

# Predicting Products: Double-Replacement Reactions

Occur only if they produce one of the following:

- i. a precipitate (s)
- ii. water (H<sub>2</sub>O)
- iii. a gas (g)

**Check solubility table for potential products: if both are aq, then NO RXN!**

# Double-Replacement Reactions Practice

Predict the products and balance:

1.  $\text{CuBr}_2(\text{aq}) + \text{AlCl}_3(\text{aq}) \rightarrow$
2.  $\text{AgNO}_3(\text{aq}) + \text{K}_3\text{PO}_4(\text{aq}) \rightarrow$
3.  $\text{Ca}(\text{OH})_2(\text{aq}) + \text{HCl}(\text{aq}) \rightarrow$
4.  $\text{Ca}(\text{NO}_3)_2(\text{aq}) + \text{HCl}(\text{aq}) \rightarrow$
5.  $\text{MgBr}_2(\text{aq}) + \text{KOH}(\text{aq}) \rightarrow$

**To be  
completed and  
balanced in  
class!**

# Predicting Products: Single-Replacement Reactions

Occur only if the isolated element is “more active” than the element in the compound.

\*When one element is able to replace another element in a compound, that element is said to be “more active.”

**Check activity series: if isolated element is less active, then NO RXN!**

# Predicting Products: Single-Replacement Practice

Predict the products and balance:



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From the data below, **determine the activity series** for the following five elements:

A, B, C, H, and Sr

<b><u>Reactants</u></b>	<b><u>Observations</u></b>
<b>C + H<sub>2</sub>SO<sub>4</sub></b>	<b>No reaction</b>
<b>A + HNO<sub>3</sub></b>	<b>Bubbles form</b>
<b>B + ASO<sub>4</sub></b>	<b>Dark substance forms</b>
<b>B + H<sub>2</sub>SO<sub>4</sub></b>	<b>Bubbles form</b>
<b>B + SrCl<sub>2</sub></b>	<b>No reaction</b>

**More  
Active**

**Less  
Active**

**To be  
completed in  
class!**

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Most Active

Least Active