs when one element replaces another one in a compound	$AB + C \rightarrow AC + B$ 
Double Replacement	Occurs when different atoms in two different compounds trade places	$AB + CD \rightarrow AC + BD$ 

A = Red B = Blue C = Green D = Yellow

Type of Reaction	Definition	★ Equation
Combustion	a hydrocarbon reacts with oxygen gas to produce carbon dioxide and water	$\text{C}_x\text{H}_y + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$



A = Red B = Blue C = Green D = Yellow

Identifying Chemical Reactions

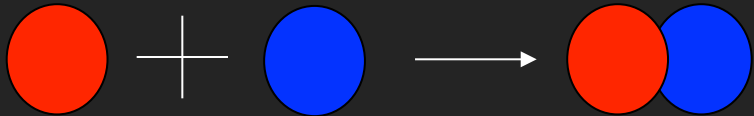
Use colored pencils to circle the common atoms or compounds in each equation to help you determine the type of reaction it illustrates. Use the code below to classify each reaction.

S = Synthesis

D = Decomposition

SR = Single Replacement

DR = Double Replacement



Compare to your notes

SYNTHESIS



SYNTHESIS