

Name: _____

Date: _____ Period: _____

13.1 – The Nature of Gases

1. The energy an object has because of its motion is called _____.

2. What is kinetic theory?

3. List and explain the three assumptions about gases that apply to kinetic theory.

1.

2.

3.

4. Gas pressure results from the force exerted by a gas per _____

_____.

5. Simultaneous collisions of billions of particles in a gas with an object result in

_____.

6. What is a vacuum? What is the air pressure in a vacuum?

7. What happens to the atmospheric pressure as we climb in altitude? Why?

8. How does a barometer work?

9. What are the three units of measurement of pressure?

10. What is the numerical relationship among those three units?

11. What is STP?

12. What happens to the temperature of a substance when the average kinetic energy of its particles increases?

13. What is absolute zero?

14. Can scientists cool things down to absolute zero?

15. What is the Kelvin temperature scale and how does it relate to average kinetic energy?

13.2 – The Nature of Liquids

16. Name two examples of fluids.

17. Why are they considered fluids?

18. True or False – The kinetic theory states that there are no attractions between the particles of a liquid. _____

19. What is vaporization?

20. When vaporization occurs at the surface of a liquid that is not boiling, the process is called _____.

21. As liquid evaporates, why do only some of the particles break away from the surface of the liquid? Why does the liquid evaporate faster if the temperature is increased?

22. What effect does evaporation have on temperature?

23. What is vapor pressure?

24. What is happening in a system if it's vapor pressure is at equilibrium?

25. The boiling point of a liquid is the temperature at which the vapor pressure of the liquid is just equal to the _____.
26. How then, can we explain why boiling points decrease as altitude increases?
27. Why can foods cook quicker in a pressure cooker?
28. True or False – After a liquid reaches its boiling point, its temperature continues to rise until all the liquid vaporizes. _____
29. What is the normal boiling point?

13.3 – The Nature of Solids

30. Why aren't solids considered to be fluid?
31. What is the melting point?

13.4 – Changes of State

32. What is sublimation?
33. What good can sublimation be used for?