Matter and The Kinetic Molecular Theory

* Matter is any physical object that has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mass is the quantity of matter that a substance contains measured in \_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Volume is the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ taken up by a substance measured in millilitres (mL), litres (L) or centimeters cubed (cm3)

Which of the following are matter? (circle the correct answers)

Air heat

Metal water

Light

What are the three states of matter?

1.\_\_\_\_\_\_\_\_\_\_\_\_

2.\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_

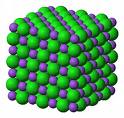
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the state of matter that has a definite shape and volume (for example, a bowling ball).
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the state of matter that has a definite volume, but its shape is determined by its surroundings (for example, water in a beaker).
* \_\_\_\_\_\_\_\_\_\_\_\_\_ is the state of matter that has its volume and shape determined by its surroundings (for example, helium in a balloon).

|  |  |  |
| --- | --- | --- |
| State of matter | Volume | Shape |
| Solid |  |  |
| liquid |  |  |
| gas |  |  |

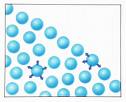
What is the smallest building block of all Matter?

**How do atoms move inside solids, liquids and gases?**

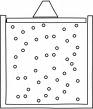
In **solids** the atoms are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



In **liquids** the atoms are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_past each other



In **gases** the atoms are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Most of the volume of a gas is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The particles move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



* Kinetic energy is the energy of motion. All particles in every solid, liquid, and gas are always moving, so they have kinetic energy.
* A model in science is a way to think about and interpret natural events and objects.
* A theory provides a scientific explanation based on the results of experimentation
* The kinetic molecular theory explains what happens to particles in a solid liquid or gas when energy is added or removed

**KINETIC MOLECULAR THEORY**

1. All matter is made up of very small particles called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. There is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between particles
3. Particles are always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_makes particles move

Assignment:

Textbook Pg 259 #1-4