**Properties of Matter Notes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_**

**What are the States of Matter?**

**Use Figure 1.2 to complete the chart.**

|  |  |  |  |
| --- | --- | --- | --- |
| **State of Matter** | **Solid** | **Liquid** | **Gas** |
| **Properties** |  |  |  |
| **Picture of**  **Molecules** |  |  |  |
| **Examples** |  |  |  |

**Solids**

A solid is matter that has \_\_\_\_\_\_\_\_\_ volume and a \_\_\_\_\_\_\_\_\_ shape.

**What is the difference between crystalline solids and amorphous solids?**

**Liquids**

A liquid is matter that has a \_\_\_\_\_\_\_\_\_\_\_\_\_ volume but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape. Instead, a liquid takes the shape of its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Surface Tension pulls particles at the top of a liquid toward other \_\_\_\_\_\_\_\_\_\_\_\_\_ particles.

Viscosity is a liquid’s resistance to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Thick liquids are more viscous than \_\_\_\_\_\_\_\_\_\_\_\_ liquids.

**What is an example of surface tension?**

**Name two liquids and compare their viscosity.**

**Gases**

A gas is matter that has neither \_\_\_\_\_\_\_\_\_\_\_\_ volume nor a \_\_\_\_\_\_\_\_\_\_\_\_ shape. Instead, a gas takes both the volume and shape of its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Plasmas**

Plasma is a state of matter that resembles a \_\_\_\_\_\_\_\_ but has certain properties that a gas does not have.

**Compare and Contrast gases and plasmas.**

**Energy**

Energy is defined as the ability to cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The energy of moving matter is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.

The theory that all matter consists of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ particles is called the Kinetic Theory of Matter.

**Energy and States of Matter**

Particles of matter of the same substance are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to one another. The force of attraction tends to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The particles need a lot of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to overcome this force of attraction.

|  |  |
| --- | --- |
| **Solids** | Particles don’t have enough \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to over come the force of attractions between them. Particles are packed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and cannot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around. |
| **Liquid** | Particles have enough \_\_\_\_\_\_\_\_\_\_\_\_\_ energy to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ overcome the force of attraction between them. They can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each other but not pull \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| **Gases** | Particles have a lot of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy. They can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ overcome the force of attraction between them. |