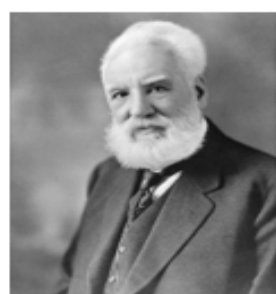


**I already know**

- that objects make different sounds.
- that I use ears to hear sounds.
- In music, different instruments make different sounds
- I can change the volume of a sound

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.
sound insulation	A material which blocks sound effectively.

Alexander Graham Bell
 1847-1922


- Born Edinburgh, Scotland
- Invented the first practical telephone
- He became interested in sound because his mother was losing her hearing.

What I will learn in this topic:

- Know how sounds are made, associating them with vibrating.
- Know how sound travels from a source to our ears.
- Know what happens to a sound as it travels from its source to our ears.
- Know the link between:
 - a. the volume of a sound and the strength of the vibrations that produced it.
 - b. pitch and the object producing a sound.

Scientific skills. I will: make observations, make predictions, plan for investigations, look for patterns, ask questions.

Sticky knowledge:

- **Know** that sound travels from its source in all directions and we hear it when it travels to our ears.
- **Know** sound travel can be blocked.
- **Know** sound spreads out as it travels.
- **Know** changing the shape, size and material of an object will change the sound it produces.
- **Know** sound is produced when an object vibrates.
- **Know** sound moves through all materials by making them vibrate.
- **Know** changing the way an object vibrates changes it's sound.
- **Know** bigger vibrations produce louder sounds and smaller vibrations produce quieter sounds.
- **Know** faster vibrations (higher frequencies) produce higher pitched sounds

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.

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

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.

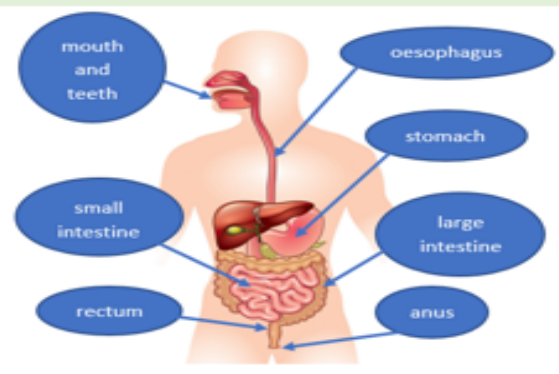


St Julie Catholic Primary School – Science

Topic: Animals including Humans

Year: 4

Strand: Biology



What should I already know?

- The parts of the human body and what they do.
- All animals need water, air and food to survive.
- The different ways in which humans are healthy.
- Animals get nutrition from what they eat. Humans and some animals have skeletons and muscles for support, protection and movement.
- What carnivores, omnivores and herbivores are. Excretion is one of the seven living processes.

In this topic I will learn:

- Teeth are used for cutting and chewing food.
- They start the digestive process which gives us the energy we need to live.
- Humans look after their teeth by brushing and flossing and ensuring that they do not eat foods high in sugar.

Not looking after teeth can lead to an increase in plaque and tooth decay.

In investigations I will:

- Identify fair tests
- Identify and use variables
- Make predictions
- Repeat measurements for accuracy
- Ask scientific questions
- Build scientific models to help answer questions

Sticky Knowledge to remember:

The main parts of the digestive system:

- Food enters the body through the **mouth**
- The **teeth** start to break the food down. **Saliva** is added and the tongue rolls the food into a ball.
- After swallowing, the food passes down the **oesophagus** to the stomach
- In the **stomach** the food is broken down further by being churned around and some chemicals are added.
- Food passes into the **small intestine**. Here **nutrients** are removed from the food to be used elsewhere in the body.
- The rest passes into the **large intestine** where **water** is removed to be used elsewhere in the body.
- What is left is then stored in the **rectum** until it leaves the body through the **anus** when you go to the toilet.

Teeth

Humans have 4 types of teeth:

- **incisors** – used for cutting
- **canines** – rip and tear food
- **molars and premolars** – for grinding and chewing food



Key vocabulary	
digestive system	The organs in your body involved in the digestion of food.
digestion	This is the way the body breaks down food so the body can absorb it.
herbivore	Animals that only eat plants.
carnivore	Animals that eat other animals.
omnivore	Animals that eat both plants and animals.
producer	All green plants can make food in their leaves. They are the only producers of food.
consumer	Animals that eat plants in a food chain.
predator	Animals that catch and eat other animals.
prey	Animals that are hunted and eaten by predators.
food chain	Animals eat plants or other animals. The way this happens is shown in a food chain.