

# 6<sup>th</sup> Grade Heat Notes

Objectives 6.01, 6.02, 6.06

## What is heat?

Transfer of energy from objects at a higher temperature to objects at a lower temperature.  
Thermal Energy

## What is conduction?

Moving heat energy between two objects that are touching. Conductors transfer heat energy easily.

## How is heat measured?

By temperature, Celsius or Fahrenheit.

## What is convection?

Transfer of heat energy by the movement of large numbers of particles in the same direction in a liquid or gas (movement in currents)

## What is radiation?

Heat energy that travels as electromagnetic waves, only the object being heated absorbs energy

## What are insulators?

Materials that transfer heat energy poorly.

## What is expansion?

### When does it happen?

When heat is added, Molecules speed up & push away from each other. It happens when molecules get Bigger because of heat

## What is contraction?

### When does it happen?

When heat energy is taken away, the molecules slow down. They move closer together because of the loss of heat.

## Describe what happens to molecules when they are heated?

The molecules move faster & Expand in some way.

## What's the difference between solids, liquids, & gases?

Solid: Molecules vibrate in one place  
Liquid: Molecules spin/move closely  
Gas: Molecules spin/move fast/far away

## Examples of Good Conductors:

All types of metal

## Examples of Good Insulators:

Wood, Plastic, Cotton