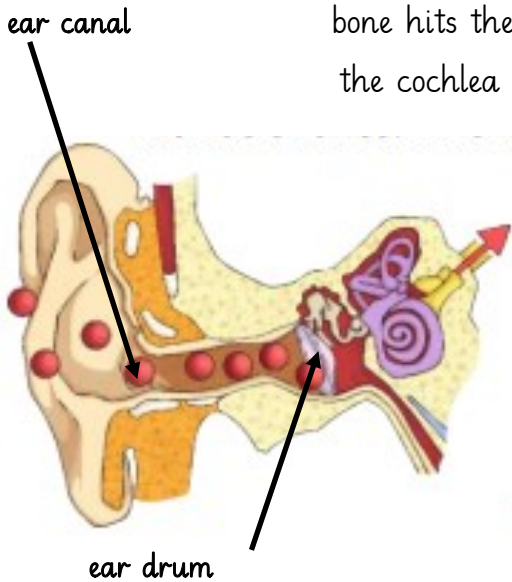


Year: 4  
Term: Spring 2  
Topic: Physics - Sound

Sounds are made when objects vibrate. The **vibration** makes the air around vibrate, and the air vibrations enter your **ear**. You hear the **vibrations** as **sounds**. You cannot always see the vibrations, but if something is making a sound, a part of it is vibrating. The vibrations travel in all directions and they **don't travel in straight lines**.



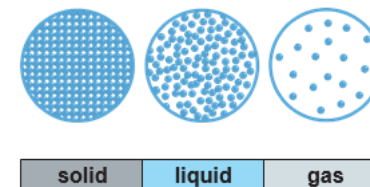
Sound enters the **ear canal**. The sound makes the **ear drum** vibrate. The vibration moves the chain of tiny bones in the middle ear. The last bone hits the membrane window in the **cochlea** (inner ear) and makes the cochlea fluid move the moving fluid triggers the hearing nerves, which send signals to the brain.



Sounds can be high or low. We call this the **pitch**. The pitch of a sound is how high or low the sound is. A high sound has a high pitch and a low sound has a low pitch. The pitch of a sound is due to how many times the object vibrates each second (the **frequency**). The higher the number of vibrations the higher the pitch.

### Glossary

- amplitude** How loud a sound is (how big a sound wave is).
- ear drum** The membrane which collects sound from the pinna and passes it to the inner ear
- cochlea** The sound reception part of the ear.
- frequency** Amount of vibrations per second.
- pinna** The outer portion of the ear (ear flap).
- pitch** How high or low a sound is. High pitched sounds vibrate faster.
- vibrate/vibrations** Forward and backward movement of an object (usually rapidly).
- volume** How loud or quiet a sound is.



The vibrations caused by the sound can travel through the air (**gas**) and can also travel through **liquids** and **solids**.