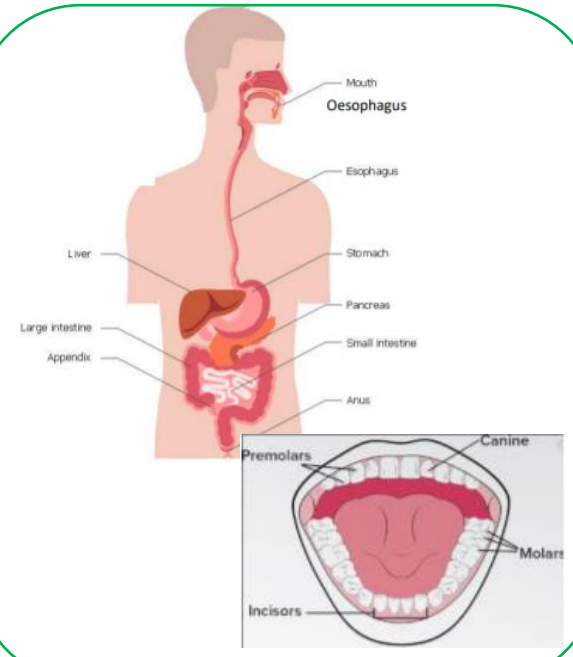
Autumn 1-The Digestive System: Biology

What? (key knowledge)	
The Digestive System	
What are the main parts of the digestive system?	The mouth, oesophagus, stomach, small intestine, large intestine, and anus
What is the role of the digestive system?	The digestive system breaks down food into nutrients so the body can use them for energy, growth and repair
What are the different types of teeth called?	Canines, incisors, premolars and molars
What role do teeth play in digestion?	They start the digestive process by cutting and chewing food

Food Chains	
What are producers?	Producers are living things that make their own food - usually using energy from the sun
What are prey?	Organisms (or living things) that predators kill for food
What are predators?	A predator is an animal that hunts, kills and eats other animals for food
What do food chains show?	A food chain shows how plants and animals get their energy

canine	pointed teeth near the front of the mouth of humans
carnivore	an animal that eats meat
decay	gradually destroyed by a natural process
digestion	breaking down ingested food material
excretion	the process of eliminating faeces from the body
faeces	solid waste substance that people pass through the anus
herbivore	an animal that only eats plants
incisor	the teeth at the front of the mouth used for biting
intestines	the tubes that food passes through when it has left your stomach
molar	large, flat teeth towards the back of your mouth used for chewing
omnivore	an animal that eats both plants and meat
oesophagus	the part of your body that carries the food from the mouth to the stomach



Influential Scientist:

William Beaumont

He was a surgeon in the U.S. Army who became known as the "Father of Gastric Physiology" following his research on human digestion.

Autumn 2 - Electricity: Physics
Forces, Levers and Pulleys: Physics

What? (key knowledge)

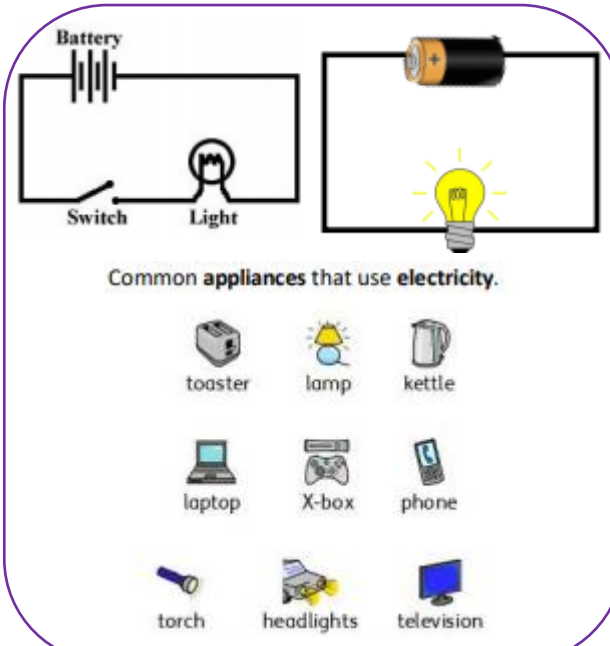
Electricity

Where does electricity come from?	Electricity is generated using energy from natural sources such as the Sun, oil, water and wind.
Which appliances run on electricity?	Some appliances use batteries and some use mains electricity.
What is a complete circuit?	A complete circuit is a loop that allows electrical current to flow through wires
What can be used to break the flow in a circuit?	A switch controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow.

Circuits

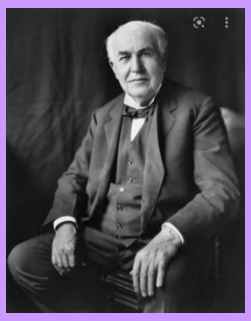
How does a circuit work?	The battery pushes the electricity along the wires from the positive terminal, through the bulb and back to the negative terminal. This creates a circuit.
What is an electrical conductor?	Objects that are made from materials that allow electricity to pass through
What is an electrical insulator?	Objects that are made from materials that do not allow electricity to pass through
What is a series circuit?	A simple circuit with several components one after the other.

appliances	a device or machine in your home that you use to do a job
battery	small devices that provide the power for electrical; made up of multiple cells
bulb	the glass part of an electric lamp, which gives out light when electricity passes through it
buzzer	an electrical device that is used to make a buzzing sound
cell	A cell is a single unit device which converts chemical energy into electric energy
component	the parts that something is made of
current	a flow of electricity through a wire or circuit
mains	where the supply of water, electricity, or gas enters a building
switch	a small control for an electrical device which you use to turn the device on or of
wires	a long thin piece of metal that is used to fasten things or to carry electric current



Influential Scientist:

Thomas Edison



He is best known for inventing 'domestic' lightbulbs to go in houses, and the electric power system that allows them to work.

Spring 1 - Sound: Physics

What? (key knowledge)

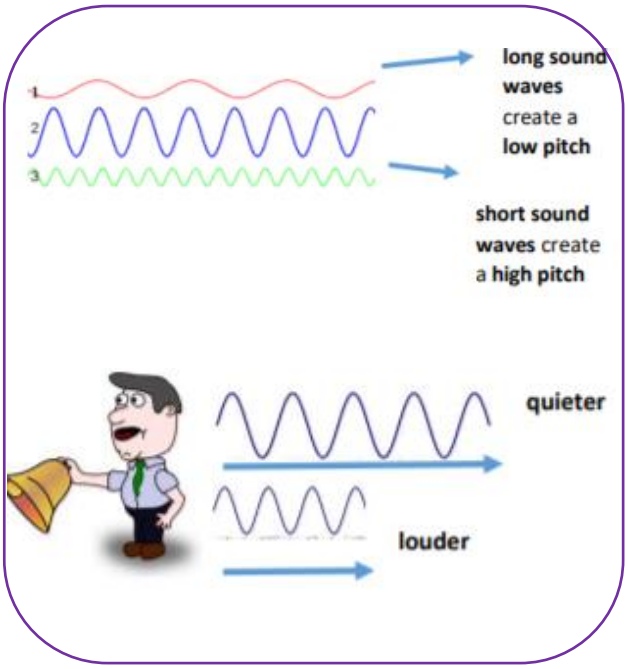
Sound

What is a sound?	A thing that can be heard.
How is a sound made?	When objects vibrate, a sound is made. The vibration makes the air around the object vibrate and the vibrations enter your ear.
How do sounds travel?	Sound waves travel through a medium (such as air, water, glass, stone, and brick).
What is pitch?	The pitch of a sound is how high or low it is.

Sound

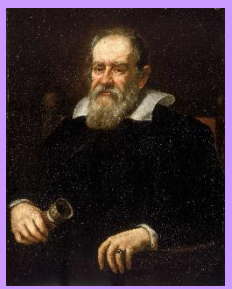
What is volume?	The volume of a sound is how loud or quiet it is.
How do we measure sound?	**Amplitude** measures how strong a sound wave is. **Decibels** measure how loud a sound is
How do we hear sounds?	The sound waves travel to the ear and make the eardrums vibrate.

vibration	Sound is caused by the vibration of a medium (usually air) and it travels in waves.
pitch	A high sound has a high pitch and a low sound has a low pitch. A tight drum skin gives a higher pitched sound than a loose drum skin.
volume	Volume is the perception of loudness from the intensity of a sound wave. The higher the intensity of a sound, the louder it is perceived in our ears, and the higher volume it has.
insulation	Protecting something by surrounding it with material that reduces or prevents the transmission of sound.
cochlea	The cochlea looks like a spiral-shaped snail shell deep in your ear. It plays an important part in helping you hear.
auditory	Auditory is close in meaning to acoustic, but auditory usually refers more to hearing than to sound.
frequency	Frequency is measured as the number of wave cycles that occur in one second.
hammer	The ear has little bones called ossicles that help you hear. They are called the hammer (malleus), anvil (incus), and stirrup (stapes). They amplify the sound or make it louder.



Influential Scientist:

Galileo Galilei



Galileo was the first scientist to record the relationship between the frequency of the wave to the pitch it produces.