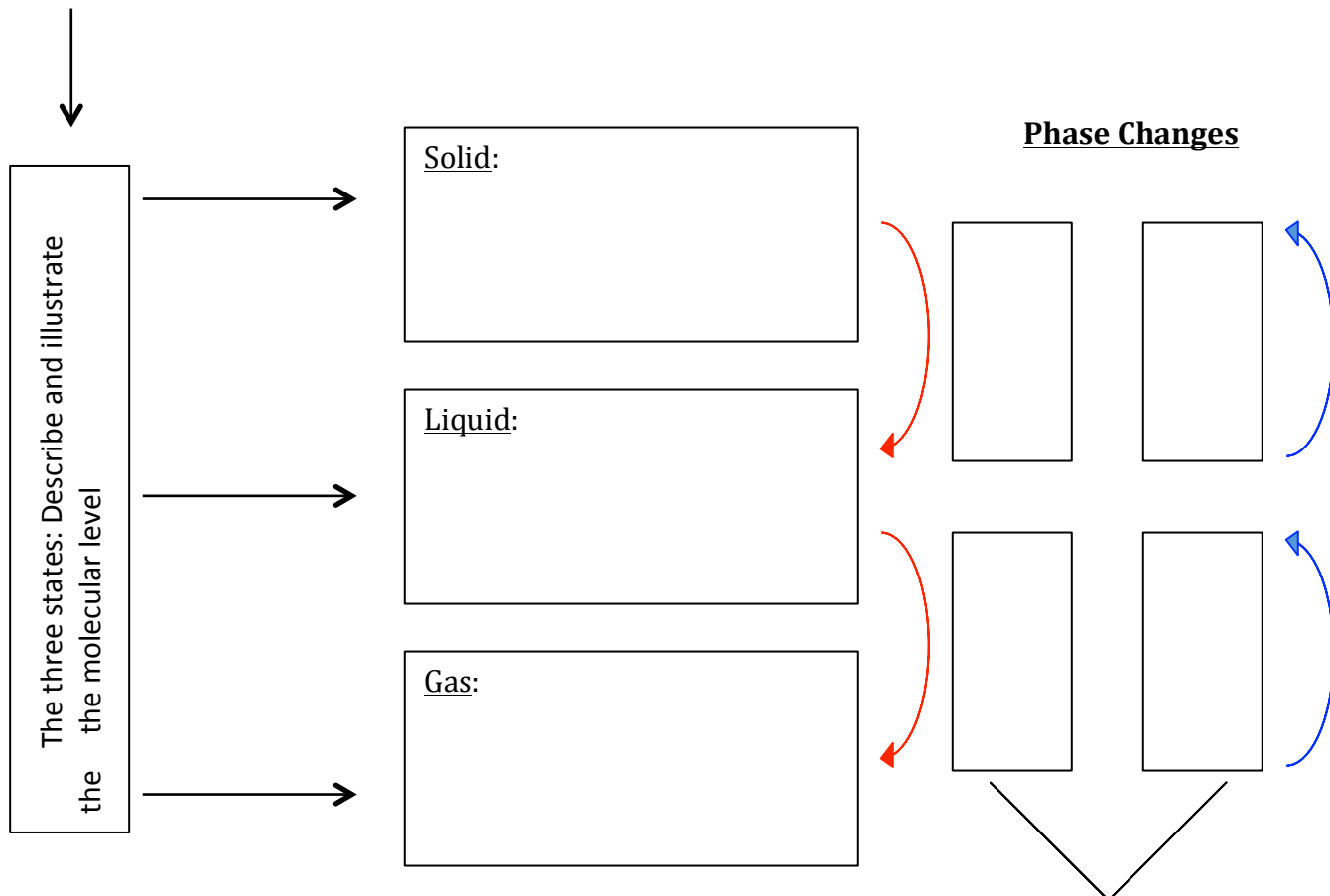


Name _____

Assessment Review Practice

Matter	→	Defined as: _____ _____ and takes up _____.
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Description of the phase changes: Melting Point = _____ Point _____ = Condensation Deposition = _____

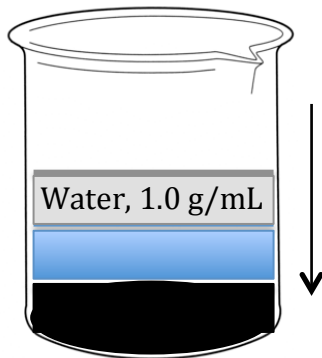
Volume – Three Methods to determining the Volume of an object or substance:

	<i>Liquid</i>	<i>Irregular Shape Object</i>	<i>Cube</i>
Explanation or Description of the Method Used			
Image/Illustration of the method.			

Density - Definitions, Examples, and Practice Calculations:

Definition - _____

Example:



Describe the densities of the liquids in the beaker to the right. Be sure to discuss the amount of matter within the given volume of the liquid. _____

Practice Problems:

1. A graduated cylinder has a mass of 50 g when empty. When 30 mL of water is added, the graduated cylinder has a mass of 120 g. If a rock is added to the graduated cylinder, the water level rises to 75 mL and the total mass is now 250 g. What is the density of the rock?

2. A student performs an experiment with three unknown fluids and obtains the following measurements:

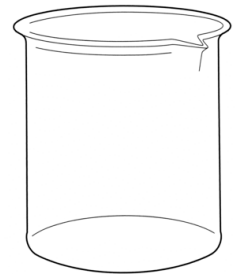
Fluid A: $m = 2060$ g, $V = 2000$ mL (color red)

Fluid B: $m = 672$ g, $V = 850$ mL (color blue)

Fluid C: $m = 990$ g, $V = 1100$ mL (color yellow)

Draw how the fluids would be layered if they were combined in a beaker.

Density calculations:



3. A solid magnesium flare has a mass of 1300 g and a volume of 743 cm^3 . What is the density of the magnesium?

4. Use your density calculation skills to find the identity of the following mystery objects.

Table of Densities			
Solids	Density g/cm ³	Solids	Density g/cm ³
Marble	2.56	Copper	8.92
Quartz	2.64	Gold	19.32
Diamond	3.52	Platinum	21.4



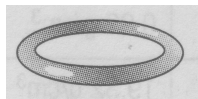
While digging in the backyard, you find an old coin. Its mass is 26.76 g and its volume is 3 cm³.



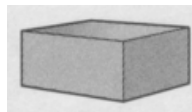
You think you have found a diamond. Its mass is 5.28 g and its volume is 2 cm³.

What is the coin made of? _____

What did you find? _____



You find a ring with a mass of 107 g. You fill a graduated cylinder up with 10 mL of water and put the ring into the cylinder. The water rises up to the 15 mL mark.



There is a block on your desk that acts as a paperweight. Its measurements are 3 cm by 4 cm by 6 cm. The block has a mass of 184.32 g.

What is the ring made of? _____

What is the block made of? _____

Physical and Chemical Properties:

Physical Properties - _____

Chemical Properties - _____

Physical Property Characteristics		Chemical Property Characteristics	
Example	Image/Drawing	Example	Image/Drawing
Color		Flammability (burns)	
Melting Freezing Boiling Condensation Evaporation		Reactivity (ability to combine or react)	
Density		Rusting	
Solubility (dissolves in water)		Gas Produced/Fizzing	
Hardness/Texture		Tarnishing	
Luster		Color/Odor Change	
State of Matter/Phase Change		Precipitate Forms (a solid)	

Decide whether the following is an example of a physical or chemical change. Provide evidence for your decision.

1. A copper pot turned green when exposed to the environment. _____

2. Diamonds are a very hard substance that can cut through glass. _____

3. Sodium reacts very easily with other elements. _____

4. Barium melts at 725°C . _____

5. Iron reacts with oxygen and forms rust. _____

6. The boiling point of water is 100°C . _____

7. Acid in tomato sauce can corrode aluminum foil. _____

8. A bar of lead is more easily bent than is a bar of aluminum of the same size. _____

Read each of the following and describe what state of matter or phase of matter the molecules are in.

1. The molecules of a substance are moving rapidly in a container. The molecules do not interact with each other. If the container is opened, the molecules will escape from the container. In what phase of matter are the molecules in the container? _____
2. At the same temperature and pressure, which state of matter has the highest density? _____
3. What must be added to water in order to change state from liquid to a gas? _____

4. When a substance such as ice melts, its temperature increases. Describe what happens to the arrangement of the water molecules as the temperature increases. _____
- _____

Complete the following Venn diagram on Physical and Chemical Properties of Matter:

