BASIC SCIENCE FOR JSS 3

SOUND ENERGY

Sound is a form of wave motion which is conveyed through a vibrating medium to its environment.

As an object vibrates, it disturbs the surrounding air causing waves to travel outwards in all directions. Sound travels in media like solid, liquid and gas. It can be produced by plucking guitar strings, whistle, talking, drums etc. This shows that vibrating objects produce sounds. Vibration is a rapid to and fro motion of an object. For example, the human body produces sound due to vibrations in the vocal cords. Note that there are sounds that can't easily be heard by man but can be heard by animals like snakes, bats etc. These sounds are called infrasonic sounds and have frequency of below 20 Hertz. But some sounds are within human hearing range of frequencies between 4000 to 20000Hertz.These range of sounds are called ultrasonic sounds.

***Uses of ultrasonic sounds***

1. Detecting objects and measuring distancing

2. Destroying bacteria in water

3. Used in medicine

4. Testing of product and structures of metals

5. Detecting invisible flaws in metals

***Sources of sound***

1. Vibrating tuning work for you and I will

2. Musical instruments-These are as follows

a. wind instruments eg . flute, trumpets, pipe organ, clarinet, saxophones etc

b. Stringed instrument eg. guitar, sonometer, piano, violin

c. Percussion instrument eg talking drums, bells, gong, xylophone etc.

***Assignment***

Explain three factors that affect the speed of sound