

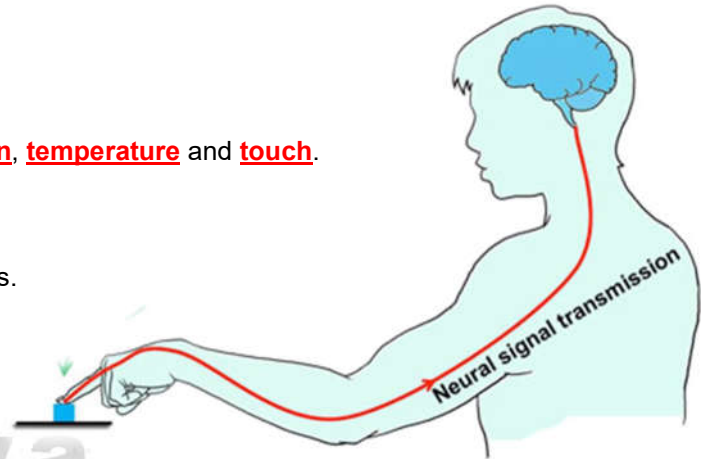


Human Senses

- Humans have **five** senses. They are **hearing**, **sight**, **smell**, **taste** and **touch**.
- Often, we use more than **one sense** at the same time.
- All the five senses work with the **brain** and help us know about the world around us.

Touch

- **Skin** helps us feel the sense of touch. It helps us feel **pain**, **temperature** and **touch**.
- Skin is the **largest organ** in the body.
- Some parts of the body are more sensitive than the others.
 - The skin in our **fingers** is very sensitive.
 - The skin in our **back** is not very sensitive.
- When the skin touches something, it sends a message to the **brain** through the **nerve**. The **brain** helps us know the sensation.



Fingerprint

- The skin on our fingers forms patterns. These patterns are called **fingerprints**.
- Each person's fingerprints are **unique** (it is different for each person). Even twins have **different** fingerprints.



Types of fingerprint

- Fingerprints may have one of these patterns.



LOOPS



WHORLS

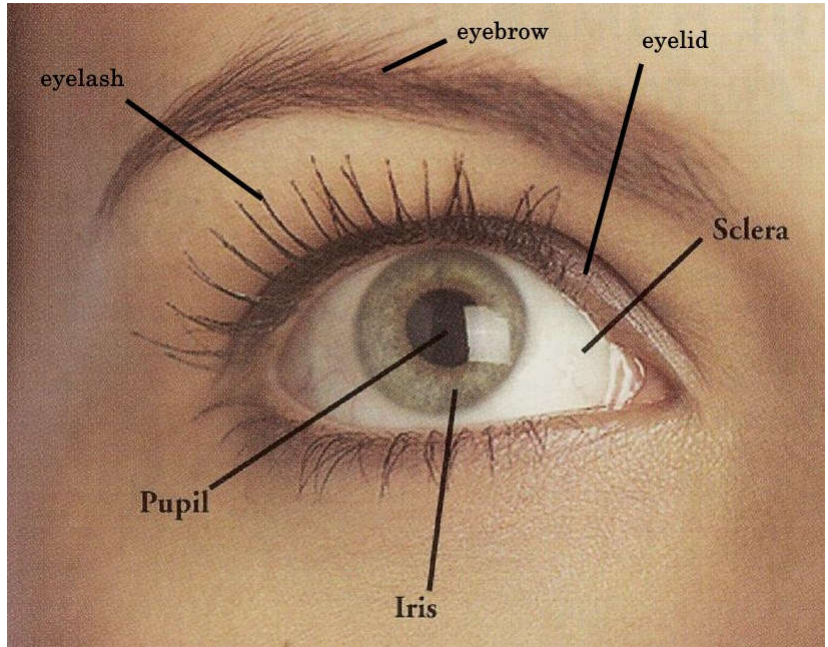


ARCHES



Sight

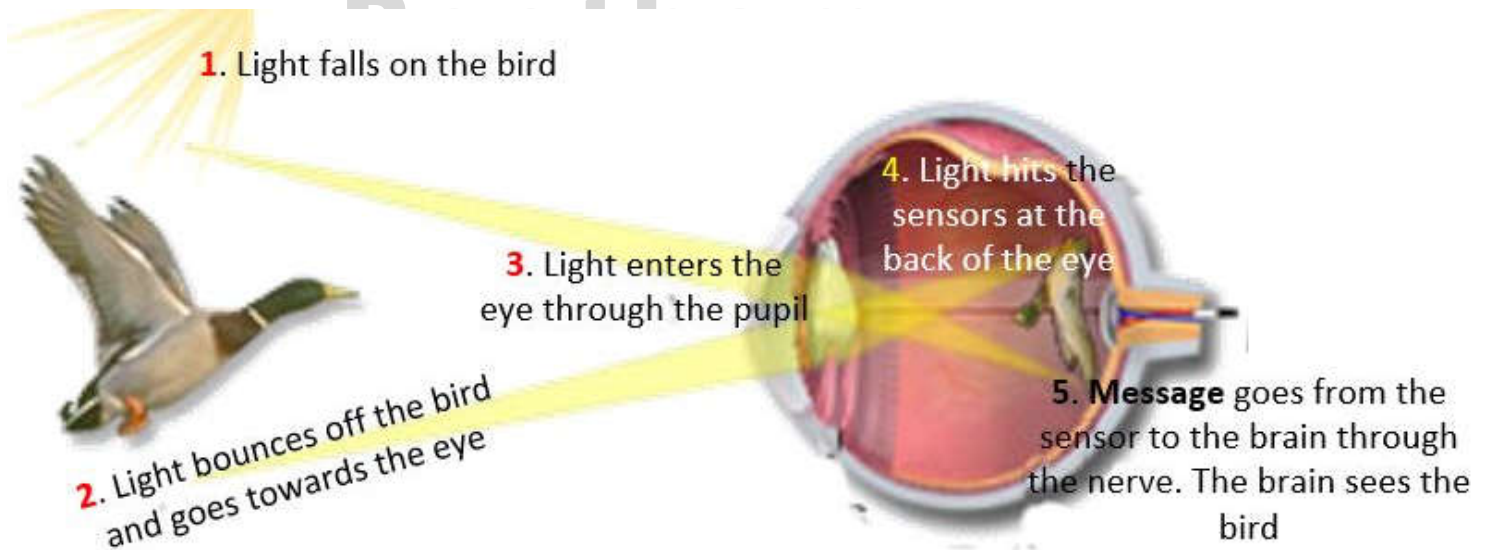
- The eyes help us see.
- The following are the parts of the eye.
 - Pupil – it is the black hole in the middle of the eye; light enters the eye through the pupil
 - Iris – it is the colored part of the eye; it controls the opening of the pupil
 - Eyelid – protects the eye
 - Eyelash – protects the eye from dust
 - Eyebrow – stops sweat from entering the eye



How We See

Vidhya

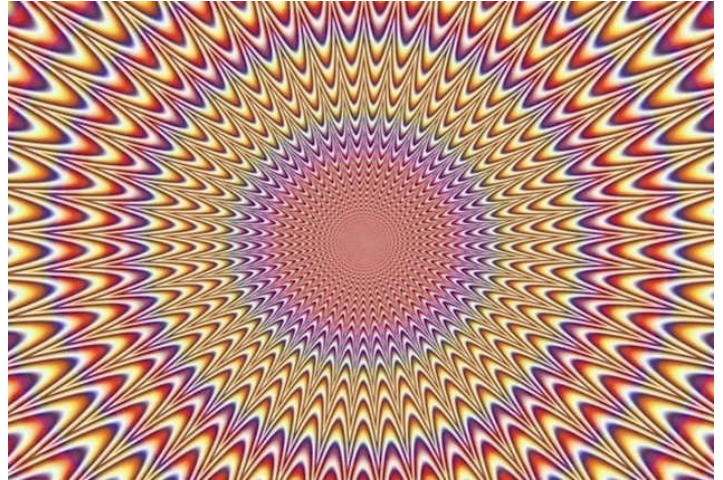
Read the picture carefully to understand how we see.





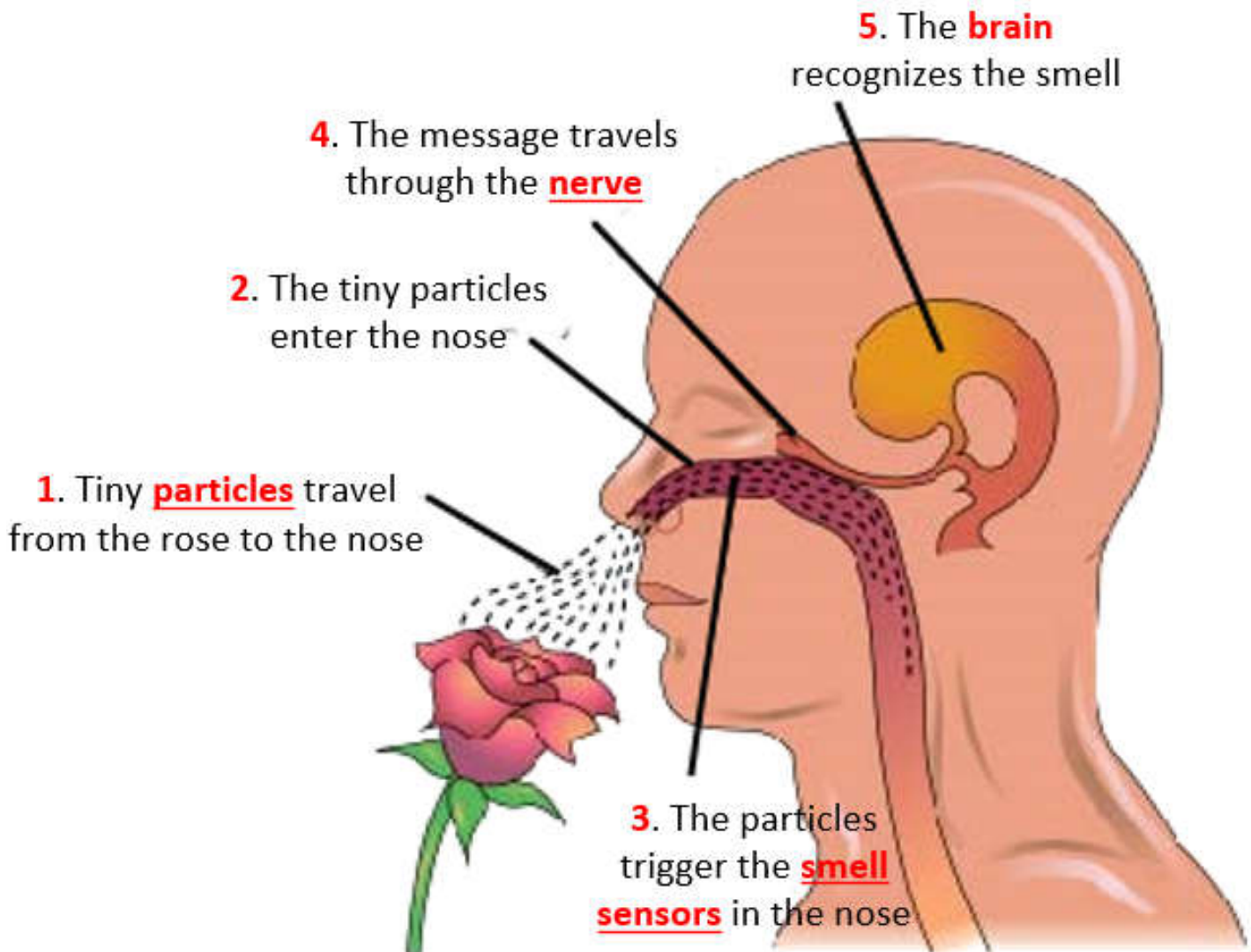
Optical Illusions

- Optical mean **sight**. Illusion means not **real**.
- See the picture on the right. It seems to shake.
- Optical illusions happen because they send **wrong** information to the brain.



Smell

The nose helps us smell. Read the picture carefully to understand how we smell.





Source of Smell

- If the source of smell is close, we will get the smell **fast**.
- If the source of smell is far, we will get the smell **slowly**.



Strong Smell

- Some things like perfumes have many **small particles**.
- These particles can travel **far**. That is why perfumes have a strong smell.
- Some things do not smell unless they are **cut**, rubbed or ground.
Example: onion



How Smelling Saves Us

- Smelling **smoke** when something is burning can save us from fire.
- Bad smell of rotten **food** stops us from eating it.



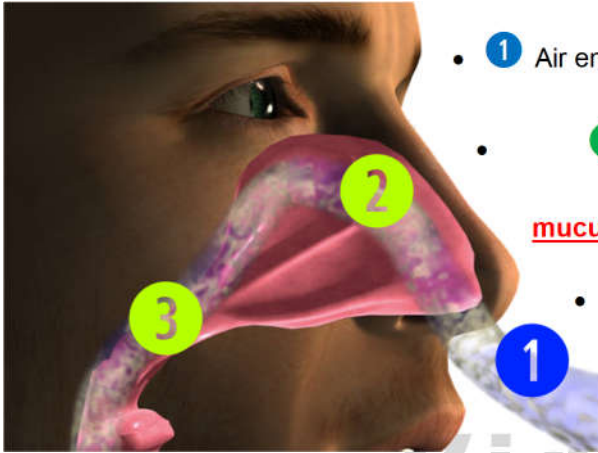


Harmful Smells

- Some materials contain **harmful chemicals**. Example: petrol, paint etc.
- When we smell these materials, **tiny particles** from them can enter the nose and **lungs**. This can make us sick.



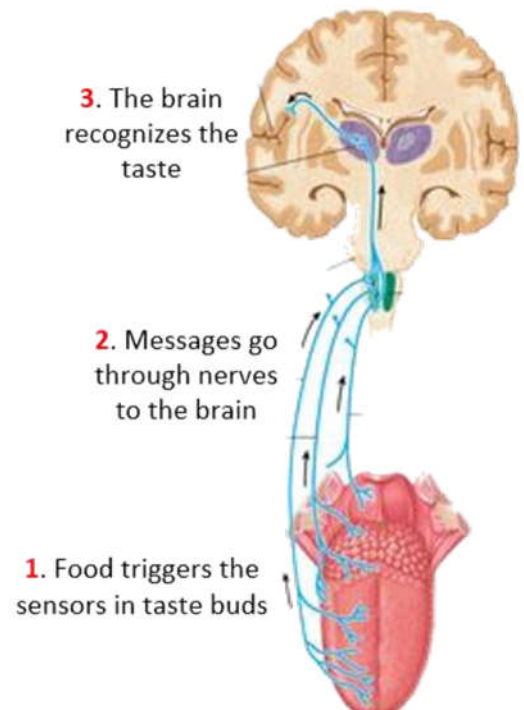
What Happens When We Breathe



- **1** Air enters the nose.
- **2** In the nose the dust in the air is removed by tiny **nasal hairs** and **mucus** (the sticky thing in the nose).
- **3** From here the air enters the **lungs**.

Taste

- The **tongue** helps us taste. It can identify **five** tastes. They are **bitter**, **salty**, **sour**, **sweet** and **umami** tastes.
- Different parts of the tongue identify different tastes.
- When we eat...
 - The **chemicals** in the food trigger the **sensors** in the **taste buds**.
 - The **taste buds** send message through **nerves** to the **brain**.
 - The **brain** recognizes the taste.





- Saliva is a wet liquid that is produced in the mouth.
 - When we eat, **chemicals** in the **food** mix with the **saliva**. Only when these two mix, **taste buds** sense the food.
 - So, only if the tongue is **wet**, we can taste well. If the tongue is **dry**, we cannot taste well.



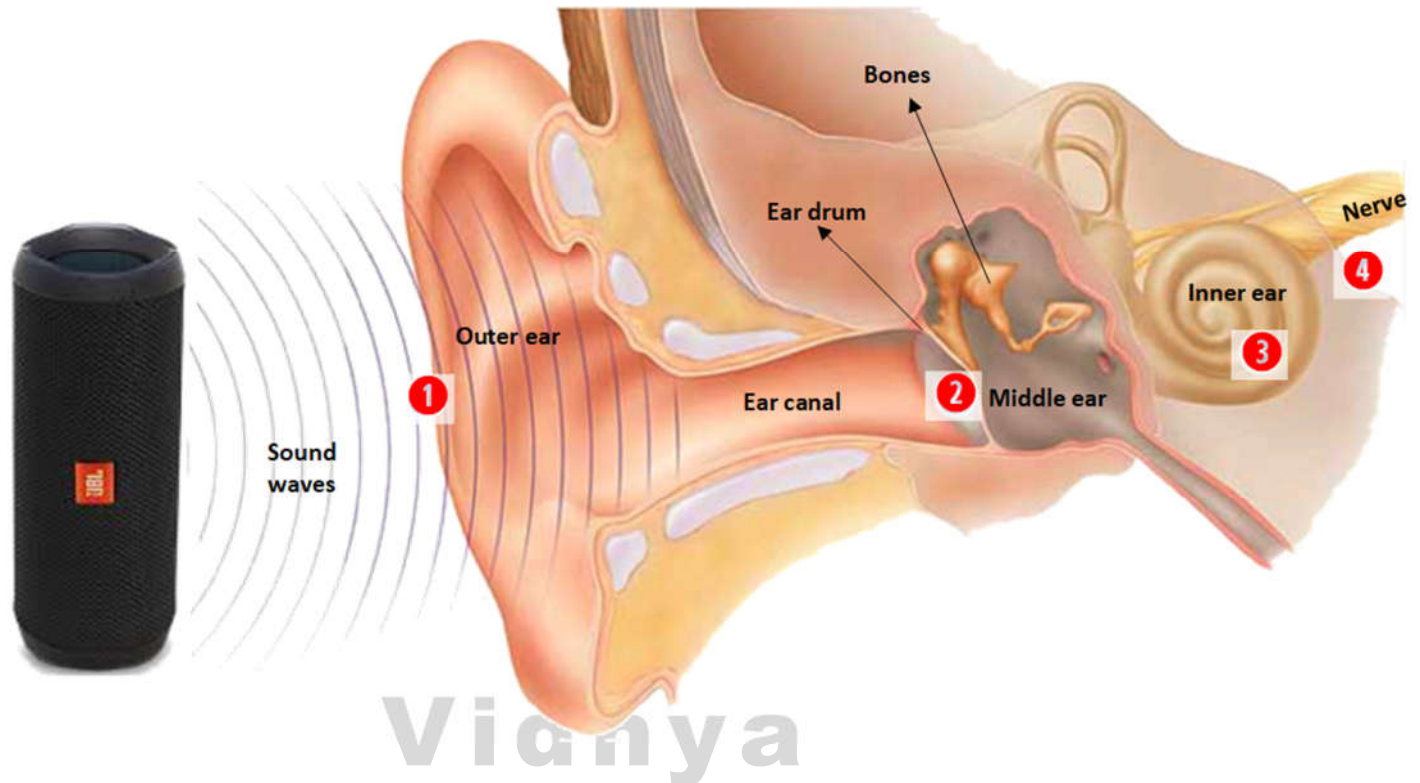
Difference Between Taste and Flavour

- The five **tastes** are bitter, salty, sour, sweet and umami tastes. Only the taste buds in the tongue are responsible for this.
- For **flavour**, the other senses like smelling and seeing are needed. Sour Green Apple, Strawberry and Blue Raspberry are the flavours of the pickles.
- Smell and flavour.
 - When we eat, the smell **chemicals** in the **food** drift to the smell sensors in the nose. From there, messages go to the brain and flavour is recognised.
 - So, if the nose is **closed**, we cannot get the flavour well.
- Sight and flavour.
 - When we **see** the food we eat, we can the flavour better.





Hearing



- The speaker produces **sound** waves. These **sound waves** reach the **outer ear**. Then, they pass through the **ear canal**. Here, the **sound waves** hit the **ear drum** and make it vibrate.
- These vibrations make the **small bones** in the **middle ear** vibrate.
- These vibrations make the **sensor hairs** in the **inner ear** vibrate.
- From here, **nerves** take the message to the **brain**. The **brain** recognizes the sound.

Why We May Lose Our Hearing

- As we grow **old**, the **sensor hairs** in the **inner ear** may get damaged. New sensor hairs do not **grow**. So, many **old** people lose their hearing.
- Very **loud noise** can damage hearing. So, we must stay away from **loud noise**.
 - We can protect our ears by wearing ear muffs.
- The ears of children are more sensitive to **noise** than adults. This is because children have shorter **ear canals**.

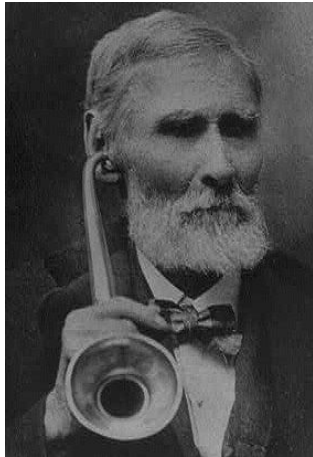




- Some people cannot hear well. They wear **hearing aids** to hear better. They **amplify** (make louder) sounds.



- Before hearing aids were invented, people used ear **trumpets** to amplify sounds. The



ear **trumpets** are bigger than the ears. So, **more** sound waves are collected and sent to the **sensor hairs** in the **inner ear**.

Source of Sound

- Anything that makes sound is a source of sound.
- Sound will be **loud** if we are close to the source of sound. Sound will be **soft** if we are far from the source of sound.

