

Name: _____

Waves & Electromagnetic Spectrum—Study Guide

Vocab- study the various vocabulary entries in your binder—focus on any vocabulary words you see in the questions below that you are not comfortable with. You should be able to apply the word's meaning to answer test questions.

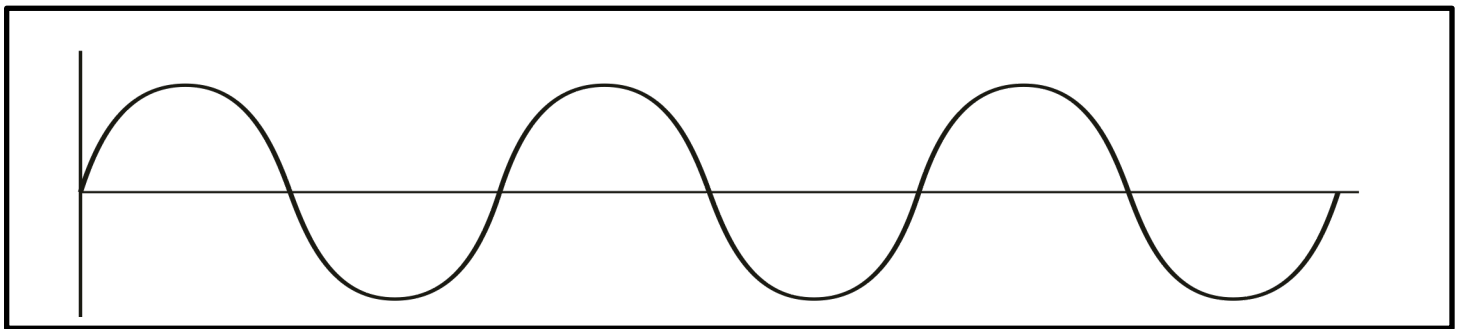
Short Answers- Write your answers in complete sentences.

1. In the box below draw a wave and label all its parts: crests, troughs, amplitude, & wavelength.



2. Explain the difference between a transverse and longitudinal wave.

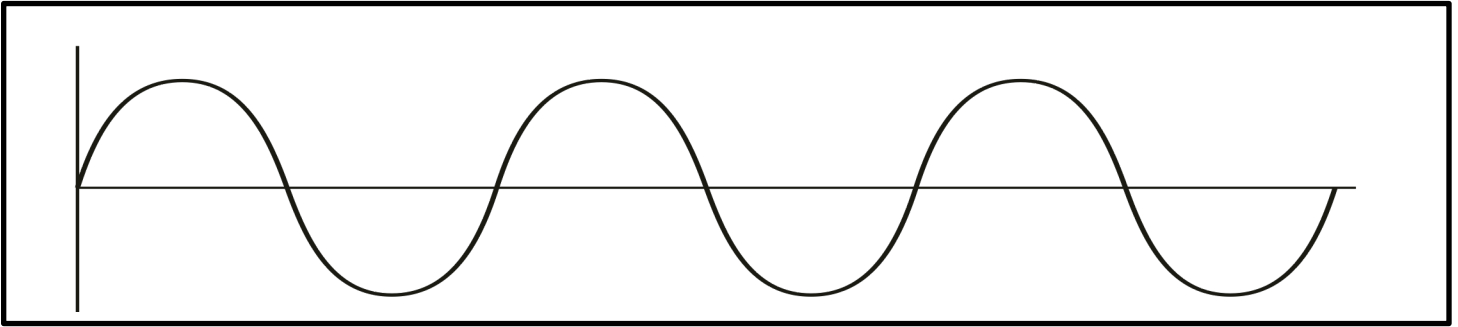
3. Draw a wave with a greater frequency.



4. What part of a wave affects the pitch of the sound you hear?

5. What part of a wave affects the loudness of the sound you hear?

6. Draw a wave with a smaller amplitude.



7. What is the main difference between a mechanical wave and an electromagnetic wave?

8. How does the frequency of a wave affect the wavelength of a wave?

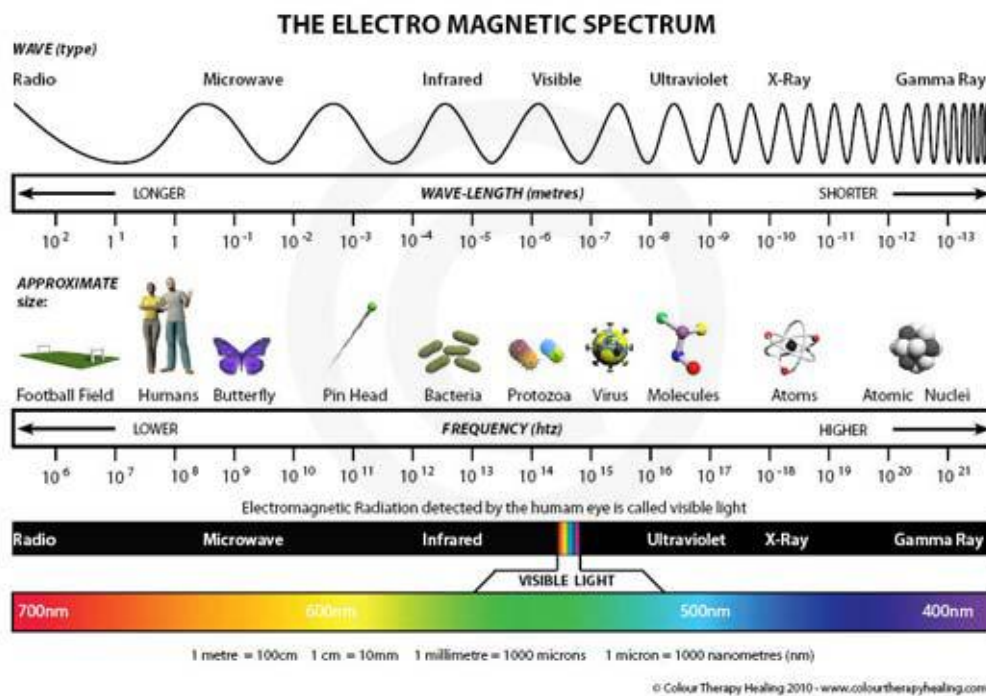
9. What factors have an affect on the speed of sound? How is the speed of sound different from the speed of light?

10. Explain why we see the color red when we look at a stop sign.

11. What causes an object to be black in color; what causes an object to be white in color?

12. What is the only part of the Electromagnetic Spectrum that humans can see?

13. List visible light in order from the longest wavelength to the shortest wavelength.



Use the diagram of the Electromagnetic Spectrum to answer questions 14-16.

14. What is the difference between the different types of waves on the Electromagnetic Spectrum?

15. Which type of wave on the Electromagnetic Spectrum has the greatest frequency?

16. Which type of wave on the Electromagnetic Spectrum has the least amount of energy?

17. Why is a digital signal more reliable than an analog signal?
