

## **Bell Ringer #5:**

Socratic Room Name:  
**LEVEL70WARRIOR**

# **Conversion Problems**

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

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# **Agenda**

**Bell Ringer**  
**New Binder Procedure**  
**Scientific Notation**  
**Chemical & Physical Changes**  
**Lab**  
**Homework**

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## Return Binders:

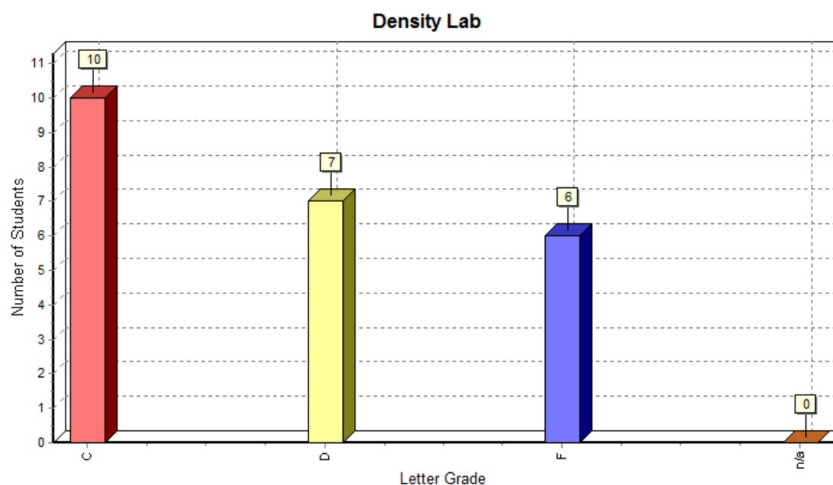
Please put a white label on your binder and write your name on it.

Please remove 1/2 of the graph paper and put it in you locker.

New Procedure: Please hand in future labs and notes in a pocket folder.

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## Comments on Density Lab



**No A's or B's!!!**

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## Practice Problem

Convert:

3,500 in to km

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## Practice Problem

Convert:

3,500 in to km

$$\frac{3500 \text{ in}}{1} \times \frac{2.54 \text{ cm}}{1 \text{ in}} \times \frac{1 \text{ m}}{100 \text{ cm}} \times \frac{1 \text{ km}}{1000 \text{ m}} = 0.0889 \text{ km}$$

<https://www.google.com/search?q=3500+in+in+km>

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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

602300000000000000000000

How would you represent this  
number in scientific notation?

[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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## Physical Transformations

- During a **physical change**, some properties of a material change, but the composition of a material does not change.
- **Melting** is a physical change.
- Certain words are clues for a physical change such as break, split, grind, cut, and crush

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## Physical Properties

- They are used to observe and describe matter.
- They can be observed or measured without changing the composition of matter.
- They include: appearance, texture, color, odor, melting point, boiling point, density, solubility, polarity, and many others.

<http://examples.yourdictionary.com/examples-of-physical-properties.html>

[https://en.wikipedia.org/wiki/Physical\\_property](https://en.wikipedia.org/wiki/Physical_property)

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## Physical Properties

- An **extensive** property is a property that depends on the amount of matter in a sample. (e.g. mass, volume)
- An **intensive** property is a property that depends on the type of matter in a sample, not the amount of matter. (e.g. temperature, color, melting point)

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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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## Observations of Cupric Chloride

- WEAR SAFETY GLASSES AT ALL TIMES.
  - Do not touch the chemicals
  - Loosely crumple up the aluminum foil.
  - Leave beaker on your table at the end of the lab session, Dr. Moad will dispose of the chemicals
  - Wash your hands when you are finished with the lab.
- 
- Do TITLE, INTRODUCTION, and PROCEDURE on your own time.
  - Start by reading lab and making your data tables
  - Lab Report Due Thursday

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# Scientific Notation Homework