Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Temperature, Heat and Expansion (Chapter 21)

**Temperature**-The quantity that tells how hot or cold something is compared to a standard.

 -Indicates the average \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an object (due to \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the object



-depends on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ amount of \_\_\_\_\_\_\_\_\_ per \_\_\_\_\_\_\_\_\_\_\_\_\_\_, not the total

 Ex. A bucket of warm water has \_\_\_\_\_\_\_\_\_ internal energy than a cup of hot water

**Internal Energy**-The grand total of all energies inside a substance

 -depends on \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 -can be increased by tapping other \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 -\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ may increase internal energy by exerting a force to do mechanical \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Examples 1. Rub hands together for warmth

 2. Strike an iron surface with great force and red hot sparks are created.

**Specific Heat Capacity**- the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ required to raise one gram of a material by one \_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Examples 1. Why does a piece of watermelon stay cool for a longer time than sandwiches do when both are removed from a cooler on a hot day?

 2. Why is it that the climate in the desert is so hot during the day yet so cold at night?

**Thermal Expansion:-**

 Due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, most materials

\_\_\_\_\_\_\_\_\_\_\_\_\_ as temperature increases.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the exception. It contracts as it \_\_\_\_\_\_\_\_\_\_\_\_\_\_ until \_\_\_\_\_\_\_\_\_\_\_\_,

Then it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as it cools to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples: