**Hot Chocolate Semester Review**

1. **Metric Unit**

Hot chocolate is a liquid, circle the measurements below that are used for liquids. Also write what each abbreviation means next to the abbreviations.

**L** - Liters mm – Millimeters mL- Milliliters Km- Kilometers m- Meters cm- Centimeters

1. **Scientific Inquiry**

If I were to do an experiment with Hot Chocolate, where I wanted to find out whether the increase or decrease in temperature would change the speed of chocolate powder dissolving in water, what would be my independent variable, dependent variable and controlled variables.

Independent:\_\_\_\_\_\_ Temperature\_\_\_\_\_\_\_

Dependent: \_\_\_\_\_\_\_Time\_\_\_\_\_\_\_\_\_\_

Controlled Variables:\_\_\_\_\_ amount of water, amount of powder, same mug, etc.\_\_\_\_\_\_\_\_\_

1. **Structure of Matter**

When the coco powder is poured into the hot water it makes hot chocolate which is a \_\_\_\_Solution\_\_\_\_ ( definition: a mixture in which a solute is dissolved in a solvent)

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The chocolate chips are what state of matter? \_\_\_\_Solid\_\_\_\_\_\_\_\_\_\_\_\_\_\_

When they are added to the hot water they become what state of matter?\_\_\_\_\_liquid\_\_\_\_\_\_\_\_

1. **Periodic Table**

What elements can you think of that are used in hot chocolate? \_\_\_\_Hydrogen, Oxygen, (H2O = water)\_\_\_\_

1. **Energy Transformations**

When drinking hot chocolate you feel the heat when your hand touches the mug because of the thermal energy transfer of \_\_\_\_conduction\_\_\_\_\_\_\_ (conduction, convection, radiation)

Heat moves from \_\_\_\_warmer\_\_\_\_\_\_ areas to \_\_\_\_\_\_cooler\_\_\_ areas

1. **Force & Motion**

If the force of gravity on the mug is 3N, and the force I put on the mug as I move it up to drink is 30N, what it the total net force? Is this balance or unbalance? \_\_\_\_\_\_\_\_27N\_\_\_\_\_\_\_\_\_ \_\_\_\_unbalanced\_\_\_\_