

8th Grade Study Guide

Chapter 6

Thermal Energy

TEMPERATURE AND HEAT Section 1

- Define, compare, and contrast temperature and thermal energy.
- Describe thermal energy in terms of particle motion.
- Describe heat.
- Define the specific heat of a material. Explain how it is measured.
- Calculate changes in thermal energy ($Q = m(T_f - T_i)C$).

TRANSFERRING THERMAL ENERGY Section 2

- Diagram the transfer of thermal energy by conduction and convection.
- Illustrate a convection current.
- Describe radiation.
- Summarize the methods used to control heat flow.

USING HEAT Section 3

- Describe forced-air, radiator, electric and solar heating systems.
- Define thermodynamics.
- Identify a system, label it open or closed.
- Identify the first and second law of thermodynamics as it applies to a given system.
- Describe the principle of a heat engine. Give an example.
- Describe how a heat mover works; identify examples.

