2. REACTION TYPES

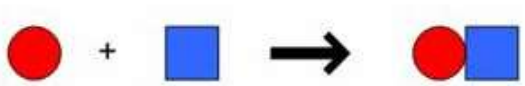
UNIT 2 CHEMICAL REACTIONS

CH30S *MR. WIEBE*

1

REACTION TYPES

A **synthesis** (or combination) reaction involves two or more simple substances (elements or compounds) combining to form one more complex substance.



A **decomposition** reaction involves a complex compound being broken down or decomposed into two or more simpler substances (elements or compounds).

2

REACTION TYPES

A **combustion** reaction involves the reaction of a hydrocarbon (a compound made up of hydrogen and carbon) or a carbohydrate (a compound made up of hydrogen, carbon and oxygen) with oxygen gas to produce carbon dioxide gas and water.

$$2\,C_8H_{18}(l) + 25\,O_2(g) \rightarrow 16\,CO_2(g) + 18\,H_2O(g)$$

$$C_6H_{12}O_6(s) + 6\,O_2(g) \rightarrow 6\,CO_2(g) + 6\,H_2O(l)$$

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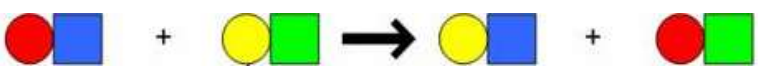
REACTION TYPES

A **single replacement** reaction (also called single displacement) involves a reaction between a compound and an element so that the element replaces an element of the same type in the compound. The result is a new compound and a new element.

A **double replacement** reaction is a chemical reaction between two compounds that trade cations (or anions) with one another.



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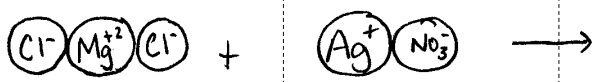
EXAMPLE

A solution of magnesium chloride reacts with a solution of silver nitrate and a reaction occurs.

Words			
Formulas			
Pictures 			
Balanced Equation			

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