* **STUDY GUIDE**  
    
  **Wave Properties, Interactions, and Sound Waves**

1. Define the following words:
   1. Crest –
   2. Trough-
   3. Amplitude-
   4. Frequency-
   5. Wavelength –
2. What is a wave?
3. How do waves travel through a medium?
4. Draw and label a diagram of a transverse wave. Be sure to include the following parts:
   1. Crest
   2. Trough
   3. Amplitude
   4. Wavelength
5. Draw and label a diagram of a Compression wave. Be sure to include the following parts:
   1. Wavelength
   2. Compression
   3. Rarefaction
6. Describe the characteristics of a longitudinal wave.

7.Describe the characteristics of a transverse wave.

8. Describe what happens during destructive interference.

9.Waves produced by earthquakes are called\_\_\_\_\_\_\_\_\_\_\_

10.The interaction of two waves that meet is called\_\_\_\_\_\_\_\_\_\_\_

1. What is the unit measure of frequency?
2. What influences the speed of sound?
3. How does amplitude affect sound?
4. Loudness is measured in \_\_\_\_\_\_\_\_\_\_\_
5. What is pitch?

16.The pitch of a sound depends on the wave’s \_\_\_\_\_\_\_\_\_\_.

17. What is the difference between reflection and refraction?

18 What is the difference between constructive and destructive interference?

1. Explain why we can see rainbows after a summer rain?
2. Explain how bats navigate using sound. What is this process called?
3. Why do you see lightning before you hear thunder?
4. What type of wave is sound? How does it travel through a medium?
5. What is the relationship between frequency and wavelength?
6. What is the relationship between frequency and sound?
7. What is the difference between an electromagnetic and a mechanical wave?