


Key vocabulary	
<b>sound</b>	Something you can hear or that can be heard. We hear sound with our ears.
<b>sound source</b>	A source is producing sound when some part of it is vibrating.
<b>vibrations</b>	Sounds are made when something vibrates. This means it moves quickly backwards and forwards.
<b>pitch</b>	How high or low a sound is.
<b>volume</b>	How loud or quiet a sound is.
<b>sound insulation</b>	A material which blocks sound effectively.

## Sound – Year 4

Significant scientist	
<b>Christian Doppler</b> (1803-1853) 	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.

## 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.

## How do we hear sound?



1. Banging the drum produces vibrations.

2. The sound travels through the air to our ears.

3. The vibrations cause parts of our body inside our ear to vibrate. This allows us to hear the sound.



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

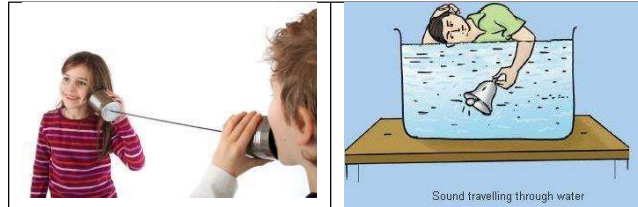
## Pitch

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

The shorter bars on the xylophone make **higher** sounds.

**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  
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## **Insulating sound**

We can  
wear ear  
defenders  
to protect  
our ears  
from very  
loud  
sounds.

