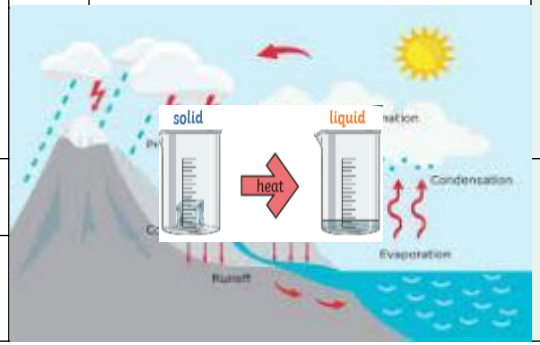
Year 4: States of Matter

Subject Specific Vocabulary

water vapour	Water that is in the form of gas.
condensation	When water vapour that is around us changes from a gas back to liquid.
precipitation	Any watery substance such as rain, water, snow, hail or sleet that falls to Earth.
evaporation	When liquid changes into gas, usually when it heats up.
substance	Any solid, liquid, powder or gas is a substance.
matter	Any solid, liquid or gas that exists in the universe.
lava	Very hot liquid that comes out of a volcano.
solid	A substance that stays the same shape. Its particles do not move.
liquid	Liquids will flow as they are made up of loosely packed particles.
gas	Gaseous matter is made up of matter that is so loose it is always moving.

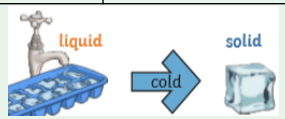
Stages of the water cycle

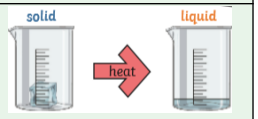
1	The sun heats up rivers, lakes and the sea.
2	Water evaporates into the air. This is called water vapour.
3	The water vapour rises, cools and condenses to water in the form of clouds.
4	The droplets in the clouds become too heavy and fall as rain, snow or hail.
5	The rain, snow or hail is then collected in rivers that run off to the sea.
6	The cycle starts again.



Sticky Knowledge about states of matter

1	Humans are made up of about 75% water.
2	A higher temperature will speed up evaporation.
3	A material's melting and freezing point is the same temperature.
4	Heating and cooling can cause materials to evaporate and condense.
5	When you freeze water, the liquid turns into it's solid form – ice. The particles in the liquid begin to slow down as they get colder.
6	When you boil water, the liquid turns into a gas. This is because the particles start to move faster until they are able to move around each other.



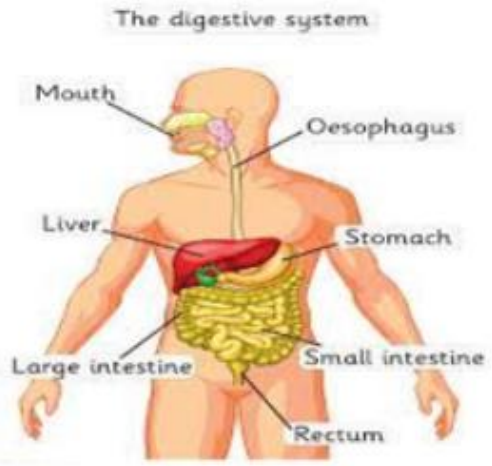


Year 4: Digestive System & Human Teeth

Subject Specific Vocabulary

pancreas	The pancreas produces juices called enzymes which help the body digest food.
oesophagus	The oesophagus is like a stretchy tube that moves food from the back of the throat to the stomach.
intestine	The main function of the small intestine is absorption of nutrients and minerals from food. The major function of the large intestine is to absorb water from the remaining indigestible food.
organ	The skin is the biggest organ of your body. Other organs include your brain, lungs, heart, liver, stomach, intestines, pancreas, and kidneys, all called internal organs.
molars	Molars are the teeth that are used for chewing and grinding our food.
canine	Canines are the teeth used for ripping and tearing our food. We have two located at the top of our mouth and two at the bottom.
food chain	A food chain is a diagram that shows us how animals are linked by what they eat.
predators	Predators are wild animals that hunt, or prey on, other animals. Predatory animals need the flesh of the animals that they kill to survive.
prey	The term prey refers to an animal that is sought, captured, and eaten by a predator.
salivary gland	The salivary glands contain special enzymes that help digest the starches in your food.

Digestive System



Important facts to know by the end of the digestive system topic:

- Know and name the parts of the digestive system.
- Know the function of each organ.
- There are three different types of teeth: molars, incisors and canine. Each have different functions.

- Know how food chains work and the roles of producers, predators and prey.
- Draw your own food chains.

Sticky Knowledge about the digestive system

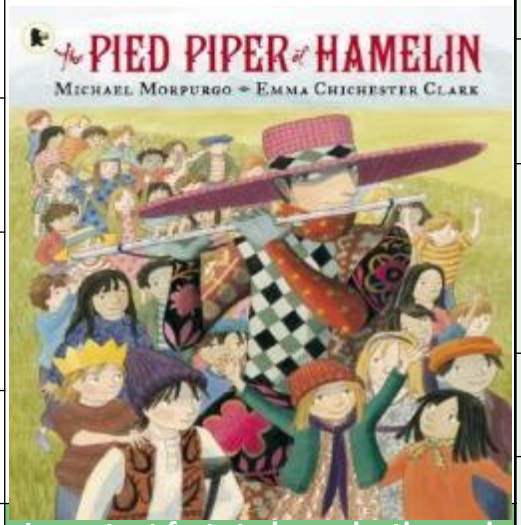
- ❑ The oesophagus is the food highway that takes your food from your mouth down into your stomach so that digestion can begin.
- ❑ The stomach is filled with powerful acids that break down the food into smaller pieces. It also lets us know when we are hungry.
- ❑ The liver creates different enzymes to help process food nutrients that are collected in the small intestine.
- ❑ The gallbladder is a storage unit for all of the bile and enzymes created by the liver. It stores them until they are needed for digestion.
- ❑ The main job for the small intestine is to absorb nutrients and minerals from food. In fact, 90% of food absorption takes place here, making it our main digestion location.
- ❑ The outside of our teeth are covered with enamel and the inside have blood vessels and nerves.
- ❑ The front teeth are called incisors, the four sharp teeth are called canines, the teeth at the back are called molars.

Year 4: Sound

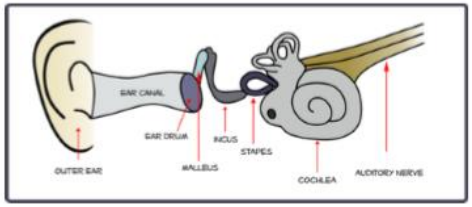
Subject Specific Vocabulary

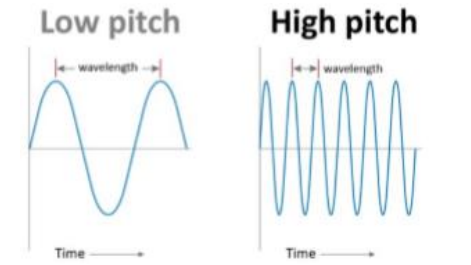
vibrating	Sound is caused by the vibration of a medium (usually air) and it travels in waves.
pitch	A high sound has a high pitch and a low sound has a low pitch. A tight drum skin gives a higher pitched sound than a loose drum skin.
volume	Volume is the perception of loudness from the intensity of a 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.
outer, middle and inner ear	The ear is made up of three different sections: the outer ear, the middle ear, and the inner ear. These parts all work together so you can hear and process sounds.
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.

Interesting Book



Important facts to know by the end of the sound topic:





Sticky Knowledge about Sound

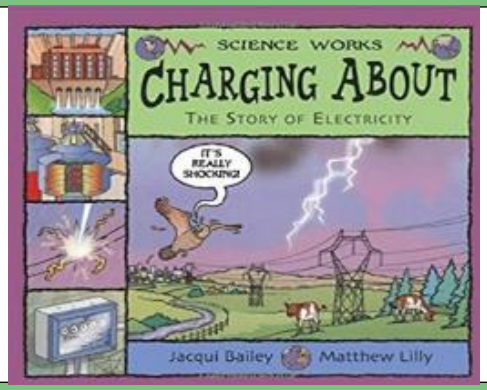
- ❑ Sound travels with a speed of 767 miles per hour but it cannot travel through a vacuum.
- ❑ Sound comes from vibrations. These vibrations create sound waves which move through mediums such as air and water before reaching our ears.
- ❑ Dogs can hear sounds at a higher frequency than humans.
- ❑ Our ear drums vibrate in a similar way to the original source of the vibration, allowing us to hear many different sounds.
- ❑ When traveling through water, sound moves four times faster than when it travels through air.
- ❑ Sound is used by many animals to detect danger, warning them of possible attacks before they happen.
- ❑ The loud noise you create by cracking a whip occurs because the tip is moving so fast it breaks the speed of sound!

Year 4: Electricity

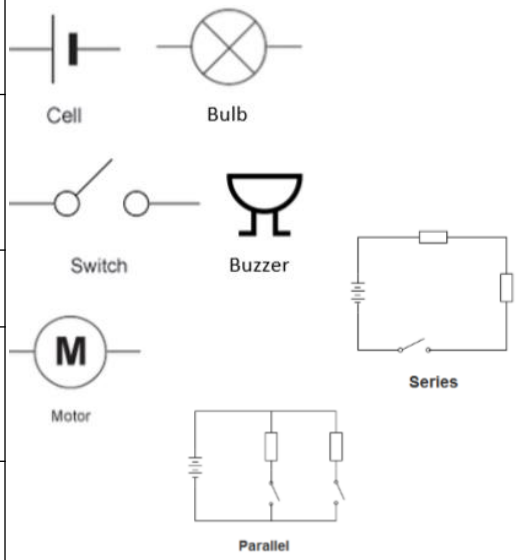
Subject Specific Vocabulary

circuit	An electrical circuit is a completed path through which an electrical current flows.
buzzers	A buzzer is an automatic signalling device. They are used as alarms and door bells.
conductor	A conductor is an object or type of material that allows the flow of an electrical current in one or more directions
battery	A battery is a device that stores chemical energy and makes it available in an electrical form.
cells	An electrical cell is a device that is used to generate electricity.
switch	A switch is an electrical component that can 'make' or 'break' an electrical circuit.
socket	Sockets allow electrical equipment to be connected to the alternating current (AC) power supply in buildings and at other sites.
appliance	An electrical appliance is a device that uses electricity to perform a function.
appliance series circuit	Components connected in series are connected along a single path, so the same current flows through all of the components.
insulator	An insulator is a material whose internal electric charges do not flow freely.

Interesting Book



Important facts to know by the end of the electricity topic in Year 4:



Sticky Knowledge about electricity

- ❑ Electricity can be generated from power stations, wind, the sun, water and even animal poo!
- ❑ Electricity is a type of energy that can build up in one place to flow to another.
- ❑ A power station is a place where electricity is created and sent to our homes.
- ❑ Many metals, such as copper, iron and steel are good electrical conductors. Plastic, wood, glass and rubber are good electrical insulators.
- ❑ Electricity travels at the speed of light, which is more than 186,000 miles per hour.
- ❑ When an electric charge builds up on the surface of an object it makes static electricity. This is why we sometimes have a small electric shock.
- ❑ The first power plant opened in 1882 and was opened by Thomas Edison.
- ❑ Thomas Edison was a very famous inventor who helped us make the most of electricity from bulbs to fuses.