Name _____ Class _____ Date _____

Skills Worksheet

Concept Review

Section: Matter and Energy

1. **Identify** each of the following as a gas, liquid, solid, or plasma.

_____ a. The particles are closely packed together.

_____ b. The particles are in a constant state of motion.

_____ c. The particles are locked in fixed positions.

_____ d. The particles are broken apart.

2. **Apply** the kinetic theory to describe the motion of particles in a homogeneous mixture of sugar and water as it is boiled.

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3. **Compare and contrast** the average kinetic energy of 0.5 L of coffee at 34°C, 0.5 L of coffee at 38°C, and 0.25 L of tea at 43°C.

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4. **Compare** the thermal energy of 0.5 L of coffee at 38°C and 0.25 L of coffee at 38°C.

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5. **Compare and contrast** the shape and volume of water as it changes state:

a. A 6 cm^3 piece of ice is placed in a beaker.

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b. The beaker is heated to more than 0°C and the ice melts in the beaker.

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c. The liquid water is heated to above 100°C and eventually evaporates.

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