

Name _____ Date _____ Hour _____

Guided Reading Chapter 14-1 Matter and Thermal Energy

1. Define kinetic energy.
2. In what phases (states) can matter exist?
3. Examine figure 1, identify the different states of matter pictured
4. What are the key parts of the Kinetic Theory?
5. Describe each state in terms of shape and volume, recreate the following chart on your paper

	Solid	Liquid	Gas
Volume			
Shape			

6. How is temperature defined in science?
7. How does the kinetic energy of a liquid at 30°C compare to the kinetic energy of a liquid at 90°C?
8. Examine figure 4, how is energy transferred, what happens because of this transfer?
9. Define melting point.
10. Which process is the opposite of melting?
11. What happens in terms of states of matter when something vaporizes? What are the two ways a substance can vaporize?
12. What is the opposite of vaporization?
13. Define boiling point.
14. What is the main difference between evaporation and boiling?
15. Examine figure 5, assuming the liquid is water what is in the bubbles as the liquid boils?
16. Examine figure 7, which portions of the graph represent the substance changing temperature? Which portions would represent where the substance changes state?
17. Define thermal expansion.
18. Examine figure 8, How does a thermometer make use of thermal expansion to measure temperature.
19. Why do hot air balloons float?
20. How are amorphous solids and liquid crystals different from traditional solids?