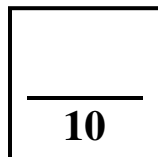


## Science 9-Chemistry

### Activity 3D—Chemical Reactions and Formulas



Name _____	
Due Date _____	
Show Me <input type="checkbox"/>	Hand In <input type="checkbox"/>
<i>Correct and Hand In Again By</i> _____	

**Purpose:** To observe some chemical reactions and to practice writing chemical formulas

**Procedure:** Go to the different stations around the lab. At each station, follow the procedure given and do the work given on this sheet. When you are finished at one station, go on to the next one until they are all completed.

#### **Station 1 – Iron (III) Chloride and potassium hydroxide reaction.**

Instructions:

- The reactants in this reaction are iron (III) chloride and potassium hydroxide

Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

Atom or group name	Iron (III)	Chloride
Atom or group formula (with combining capacity)		
<b>Final Formula</b>		

Atom or group name	Potassium	Hydroxide
Atom or group formula (with combining capacity)		
<b>Final Formula</b>		

2. PUT ON YOUR GOGGLES! Put about 2 cm of the iron (III) chloride solution in one test-tube. Put about 2 cm of potassium hydroxide solution in another test tube. Pour one test tube into the other and observe the results here: Rinse out the test-tubes and take them to the next station.

**Observations:** \_\_\_\_\_

\_\_\_\_\_

3. The products of this reaction are iron (III) hydroxide and potassium chloride. Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

Atom or group name	Iron (III)	Hydroxide
Atom or group formula (with combining capacity)		
<b>Final Formula</b>		

Atom or group name	Potassium	Chloride
Atom or group formula (with combining capacity)		
<b>Final Formula</b>		

**Station 2 – Silver Nitrate and Sodium Chromate reaction.**

Instructions:

- The reactants in this reaction are silver nitrate and sodium chromate

Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

Atom or group name	Silver	Nitrate
Atom or group formula (with combining capacity)		
Final Formula		

Atom or group name	Sodium	Chromate
Atom or group formula (with combining capacity)		
Final Formula		

- PUT ON YOUR GOGGLES! Put about 2 cm of the silver nitrate solution in one test-tube. Put about 2 cm of sodium chromate solution in another test tube. Pour one test tube into the other and observe the results here: Rinse out the test-tubes and take them to the next station.:

**Observations:** \_\_\_\_\_

\_\_\_\_\_

3. The products of this reaction are silver chromate and sodium nitrate. Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Silver</b>	<b>Chromate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Sodium</b>	<b>Nitrate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

### **Station 3** – Copper (II) Chloride and Sodium Carbonate reaction.

Instructions:

1. The reactants in this reaction are Copper (II) chloride and sodium carbonate

Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Copper (II)</b>	<b>Chloride</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Sodium</b>	<b>Carbonate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

2. PUT ON YOUR GOGGLES! Put about 2 cm of the Copper (II) chloride solution in one test-tube. Put about 2 cm of sodium carbonate solution in another test tube. Pour one test tube into the other and observe the results here: Rinse out the test-tubes and take them to the next station.

**Observations:** \_\_\_\_\_

\_\_\_\_\_

3. The products of this reaction are Copper (II) Carbonate and Sodium Chloride. Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Copper (II)</b>	<b>Carbonate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Sodium</b>	<b>Chloride</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

**Station 4** – Nickel (II) Chloride and Potassium Phosphate reaction.

Instructions:

- The reactants in this reaction are Nickel (II) chloride and potassium phosphate

Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Nickel (II)</b>	<b>Chloride</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Potassium</b>	<b>Phosphate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

- PUT ON YOUR GOGGLES! Put about 2 cm of the Nickel (II) chloride solution in one test-tube. Put about 2 cm of potassium phosphate solution in another test tube. Pour one test tube into the other and observe the results here: Rinse out the test-tubes and take them to the next station.

**Observations:** \_\_\_\_\_

\_\_\_\_\_

3. The products of this reaction are Nickel (II) Phosphate and Potassium Chloride. Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Nickel (II)</b>	<b>Phosphate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Potassium</b>	<b>Chloride</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

**Station 5** – Silver Nitrate and Sodium Iodide reaction.

Instructions:

- The reactants in this reaction are silver nitrate and sodium iodide

Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

<b>Atom or group name</b>	<b>Silver</b>	<b>Nitrate</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

<b>Atom or group name</b>	<b>Sodium</b>	<b>Iodide</b>
<b>Atom or group formula (with combining capacity)</b>		
<b>Final Formula</b>		

- PUT ON YOUR GOGGLES! Put about 2 cm of the Silver Nitrate solution in one test-tube. Put about 2 cm of Sodium Iodide solution in another test tube. Pour one test tube into the other and observe the results here: Rinse out the test-tubes and take them to the next station.

**Observations:** \_\_\_\_\_

\_\_\_\_\_



3. The products of this reaction are Silver Iodide and Sodium Nitrate.  
Look up the combining capacities of these, write the atoms or groups (with combining capacity on the top right) in the following boxes and work out the correct formula for each reactant:

Atom or group name	Silver	Iodide
Atom or group formula (with combining capacity)		
Final Formula		

Atom or group name	Sodium	Nitrate
Atom or group formula (with combining capacity)		
Final Formula		