**Synthesis Reaction**

* In a synthesis reaction, \_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_ substances combine to form one new substance.

Na + Cl → NaCl

**Decomposition Reaction**

* This is a reaction where many substances will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into simpler substances when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is supplied. This energy may come from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Pb(OH)2(cr) → PbO(cr) + H2O(g)

**Single Displacement Reactions**

* In this type of reaction, one element \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (replaces) another element in a compound. Example:

Cl2(g) + 2KBr(aq) → 2KCl(aq) + Br2(l)

* Chlorine displaces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from potassium bromide .

**Double Displacement Reaction**

* Double Replacement Reaction occurs when the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ portions of two compounds are interchanged. Example:

PbCl2(cr) + Li2SO4(aq) → PbSO4(cr) + 2LiCl(aq)

* In this reaction the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ exchanged places.

**Combustion**

* Almost all organic compound and some inorganic compounds will \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in air. Many will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quite readily and are considered \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The general form for combustion reactions is:

hydrocarbon + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ → \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CH4 + 202 → CO2 + 2H20