

**Bell Ringer #7:**

**Socratic Room Name:  
LEVEL70WARRIOR**

## **Conversion/Density**

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

# Agenda

**Bell Ringer**

**Finish Aluminium Lab**

**Notes: States of Matter**

**Test Outline**

**Exit Ticket**

# Finish Aluminium Foil Thickness Lab

Data Table

Foil Piece	Length (cm)	Width (cm)	Area (cm <sup>2</sup> )	Mass (g)	Density (g/cm <sup>3</sup> )	Volume (cm <sup>3</sup> )	Thickness (cm)
Foil #1					2.6989		
Foil #2					2.6989		
Foil #3					2.6989		

## **Analysis Questions:**

**1. Calculate the area for each piece of foil. Show all calculation.  $\text{Area} = \text{Length} \times \text{Width}$ . Fill in the table appropriately.**

## **Analysis Questions:**

**2. Calculate the volume for each piece of foil.  
Show all calculations.  $\text{Volume} = \text{Mass}/\text{Density}$ .  
Fill in the table appropriately.**

### **Analysis Questions:**

**3. Calculate the thickness of each piece of foil.  
Show all calculations. Thickness = Volume/Area.  
Fill in the table appropriately.**

## **Analysis Questions:**

**4. Calculate your percent error for this experiment and determine at least three sources of possible error.**

$$\text{Percent Error} = \frac{(\text{experimental value} - \text{accepted value})}{\text{accepted value}} \times 100\%$$

## Notes: States of Matter

### Kinetic Theory

- The word kinetic refers to motion
- The energy an object has because of its motion is called **kinetic energy**
- According to the **kinetic theory**, all matter consists of tiny particles that are in constant motion.
- The particles in a gas are usually molecules or atoms.



## **Notes: States of Matter**

- **Three states of matter are solid, liquid and gas.**

## Notes: States of Matter

### Solids

- A **solid** is a form of matter that has a definite shape and volume.
- As a result, solids are almost incompressible; that is, it is difficult to squeeze a solid into a smaller volume.
- In addition, solids expand only slightly when heated.

## Notes: States of Matter

### Liquids

- The volume of a liquid is fixed or constant.
- Thus, a **liquid** is a form of matter that has an indefinite shape, flows, and yet has a fixed volume.

## Notes: States of Matter

### Gases

- Like a liquid, a gas takes the shape of its container.
- But, unlike a liquid, a gas can expand to fill any volume.
- A **gas** is a form of matter that takes both the shape and volume of its container.



## **PhET Interactive Simulations: States of Matter**

- **Students will observe a computer simulation of the three states of matter.**

<https://phet.colorado.edu/en/simulations/category/chemistry>

**Board Meeting:**

**Draw two lines and divide your board into 4 sections.**

**Three Sections: Draw the three states of matter.**

**Fourth Section: Draw the shape and volume of just one state of matter (your choice).**

## Test Outline: Unit 1 Test

The following topics will be covered on the test:

- **Conversions**
- **Density**
- **Lab equipment**
- **Quantitative & Qualitative Observations**
- **Scientific notation**
- **Clues for chemical changes**
- **States of matter**

**Exit Ticket #4:**

**Socratic Room Name:  
LEVEL70WARRIOR**

## **Scientific Notation**



## **New Lab: Aluminium Foil Thickness**

**Great Value Brand Aluminium Foil**

**Thickness = 0.00090 in**

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

**Convert to cm**