Chapter 18
Sections 18-1,18-2, 18-3, 18-4 & 18-5

Name _____
Date _____
Class Period _____

1. Explain the difference between radiant heating systems and other central heating systems.

2. What is the basic difference between an active solar heating system and a passive solar heating system?

3. Heat pumps use phase changes to transfer energy. What phase changes occur during the operation of a heat pump and where does each phase change occur?

4. How does fiberglass insulation prevent the transfer of heat energy?

5. How do their down feathers help keep birds warm?

6. Why are double or triple pane windows better insulators than single pane windows?

7. What phase change takes place inside the refrigerant pipes in the freezer unit of a refrigerator?

8. How does the refrigeration system in a refrigerator get rid of the heat it has absorbed from the freezing compartment?

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9. What do all “heat” engines have in common?

10. Explain the basic difference between an “external combustion” engine and an “internal combustion” engine.

11. Give two examples of how “external combustion” engines have been used in the past.

12. How are modern steam engines different from steam engines of the early days in U.S. history?

13. Explain how thermal expansion provides the force for the operation of both internal and external combustion engines.

14. What is thermal pollution?

15. Give examples of three types of wildlife that could be threatened by thermal pollution and explain why thermal pollution poses a threat to each type.

16. Why are cooling towers a necessary part of nuclear power plants?