2nd Qt. Study Guide

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Bell: \_\_\_\_\_

**Part #1: pH**

1. What pH number indicates an alkali? \_\_\_\_\_
2. What ph number indicates an acid? \_\_\_\_\_
3. What ph number indicates a neutral substance? \_\_\_\_\_
4. Describe neutralization. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In general, what types of substances tend to be acidic? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. In general, what types of substances tend to be alkali? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part #2: Waves & Sound**

Define the following vocabulary terms:

8. Amplitude: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Wavelength: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Frequency: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. Compression: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Rarefaction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. How many full wavelengths are there in the wave below? \_\_\_\_

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14. How many full wavelengths are there in the wave below? \_\_\_\_

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15. What role does energy play in sound? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. What sort of frequency do high-pitched sounds have? \_\_\_\_\_\_

17. Which aspect of sound goes with pitch? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. Which aspect of sound goes with volume? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19. What type of energy is sound? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. Label the wavelength, trough, crest, and amplitude of the wave.



21. Which of the following waves below has more energy? How do you know? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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22. Sketch a wave with higher frequency & higher amplitude than wave A. above.



 Part #3: Circuits

Define the following vocabulary terms:

23. Series circuit: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24. Parallel circuit: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25. What causes electricity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26. What type of charge do electrons have? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

27. In the space below, draw a parallel circuit and a series circuit. Make sure you include and **label** a bulb, switch, and a battery.

Part 4: Vocabulary Energy Transfer

1. Kinetic Energy D. Nuclear Energy
2. Mechanical Energy E. Electromagnetic Energy
3. Potential Energy
4. \_\_\_\_\_ Energy transmitted through space in the form of electromagnetic waves.
5. \_\_\_\_\_The energy of motion.
6. \_\_\_\_\_A combination of the kinetic energy and potential energy an object has.
7. \_\_\_\_\_Stored energy.
8. \_\_\_\_\_Energy from the nucleus of an atom.

**Vocabulary: Match the term with the definition.**

**\_\_\_\_ 33. Convection**

**\_\_\_\_ 34. Conduction**

**\_\_\_\_ 35. Radiation**

**\_\_\_\_ 36. Insulator**

**\_\_\_\_ 37. Conductor**

**\_\_\_\_ 38. Heat**

1. **Energy that travels across distances in the form of electromagnetic waves.**
2. **A material that does not transfer energy easily.**
3. **The flow of energy from an object at higher temperature to an object at lower temperature.**
4. **A process by which energy is transferred in gases and liquids.**
5. **A material that transfers energy easily**
6. **The process by which energy is transferred from a warmer object to a cooler object by means of physical contact.**

 39. Two pots have been sitting on the stove for a while. One pot has copper handle and the other has a wooden handle. Which handle should you touch? Why?