

Heat: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

1. Define and explain examples of temperature, thermal energy and heat, and how each is measured.
2. Know the three temperature scales commonly used in this country, and what they are based on.
3. Define and explain examples of how heat is transferred in conduction, convection, and radiation .
4. Describe and explain how insulators and conductors behave and examples of each .
5. Explain all the ways that a vacuum bottle blocks the transfer of heat.
6. Understand how heating systems work and the different types that exist.
7. Describe and contrast heat engines vs heat movers and the types of each.
8. Understand what thermal expansion/contraction is and how structures are designed to deal with it .
9. Explain how a thermostat works to regulate temperature.
10. Explain how machines and animals get rid of excess heat.

Vocabulary:

Temperature	Forced air	Thermocouple
Thermal energy	Geothermal	Ball and Ring
Heat	Active solar	Bimetallic strip
Conduction	Passive solar	Fahrenheit
Convection	Heat engines	Celsius
Radiation	Heat movers	Kelvin
Insulators	Thermal expansion/contraction	Calorimeter
Conductors	Expansion joints	Thermostat
Vacuum bottle	Conductometer	Expansion
Radiators	Heat sink	Contraction