

## **Bell Ringer #6:**

Socratic Room Name:  
LEVEL70WARRIOR

# **Physical Changes vs. Chemical Changes**

**Please hand in you  
Scientific Notation  
Homework**

<http://drmoad.weebly.com/>

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## **Agenda**

**Bell Ringer**  
**Lab Reports: Analysis Questions**  
**Lab Reports: Graph & Conclusion**  
**Scientific Notation**  
**Magnesium Demo**  
**Start Aluminium Foil Thickness Lab**

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## **Analysis Questions:**

- 1. Graph your data. Put your temperature data on the Y axis (vertical) and time on the X axis (horizontal). The graph should have a descriptive title, labeled axes, and take up a whole page.**

## **Analysis Questions:**

- 2. List five qualitative observations from the lab**

## **Analysis Questions:**

**3. List three quantitative observations from the lab**

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## **Analysis Questions:**

**4. How do you know a chemical reaction occurred?**

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## Chemical Transformations

- A **chemical change** is a change that produces matter with a different composition than the original matter.
- Clues for a Chemical Change/Reaction:
  - Color change
  - Temperature change
  - Gas is produced
  - Precipitate is formed

<http://examples.yourdictionary.com/examples-of-chemical-properties.html>  
[https://en.wikipedia.org/wiki/Chemical\\_property](https://en.wikipedia.org/wiki/Chemical_property)

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### Analysis Questions:

5. When was the chemical reaction over?  
How did you know the reactions was over?

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## **Analysis Questions:**

**6. Place a star (\*) on the graph when the reaction ended.**

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## **Board Meeting:**

**Draw a line down the center of your board.**

**Left Side:** Write your conclusion. Include your reasoning for which type of change occurred in the lab and back it up with evidence.

**Right Side:** Crudely draw your graph.

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## Cupric Chloride Lab:

Please hand in your completed lab report.

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## Convert to Scientific Notation

500,000

$$5 \times 10^5$$

Move LEFT  
positive exponent

$$5.0 \times 10^5$$

It's a clear way to  
indicate the number  
of significant figures

0.0009

$$9 \times 10^{-4}$$

Move RIGHT  
negative exponent

6023000000000000000000000000

How would you represent this  
number in scientific notation?

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[https://en.wikipedia.org/wiki/Scientific\\_notation](https://en.wikipedia.org/wiki/Scientific_notation)

<https://www.mathsisfun.com/numbers/scientific-notation.html>

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## Practice Problem

Convert:

3,500 into scientific notation

## Practice Problem

Convert:

0.0000345 into scientific notation

## Practice Problem

Convert:

$16.8 \times 10^4$  to a decimal number

## Practice Problem

Convert:

$7.14 \times 10^{-3}$  to a decimal number



## Magnesium Demonstration

- **Wear Safety Goggles**
- **Observe the Magnesium initially**
- **Discuss the Bunsen Burner**
- **Observe the Magnesium burn**
- **Observe the Remaining Material**

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## New Lab: Aluminium Foil Thickness

**Great Value Brand Aluminium Foil  
Thickness = 0.00090 in**

$$1 \text{ in} = 2.54 \text{ cm}$$

**Convert to cm**

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