Physical Science
Assignment 17-1

Name _____

Class Period _____

Date _____

Read section 17-1. Then, based on the information in your textbook, answer the following questions :

1. Explain why heating water increases the speed of the water molecules.

2. Explain why heating a liquid or gas increases the number of collisions per second between the molecules (or atoms).

3. Explain why water molecules that are moving faster are farther apart than water molecules that are moving slower.

4. Explain why water that is heated will rise up through cooler water above it.

5. Explain why boiling water in a beaker will keep swirling around even after the flame was shut off.

Please continue on the other side.

6. What do we mean when we say a material is a good heat ***insulator***?

7. What do we mean when we say a material is a good heat ***conductor***?

8. Name four materials that are considered to be good heat ***insulators***.

9. Name four materials that are considered to be good heat ***conductors***.

10. Explain how a Thermos® bottle keeps liquids hot or cold. ***Be sure to explain how it prevents transfer of energy by all three transfer methods*** (conduction, convection, radiation).

11. Explain how the earth is heated by radiation from the sun.

12. Explain how the hot air balloons shown in Figure 17-6 work.

13. What did James Prescott Joule and other scientists of his time discover about molecules?