# General Formula

**Single Replacement (displacement):**

$A + BC \rightarrow B + AC$ *OR*

$A + BC \rightarrow C + BA$

**Double Replacement (displacement):**

$AB + CD \rightarrow AD + CB$

Nov 14-11:42 AM

# Check for Understanding:

Balance and determine the type of reaction.

DR ___ NaBr + ___ $Ca(OH)_2$ → ___ $CaBr_2$ + ___ NaOH
comp comp

DR ___ HBr + ___ $Al(OH)_3$ → ___ $H_2O$ + ___ $AlBr_3$
comp comp

SR ___ Mg + ___ $Fe_2O_3$ → ___ Fe + ___ MgO
single comp

Nov 14-11:43 AM

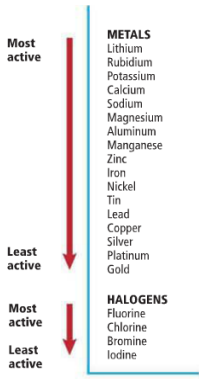
# Predicting Products:

**Single Replacement**

-- you need to check the activity series

-- the reaction can happen ONLY if the bonded element is lower on the list than the single element

-- if the lone element is higher on the list, it must switch the element that has the same type of charge (positive or negative)




Nov 15-10:24 AM

# Single Replacement Example

$2Li + CaSO_4 \rightarrow Ca + Li_2SO_4$

Nov 15-10:24 AM

# Predicting Products:

**Double Replacement**

-- you do NOT need to look at the activity series

-- the elements with the same type of charge will switch (positive or negative)

Nov 15-10:24 AM

# Double Replacement Example

$Li_2CO_3 + CaSO_4 \longrightarrow CaCO_3 + Li_2SO_4$

Nov 15-10:24 AM

# CHECK FOR UNDERSTANDING

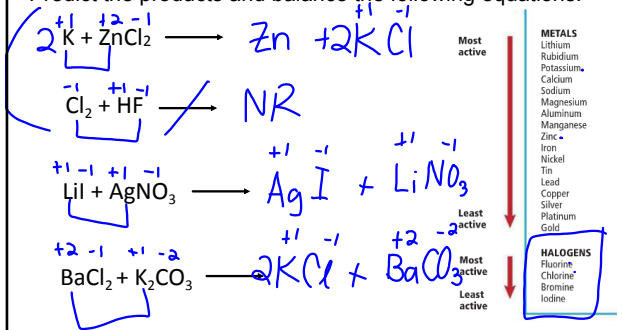
Predict the products and balance the following equations:

$2K + ZnCl_2 \longrightarrow Zn + 2KCl$

$Cl_2 + HF \longrightarrow NR$

$LiI + AgNO_3 \longrightarrow AgI + LiNO_3$

$BaCl_2 + K_2CO_3 \longrightarrow 2KCl + BaCO_3$




Nov 15-10:25 AM