Matter/Thermal Energy Science Flash Cards

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| FRONT OF CARD | BACK OF CARD |
| Matter | Anything that has mass (like a weight) and volume (takes up space)  Comes in 3 states: solid, liquid, gas |
| Conservation of matter (matter is conserved) | The amount of matter STAYS THE SAME even when its state, size, or shape changes.  Memorize kool-aid conservation of matter AFL paper-example |
| Name **2** examples of conservation of matter when an object’s STATE changes. | 1. The liquid juice and the frozen (solid) juice have the same amount of matter (mass). 2. If liquid water is boiled to make water vapor, the liquid and gas have the same amount of matter. |
| Name **2** examples of conservation of matter when an object’s SHAPE changes | 1. 7 connecting cubes in a straight line will have the same amount of matter as 7 connecting cubes formed into a T shape. 2. A clay ball will have the same amount of matter as the same clay flattened into a pancake or rolled out. |
| Name **2** examples of conservation of matter when an object’s SIZE changes | 1. If you have a plate of food, but you smash it all together, it will still have the same amount of matter. 2. If you have a glass of water and a dry sponge, the matter will be the same if the sponge soaks up some water but is still on the scale. |
| Describe what happens when baking soda is mixed with an acidic liquid in a cup. Does the weight change? | The weight of the cup, the liquid and baking soda all stay the same. The mass/weight stays the same, even when it has a change. It is conserved. |
| What happens to sugar or salt when it dissolves in a liquid and then the liquid evaporates? | The sugar or salt stays behind. The amount of original sugar or salt stays the same. |
| Which way does heat energy travel? | Heat energy travels FROM HOT TO COLD! Look at pages 28 and 29 in your binder! |
| Give **3** examples of heat energy transferring. | 1. If you put a pot of cold water on a hot burner, the heat from the burner will move to the cold water and make it boil. 2. If you put a cold object in a fire, the heat from the fire will heat up/melt the object. 3. If you go outside in the winter, your body is warmer than the cold air, so your body heat escapes from your head/hands/or any part of your body that isn’t covered. Hats, coats, and gloves slow down heat from leaving. |
| How does a thermometer work? | Mercury or alcohol is used and it expands (takes up more space) when it gets hotter or contracts (takes up less space) when it is cooler. |
| Temperature | How hot or cold something is; it is the measure of thermal energy |
| Give **3** examples of how temperature is measured? | 1. Use a thermometer 2. Using Fahrenheit or Celsius 3. Measured in degrees |
| Name **2** units that temperature are measured in. | 1. Fahrenheit 2. Celsius |
| Name **2** examples of conduction of thermal energy. | 1. Hot mug warmer transfers heat to liquid in mug. Liquid warms up and releases heat into the air above it. 2. Blow dryer heat heats up cold metal and makes it hot. |
| How do you measure thermal energy? | Temperature |
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