**Properties and States of Matter Study Guide**

**Vocabulary**

**matter: stuff that everything is made of**

**physical property: a characteristic of an item**

**liquid: can be felt with your hand; takes the shape of the**

**container**

**solid: An object that has a definite shape**

**gas: an object that fills up a container and is all around us**

**mass: how much matter (weight) the object has**

**observable: items that can be seen, felt, tasted, or smelled**

**Vocabulary in Context**

**A solid has a shape of its own. The matter in a solid is tightly packed. The particles are close together.**

**A liquid takes the shape of its container (has no shape of its own). The particles in a liquid tend to be farther apart than in a solid (and can slide past each other). A liquid can pour.**

**A gas fills the shape of the container (has no shape of its own). The particles in a gas tend to be far apart and will bounce off each other.**

**Chocolate can be a solid (as in a chocolate bar) or a liquid (melted chocolate bar that has been heated). Both of these taste the same and are made of chocolate, but they are different because one is a solid and one is a liquid.**

**Objects can be observed and sorted in many ways, according to their physical properties. For example, items can be sorted into these categories: hard (rock, nail) or soft (cotton, sponge). Another way to sort these same items can be bumpy (sponge, rock) or smooth (nail, cotton).**

**Need to Know**

**A penny, ball, and Frisbee are round, but an envelope, calculator, and dice are not round.**

**A bowling ball and a playground ball can both have a smooth texture.**

**An ice cube and a marble are both solids.**

**A thermometer is the tool that would be most useful when sorting objects by temperature.**