

# Making an Ionic Compound

Name: \_\_\_\_\_

Block: \_\_\_\_\_

Date: \_\_\_\_\_

<b>Experimental Data</b>	
	<b>Mass in grams</b> <i>(Be SURE to measure with the correct number of decimal places)</i>
Mass of empty crucible	
Mass of crucible + magnesium BEFORE heating	
Mass of magnesium ribbon by itself	
Mass of crucible + magnesium AFTER reaction (crucible plus ash)	
Mass of the product by itself (Subtract the mass of the crucible.)	<i>Note: If your mass of the product is less than the mass of magnesium by itself, start over.</i>
Describe the contents of the crucible after the magnesium has burned. Be sure to note COLOR(s) of the compound(s). Look very, very carefully. You should see TWO different colors.	
Is the burning magnesium an endothermic or an exothermic reaction? How do you know when an exothermic or endothermic reaction occurs? What characteristics do you look for? (You may need to google what endothermic and exothermic mean.)	
Does the magnesium compound solution conduct electricity when it is dissolved in water?	

## Analysis:

1. Write the symbol and charge of the magnesium atom.

2. Write the symbol and charge of a magnesium ion.

3. Write the symbol and charge of an oxygen atom.

4. Write the symbol and charge of an oxygen ion.

5. When magnesium reacts with oxygen, magnesium oxide forms. Write the formula (be sure to include charges on ions).

6. When magnesium reacts with nitrogen, magnesium nitride forms. Write the formula (be sure to include charges on ions).

7. The product formed from magnesium and oxygen is WHITE and the product formed from magnesium and nitrogen is YELLOW. From your observations, which compound makes up MOST of the product?

8. Is the reaction between magnesium metal and oxygen endothermic or exothermic? How do you know? What observations did you see that tells you that it is an exo/endothermic reaction? Be specific.

9. Did the solution of magnesium oxide/magnesium nitride in water conduct electricity? WHY do you think the compound conducted electricity?

10. Based on the results of this experiment, what can you say about the conductivity of ionic compounds dissolved in water? Write a complete sentence and use nouns that make sense. Would an ionic compound NOT dissolved in water conduct electricity? WHY or why not?