



Sound

**I can recognise that vibrations from
sounds travel to the ear.**



Thinking Time...



How are **sounds** made?

Talk to your partner before
feeding back to the class.



Sounds

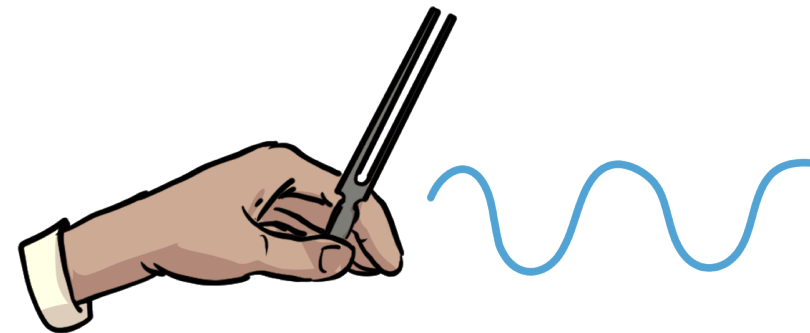
2

Sounds are made when objects **vibrate**.

The vibration makes the air around vibrate, and the air **vibrations** enter your ear. You hear them as **sounds**.



You cannot always see the **vibrations**, but some part of the object will be **vibrating** if it makes a **sound**.



What is the difference between a sound and a noise?



Sounds

3

We can see **vibrations** when we hit a drum.
When we hit it, the **drum skin vibrates**.
This makes the air particles closest to the
drum start to **vibrate** as well.

The vibrations then pass to the next air particle,
then the next, then the next. This carries on
until the air particles closest to your **ear vi-**
brate, passing the **vibrations** into your ear.

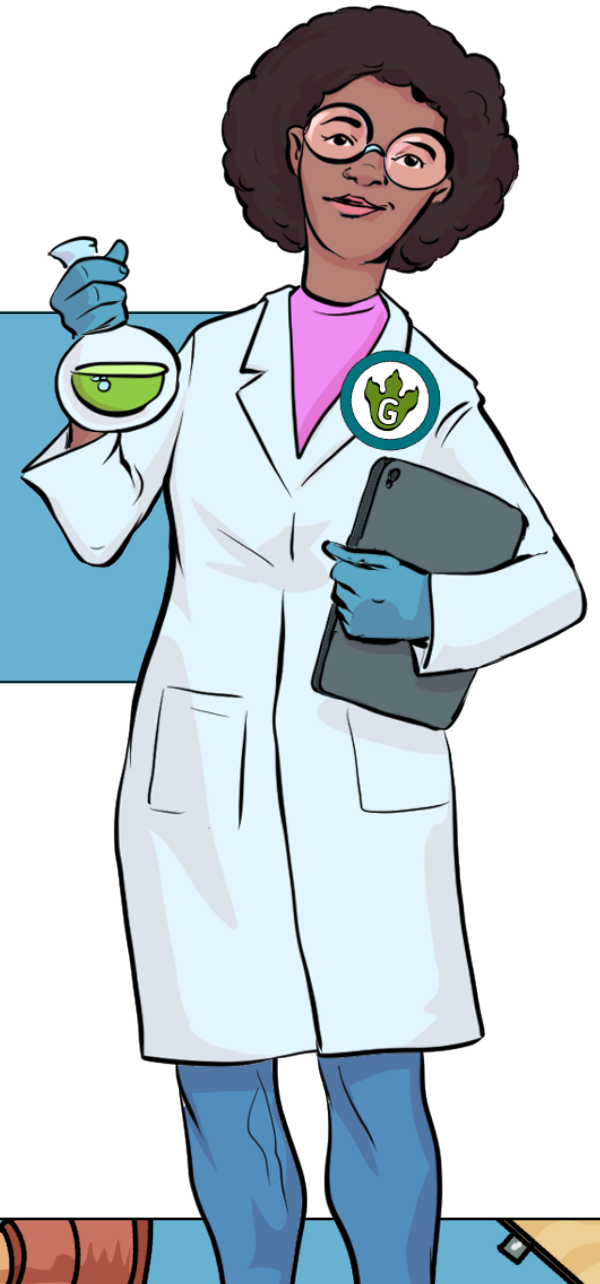


Thinking Time...



What happens when **sounds**
reach our **ears**?

Talk to your partner before
feeding back to the class.



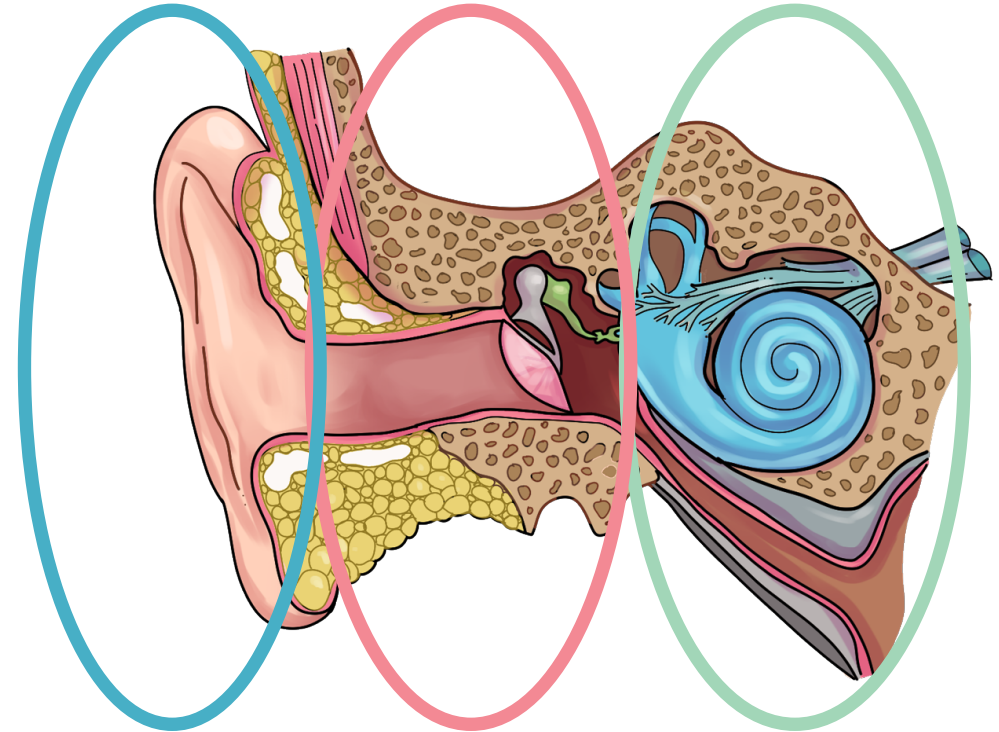
The Ear

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The ear is divided into three parts.
The **inner ear**, **the middle ear**
and **the outer ear**.

Did you know?

Most of your ear is hidden
inside your head!



The Outer Ear

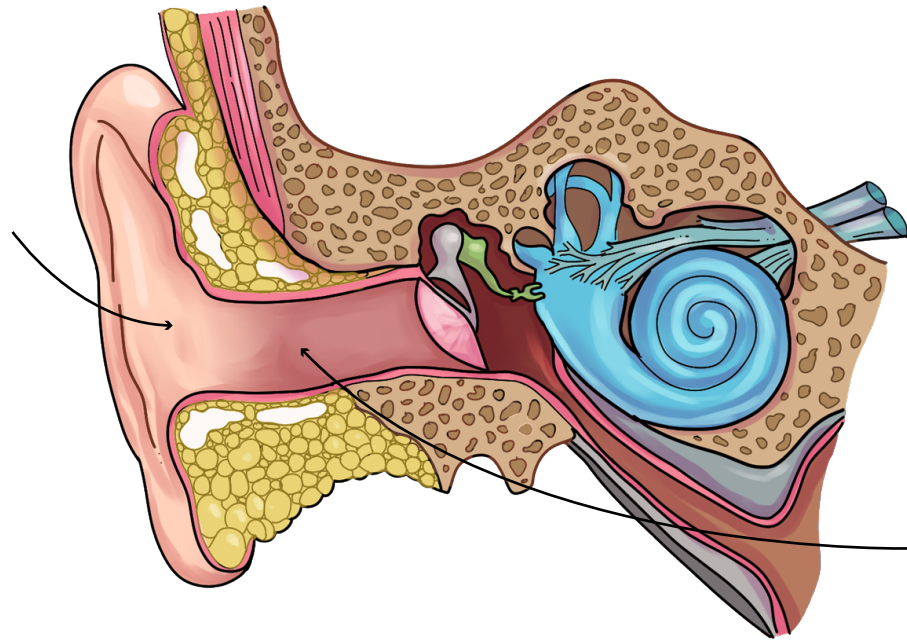
1. Pinnae or Ear Flaps

We usually think of this part when we think of our ears.

They are the folds of skin and **cartilage** on the side of our heads. They collect the sound waves and **vibrations** and direct them into the ear **canal**.

Interesting Fact!

One ear flap is called a pinna. Two or more ear flaps are called **pinnae**.



Interesting Fact!

If you have bigger pinnae, you can hear **sounds** louder. Try it out! Cup your hands around your ears to make bigger **pinnae**! Do sounds seem louder?

2. Ear Canal

The **ear canal** is a tube that connects the outer ear flaps to the middle ear. Sound waves and vibrations travel down the **ear canal**.



The Middle Ear

1. Eardrum

The **eardrum** is a thin flap of skin at the end of the ear canal. The sound waves strike it like a drum, causing it to **vibrate**.

3. Anvil

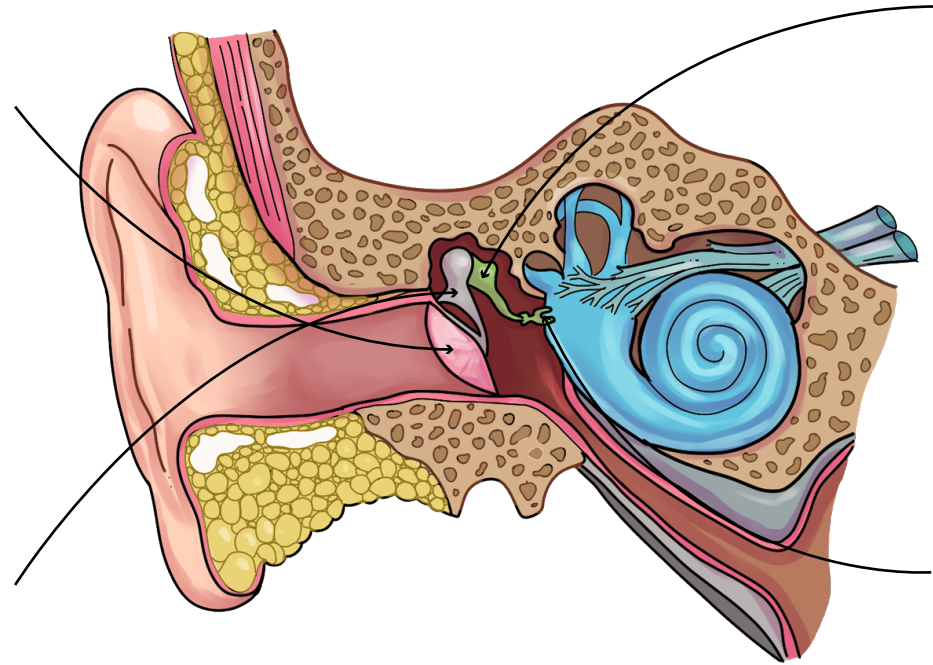
The anvil is another **bone**. When the hammer vibrates, it causes the **anvil** to move too!

4. Stirrup

The **stirrup** is the smallest bone in the whole body! When the anvil moves, it causes the stirrup to move too. The stirrup sends the **vibrations** to the inner ear.

2. Hammer

The hammer is a tiny bone connected to the **eardrum**. When the eardrum **vibrates**, it causes the hammer to vibrate too.



The Inner Ear

1. Cochlea

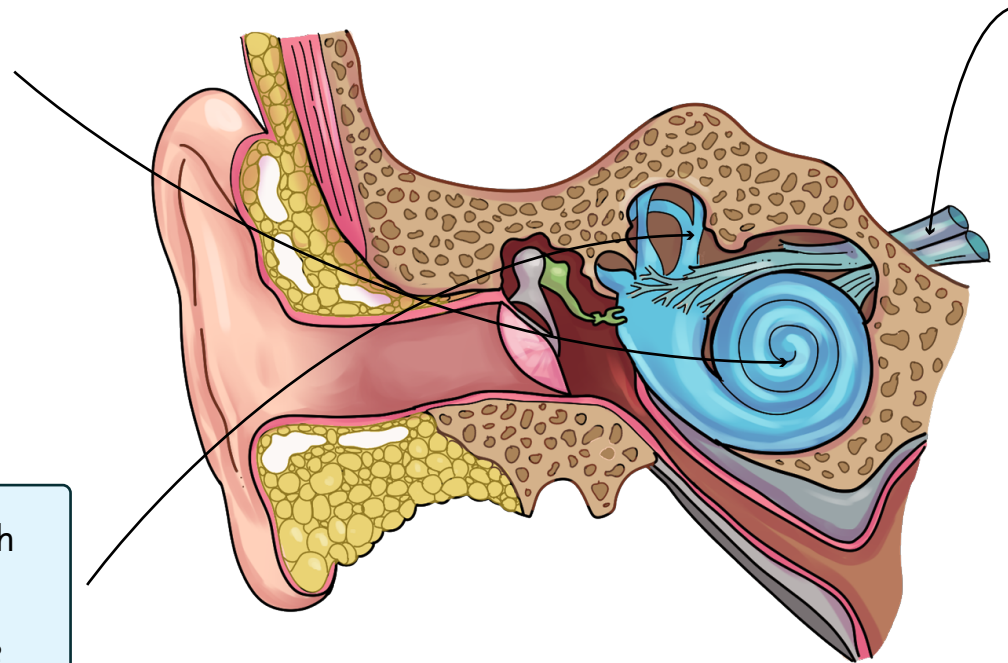
The **cochlea** is snail shaped and is filled with liquid. When the **stirrup** hits the cochlea, it sends waves through the **liquid** inside.

3. Semi-Circular Canals

The semi-circular **canals** help with our balance. When you spin around quickly and then stop, the fluid in the **semi-circular** canals keeps moving for a while. This is what makes you feel **dizzy**.

2. Auditory Nerve

The **auditory nerve** begins in the cochlea as thousands of tiny hairs. The hairs sense the **liquid** moving and carries this information to the brain. The **brain** then interprets what sound we are hearing.



Independent Activity

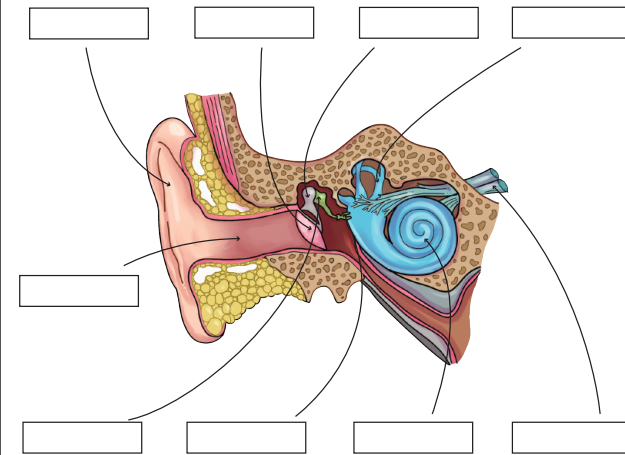


Label the different parts of the **ear** on your worksheets.

Activity



Label the parts of the ear.



Keywords

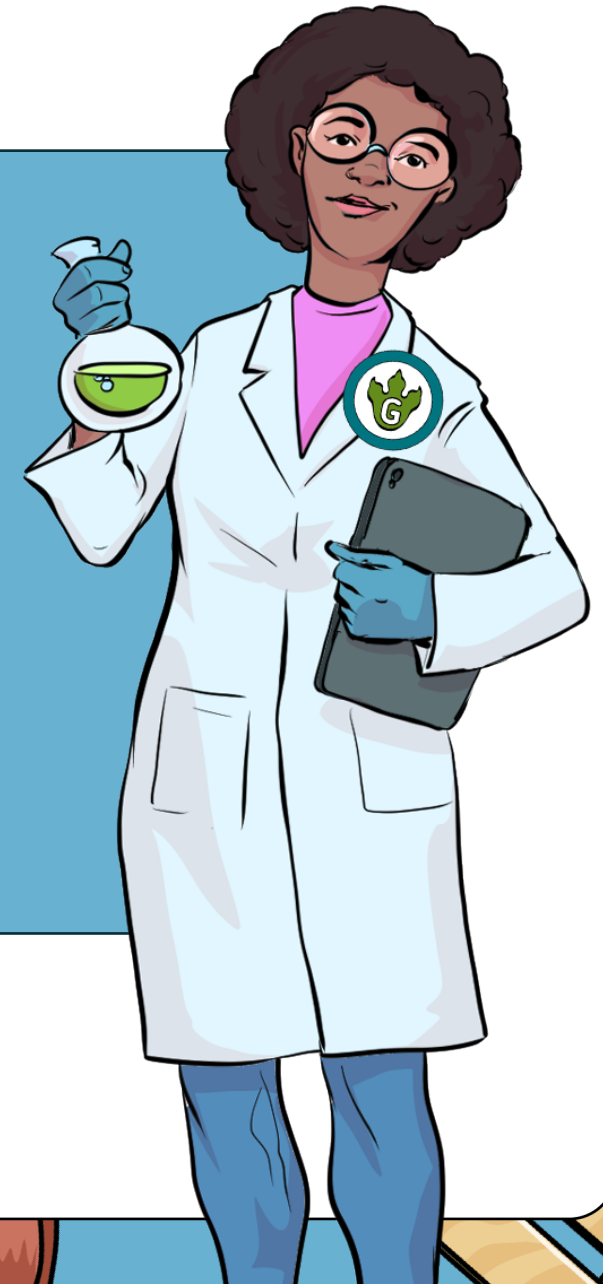
semi-circular canals stirrup eardrum pinna
cochlea anvil hammer ear canal auditory nerve



Quiz



1. What are the three sections of the **ear** called?
2. What is the **smallest bone** in our body?
3. Which part of the **ear** carries signals to the **brain**?
4. Which part of the **ear** helps with our balance?
5. What is another name for **ear** flaps?



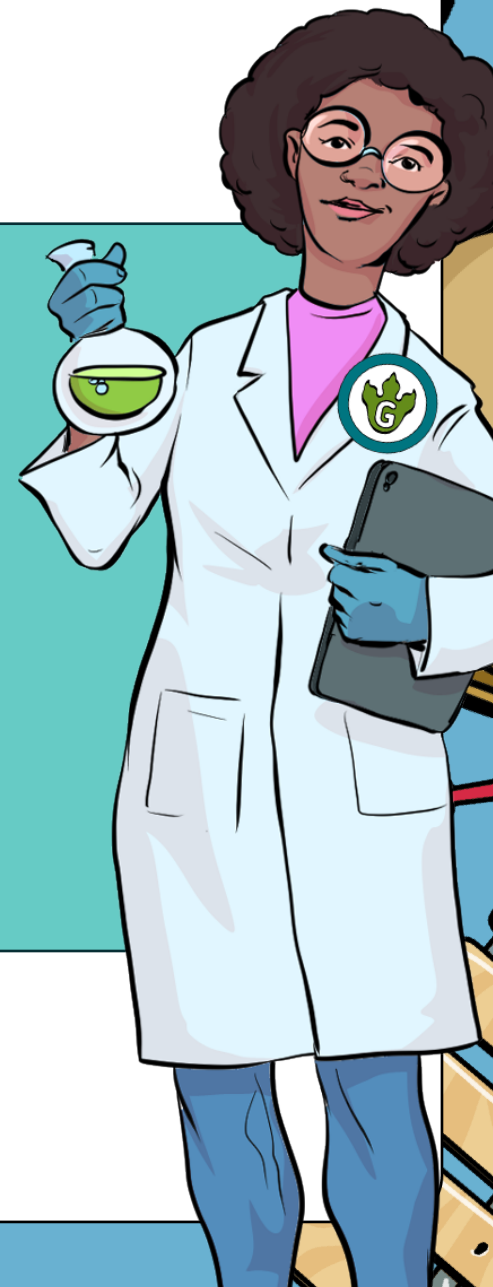
Grab a whiteboard and write your answers down!



Quiz



1. What are the three sections of the ear called? **Inner, middle and outer ear**
2. What is the smallest bone in our body? **Stirrup**
3. Which part of the ear carries signals to the brain? **Auditory nerve**
4. Which part of the ear helps with our balance? **Semi-circular canals**
5. What is another name for ear flaps? **Pinnae**



How many did you get correct?

