




Topic: Sound	Year: 4	Strand: Physics
--------------	---------	-----------------

Significant Scientist

<p>Christian Doppler (1803-1853)</p> 	<p>Christian Doppler was an Austrian mathematician and physicist. He is celebrated for his principle known as the Doppler effect. This describes how noises sound different as you move toward or away from a noisy object.</p>
---	---

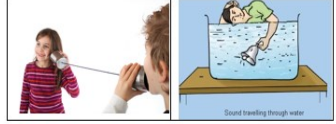
Sound - key information

Volume


The volume (loudness) of a sound depends on the size of the vibrations.

If we blow an instrument harder, we make a louder sound.

As well as travelling through air (gas), sound can travel through solids and liquids:




The closer we are to the sound source the louder it will be.




A train arriving at a station sounds loud.

The further away from a sound the fainter it will be.







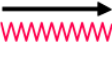




A train in the distance sounds quieter.


Pitch



The longer bars on the xylophone make a **lower** sound. The shorter bars on the xylophone make **higher** sounds.

	Key Vocabulary
 sound	Something you can hear or that can be heard. We hear sound with our ears.
 sound source	A source is producing sound when some part of it is vibrating.
 vibrations	Sounds are made when something vibrates. This means it moves quickly backwards and forwards.
 pitch	How high or low a sound is.
 volume	How loud or quiet a sound is.
 repeating	A sound that is repeated again and again.
 continuous	A continuous sound that is not interrupted.
 distance	The length of space between 2 points.
 eardrum	An inner part of the ear which vibrates when sound hits it.

How do we hear sound?



- Banging the drum produces vibrations.
- The sound travels through the air to our ears.
- The vibrations cause parts of our body inside our ear to vibrate. This allows us to hear the sound.

Retrieval Quiz

- What causes a sound to be made?
- Which word is used to describe how loud or quiet a sound is?
- Which word describes how **high or low** a sound is?
- Which three **states** can sound travel through.
- Which body parts do vibrations travel into?
- The longer an object, the _____ the pitch.
- The thinner an object, the _____ the pitch.
- What happens to sounds as you move further away from the sound source?
- The louder the sound, the _____ the vibrations.
- The quieter the sound, the _____ the vibrations.

Useful Websites

- [Sound - KS2 Science - BBC Bitesize](#)
- [Activities - Explorify](#)