

1. See energy handout from week of 9/25.
2. Chemical \rightarrow kinetic (any bodily motion)
Electrical \rightarrow sound (plugging in a CD player)
Gravitational \rightarrow kinetic (dropping a pebble)
Nuclear \rightarrow thermal (fission reactor)
3. Energy cannot be created or destroyed. It is important to understand that all energy that we deal with has been transferred from some other source.
4. Models should be able to predict, should be testable, should have limitations, should explain phenomena, be based on data, etc. A scientific model has the previous characteristics. Some models have limits because of time or size or availability of data.
5. Conceptual, physical and mathematical.
6. Fahrenheit - we use in U.S. $32^{\circ} \rightarrow 212^{\circ}$ for freezing to boiling pt. of water.
Celsius - used EVERYWHERE else! $0^{\circ} \rightarrow 100^{\circ}$ also called centigrade (1/100).
Kelvin - used in some science when investigating and calculating with heat or energy $273 \rightarrow 373$. has the same size degree as Celsius.
We have so many because people are too lazy to change.
7. Absolute zero (0 Kelvin) is the coldest temperature possible. At absolute zero all motion stops.

8. Kinetic energy measures motion of a specific particle. Average kinetic energy is proportional to temperature in Kelvin and describes the motion of a sample.
9. See Reading jigsaw heat from week of 10/2
10. Heat is energy that moves from objects at a high temperature to objects at a lower temperature. Whereas, temperature is a measure of average kinetic energy.