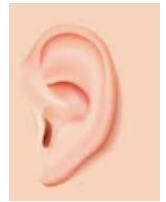




Listen up

Science sound topic

Session 2



What is sound and how do we hear?

How sound is made

Sound is caused by **vibration**. Vibration means **wobbling** very quickly back and forth. When you pluck a guitar string, or hit a drumskin, you can see the material vibrate. This causes the **air** touching the string to vibrate, which causes air further away to vibrate, which causes the air near your **ear** to vibrate, which your brain experiences as **sound**.

The moving vibration is called a **sound wave**.

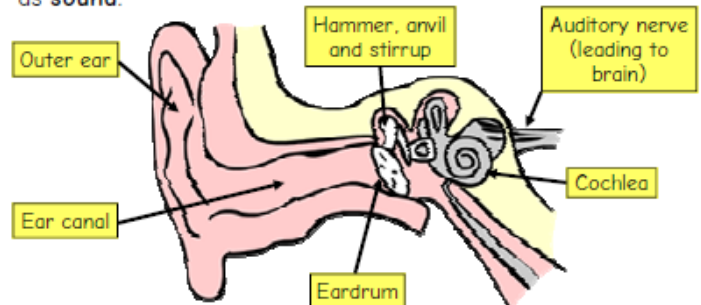


The vibrating **guitar** causes the **air** to vibrate. This vibrating air is called a **sound wave**. When the air near your **ears** vibrates, your brain experiences a **sound**.



How our ears work

When a sound wave reaches our ear, our **outer ear** (the part that we can see on the side of our heads) funnels the sound into our heads down the **ear canal**. At the end of the ear canal is the **eardrum**, which is waterproof and airtight. Past the ear canal is the **middle ear**. Inside the middle ear are the **hammer**, **anvil** and **stirrup** (the three smallest bones in the body) which vibrate and pass the sound waves to the **inner ear**, which contains the **cochlea**, which turns the vibrations into **electrical signals**. These signals travel down the **auditory nerve** to the **brain**, which experiences the signal as **sound**.



Watch this short video, that explains all about how sound travels and how we hear it.


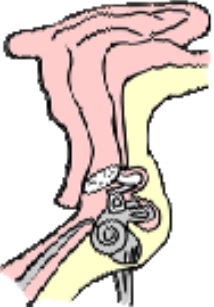

<https://www.youtube.com/watch?v=aWieHpsZ7ik>



Activity

Cut out the pictures and explanations. Order them and match to the correct picture to make an explanation text all about how we hear sound.

How we hear things	
1	
2	
3	
4	

<p>The sound wave reaches the ear. The wave travels deep inside the ear, where it is turned into an electrical signal that the brain understands as sound.</p>	
<p>The vibrating object causes the particles in the air around it to vibrate too, because it is touching them.</p>	
<p>The vibrating air particles bump into other air particles further away, causing them to vibrate too. This is called a sound wave. It gradually moves away from the source.</p>	
<p>An object starts to vibrate, or move very quickly back and forth. This is called a sound source. An example of a sound source is a plucked guitar string.</p>	