**Kinetic Molecular Theory Unit Review**

Make a comparison for each situation:

-Two objects where one object has larger mass and volume.

-Two objects where one object has a larger mass, but smaller volume.

**States of Matter**

Solid – What determines volume and shape for solids? Describe how the particles in a solid are moving.

Liquid – What determines volume and shape for liquids? Describe how the particles in a liquid are moving.

Gas – What determines volume and shape for gas? Describe how the particles in a gas are moving.

What are the four main points of Kinetic Molecular Theory.












What is Kinetic Energy? What would be a way to give something more kinetic energy?

What is the difference between thermal energy and temperature?

A hot pot touches a cool table. What direction does the heat flow?

When an object is given more thermal energy it will (**expand**/**contract**). When an object has thermal energy taken away it will (**expand**/**contract**).

**Changes of State**

How do you change the physical state of a material?(Ex.Solid to liquid,gas to solid)

Make a triangle with the three states of matter. Using arrows, write the words that describe the change of state between the three.

A block of aluminum occupies a volume of 15.0 mL and weighs 40.5 g. What is its density?

Calculate the density of sulfuric acid if 35.4 mL of the acid weighs 65.14 g.

Explain how the particles of gas in a container would increase the pressure if I were to heat them up. (Use ideas from KMT, use words like force, collision, energy, pressure)

What happens when the gas inside a container has greater pressure than the gas outside the container?

What happens when the gas inside a container has less pressure than the gas outside the container?

Gas in a container is exerting 400N of force over the surface area of 0.14m2. What is the pressure in the container?

Sally is swimming where water pressure is has 8N of force pushing on her. Her area is 0.75m2. What is the pressure on her?

Which state(s) of matter are compressible?

Which state(s) of matter are incompressible?

An object may appear to be compressed, but its volume has not decreased. What happened to the object instead of compression?

What two factors determine a fluid’s viscosity? Explain how they determine the viscosity of the fluid.

When you heat a liquid, what happens to the viscosity? What happens when you heat a gas?

When you cool a liquid, what happens to the viscosity? What happens when you cool a gas?

An adhesive fluid will stick strongly to (**itself**/**other** **objects**).

A cohesive fluid will stick strongly to (**itself**/**other** **objects**).

Surface Tension is a property of (**adhesion**/**cohesion**). It makes it appear like the liquid has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Review your Vocab!**

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