Name Date Class

Directed Reading for Content Mastery

Section 3 ▪ Using Heat

Directions: *Fill in the blanks using the correct terms from the list below.*

active	**combustion**	**heating systems**	**heat pump**	
stroke	**conduction**	**free**	**passive**	**thermal energy**

1. Using solar energy is especially appealing because it is _____.

2. Most _____ use fuel or electricity as a source of energy.

3. A house with large windows on its south side and few windows on its other sides probably uses a(n) _____ solar heating system.

4. Solar collectors are used in buildings that have _____ solar heating systems.

5. Fuel burned in a stove or fireplace transfers thermal energy to the surrounding air by _____, convection, and radiation.

6. Before solar energy can be used as a source of heat, it must be changed to _____.

7. _____ means rapid burning.

8. A two-way heat mover is a _____.

9. A _____ is the movement of a piston up or down.

Directions: *The terms in each group below are related. Write a sentence that uses all of the terms in each group in a way that shows how they are related. Underline each word of the group in your sentences.*

10. radiant energy, solar collector, active solar heating system

_____

_____

_____

11. heating system, radiator, conduction

_____

_____

_____

Meeting Individual Needs

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Directed Reading for Content Mastery

Key Terms
Thermal Energy

Directions: *In each of the following statements, a term has been scrambled. Unscramble the term and write it on the line provided.*

_____ **1.** The transfer of energy through matter by direct contact of particles is called *docniotucn.*

_____ **2.** The transfer of energy by the movement of matter is called *vecconniot.*

_____ **3.** The type of heat transfer that does not require matter is *iadraniot.*

_____ **4.** Any material that does not allow heat to pass through it easily is an *roinsulta.*

_____ **5.** An *ntieanrl busmcotoin* engine burns fuels inside chambers called cylinders.

_____ **6.** Energy from the sun is *lraos neeygr.*

_____ **7.** A device on a building that absorbs radiant energy from the sun is *lraos lleocctro.*

_____ **8.** The thermal energy that flows from something with a higher temperature to something with a lower temperature is called *eath.*

_____ **9.** Thermal energy is converted into mechanical energy by *a thea gennie.*

_____ **10.** A *thea revmo* moves thermal energy from one location and transfers it to another location at a different temperature.

_____ **11.** The *pertreuamet* measures the average kinetic energy of all the particles in an object.

_____ **12.** The total energy of the particles in a material is *ethrlam gyeren.*

_____ **13.** The *pcciifes thea* of a material is the amount of energy it takes to raise the temperature of 1 kg of the material 1 kelvin.

Meeting Individual Needs