Name: _____ Date: _____
Lab Partner: _____ Period: _____

BURNING MAGNESIUM LAB

ABSTRACT: Research on the law of conservation of mass/matter. Write down 5-6 sentences about it.

Introduction:

When Magnesium burns it combines with Oxygen in the air to form Magnesium oxide. This reaction will be used to help explain several theories about the atom.

Purpose:

1. Demonstrate the law of conservation of mass.

Materials:

ring stand	iron ring	clay triangle
bunsen burner	crucible & lid	crucible tongs
ceramic/wire gauze	35cm Magnesium	

- **Before you begin, read the introduction and write down your hypothesis, whether you think the product will weigh less, more or the same as the magnesium you start with.**

1. Completely clean and dry a crucible and lid with soap and water. Dry thoroughly with a paper towel.
2. Hold the clean crucible and lid in an open flame for about 2 minutes to dry.
3. Allow the crucible and lid to **COOL Completely** (5 min.)
4. Find the mass of the crucible & lid. Record mass to 0.00g
5. Cut a 35cm strip of Magnesium into small pieces (~ 1cm). Place these pieces in the crucible.
6. Find the mass of the crucible & lid & Magnesium. Record mass to 0.00g
7. Calculate the mass of Magnesium.
8. Adjust the flame of a burner to blue, so you can see the inner cone. **Gently** heat the crucible, slightly tilted, with the lid off for 1-2 minutes.
9. When you see "sparks," adjust the flame so the crucible is in the hottest part and gently use a scoop to break up and mix the Magnesium. Place the lid on the tilted crucible.
10. Heat until there are no more sparks, frequently lifting off the lid, scraping the Magnesium and peaking to record your **observations**. **DO NOT LOOK DIRECTLY AT THE BURNING MAGNESIUM!**
11. Continue heating until there are no more sparks.

12.COOL COMPLETELY!! Find the mass of the Crucible & lid & contents.

Observations:

1. Product mass prediction: _____
2. Magnesium ribbon: _____
_____
3. Reaction observations: _____
_____
4. Product observations: _____
_____

Data Table:

Object or Substance	Mass (g)
Crucible + Lid	
Crucible + Lid + Magnesium	
Magnesium	
Crucible + Lid + Product	
Product (Magnesium Oxide)	
Oxygen	

Analysis:

1. List, in complete sentences, 3 possible sources of error.

_____

_____

_____

2. Did the mass of your product match what you predicted? Explain why or why not in complete sentences.

Discussion of Errors:

Conclusion: