



**SCIENCE**  
**CHAPTER 7- ENERGY**  
**LESSON 2- SOUND**  
**PART 2**



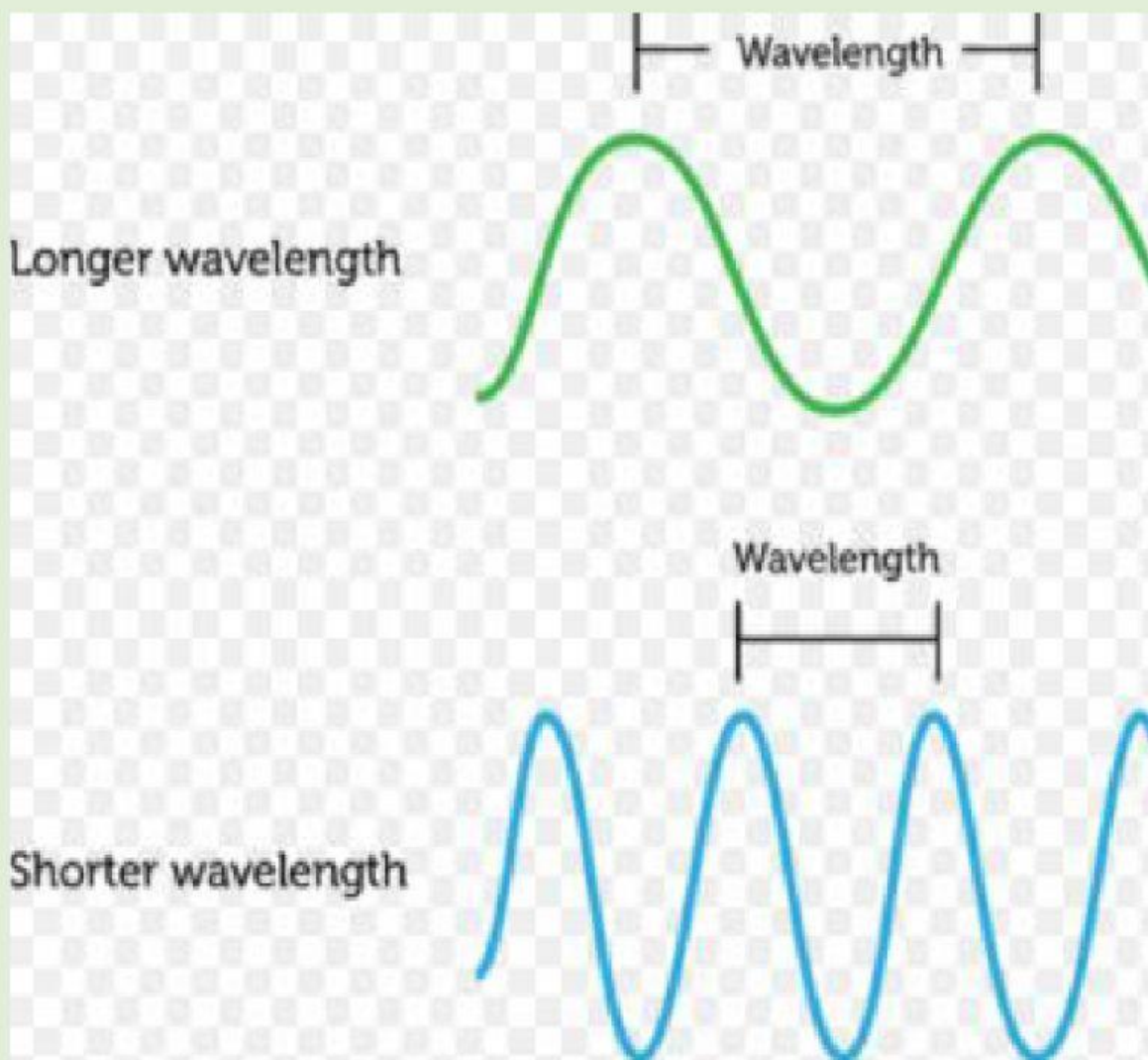
**Created by- Nisha Tanwar**

# HOW DO SOUNDS DIFFER?

❖ Each sound wave has a wavelength and frequency.

## WAVELENGTH

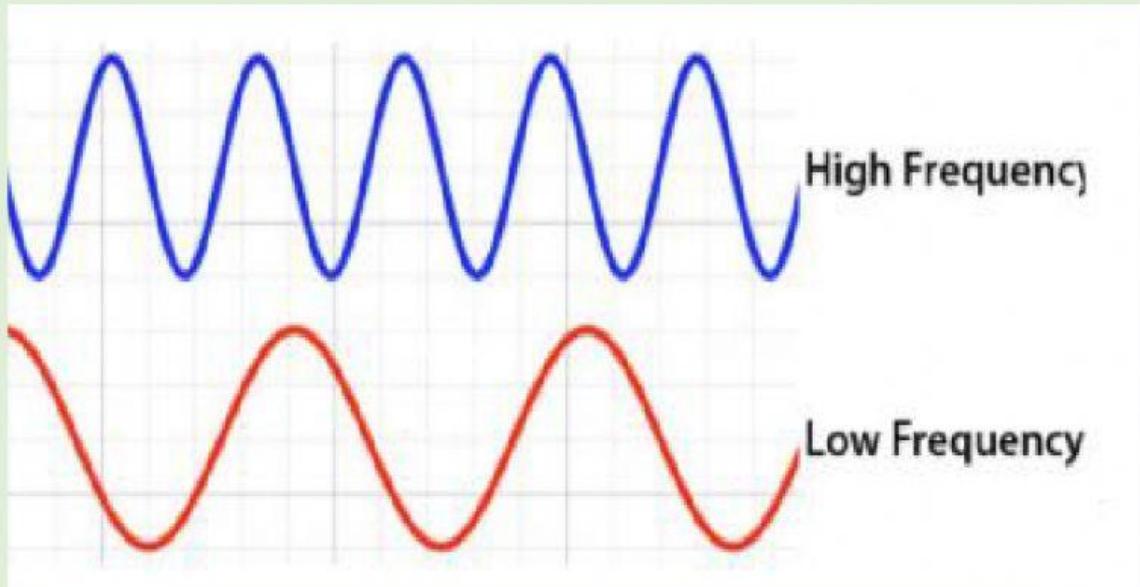
It is the distance from the top of one sound wave to the top of next sound wave.





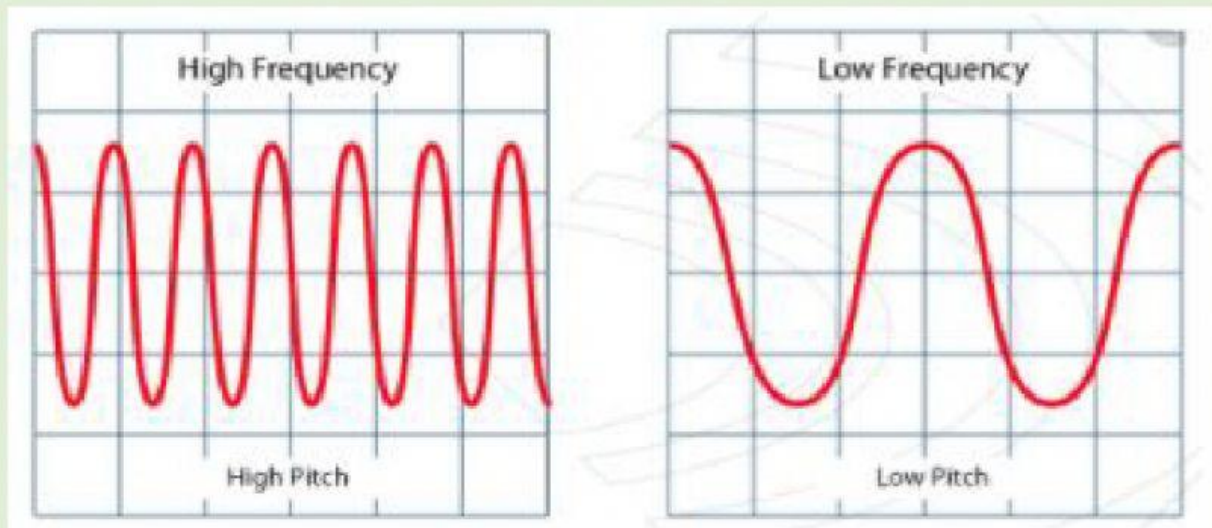
## **FREQUENCY**

**It is the number of vibrations in one second**



### **Frequency determines pitch**

The frequency of a sound wave determines its pitch. **Pitch** is the perceptual quality which permits the distinction between a low frequency sound and a high frequency sound. High sounds, like the beat of a mosquito's wings, have high frequencies. Low sounds, like the croaks of a toad, have low frequencies.



## **AMPLITUDE**

**Amount of energy in a sound wave is called amplitude.**

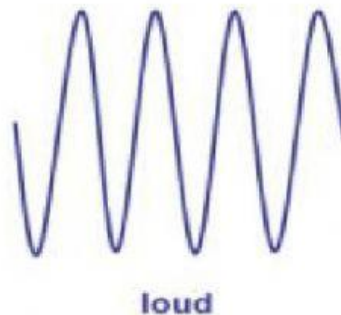
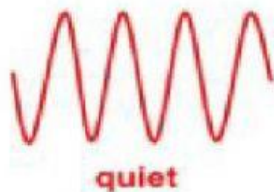




## **AMPLITUDE AFFECT LOUDNESS**

Amplitude affects the **Loudness** of sound. As an airplane takes off, sound waves with high amplitude fill the air. The sounds are loud. When you whisper, your vocal cords vibrate just a little. The sound waves have low amplitude. The Loudness is low.

The loudness of a sound increases with the amplitude of the sound wave.

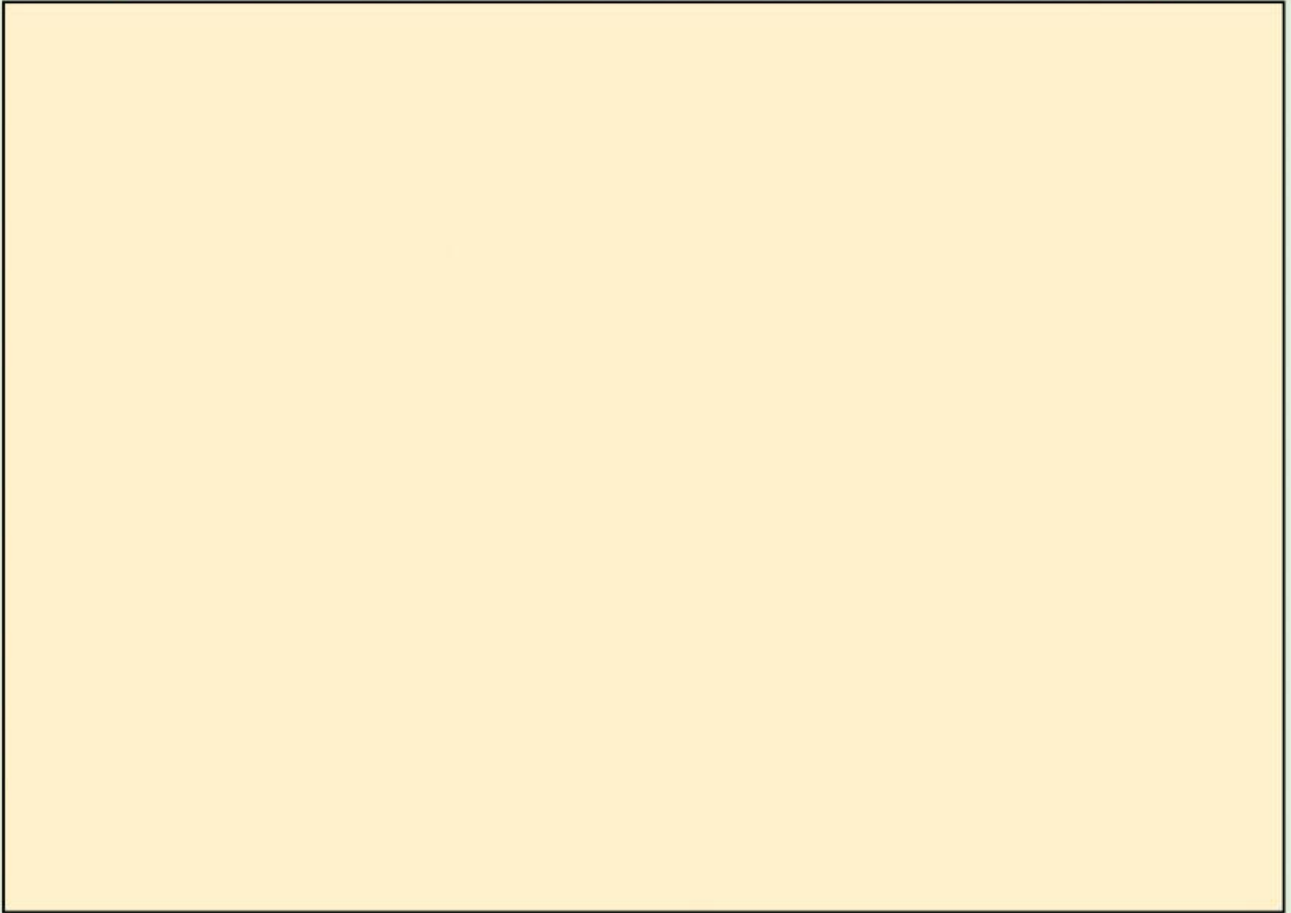


**Whistle**  
High pitch sound



**Drum**  
Low pitch sound

## WATCH VIDEO ABOUT HOW SOUNDS DIFFER?



## QUESTIONS FROM BOOK

1.

**Vocabulary.** Perceptual quality which permits the distinction between a low frequency sound and a high frequency sound is the

\_\_\_\_\_.

**2. Test Prep.** A sound wave with high amplitude produces which kind of sound?

- A** high pitched sound      **C** loud  
**B** low      **D** fast

**3.** When a sound has a great deal of energy, it also has a high \_\_\_\_\_

**4.** High frequency sound has \_\_\_\_\_  
pitch.

**5.** Low frequency sound has \_\_\_\_\_  
pitch.

**6.** Loud sound has \_\_\_\_\_ amplitude.

**7.** Quiet sound has \_\_\_\_\_ amplitude.

**8.** Frequency determines \_\_\_\_\_.

**9.** Amplitude affects \_\_\_\_\_.