

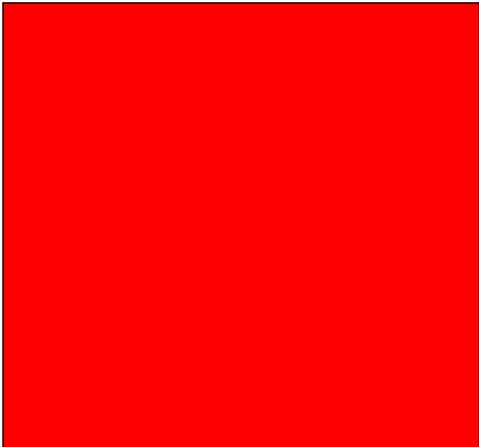
LO: Students will be able identify types of reactions and predict products

DOL: Students will be able to correctly identify at least 4/5 chemical equations.

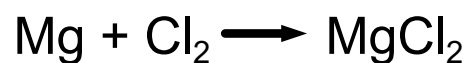
Types of chemical reactions:

Now that you have practiced with balancing chemical reactions, we are going to categorize chemical reactions. There are many more complicated reactions, but these 6 basic ones will help you to predict what products will form from the reaction.

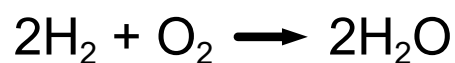
6 Types of Reactions

Name	Generic Form (revealed in class)
1) synthesis	
2) decomposition	
3) single replacement	
4) double replacement	
5) combustion (of a hydrocarbon)	
6) acid-base (neutralization)	

In order to determine which type of reaction you have, look at how many different elements or polyatomic ions you start with and how many you end up with and compare it to the generic versions.



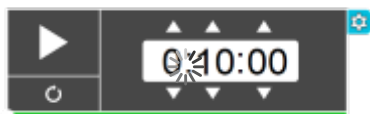
If the compound has water as a product, look and see if it is either a combustion or an acid-base reaction.



This one matches the pattern of a synthesis reaction

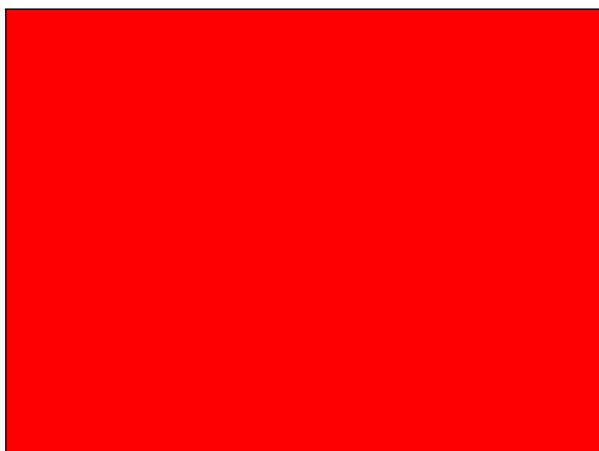
($A + X \longrightarrow AX$), but it is actually a combustion reaction (the burning hydrogen gas to produce water)

Determine the type of reaction for each of the following.



We will do these in class, leave some room in your notes (about 12 lines)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.



Predicting Products:

Not everything that you put together reacts. For example, if you mix salt and sugar you do not get a new chemical compound, you just get salty tasting sugar.

For now, we are going to assume that each of these combinations will result in a chemical reaction.

To predict the product, you just need to identify what type of reaction you have and follow the patterns.