

## Year 3 and 4 - Electricity

Prior Learning		Concepts	
<ul style="list-style-type: none"> <li>I can name items in the home that are electrical such as television, refrigerator and kettle.</li> <li>I know electricity in the home comes from batteries and plug sockets.</li> <li>I know electricity can be dangerous, especially near water.</li> <li>I know a switch turns items off and on.</li> <li>I can identify different materials like plastic, wood, metal and rock.</li> </ul>		<b>Material</b>	The matter from which a thing is or can be made.
		<b>Component</b>	part of a larger whole, such as a machine or vehicle.
Vocabulary		Diagram	
<b>Battery</b>	a container consisting of one or more cells, with electricity that is used as a source of power		
<b>Switch</b>	a device for making and breaking the connection in an electric circuit.		
<b>Wire</b>	metal drawn out into the form of a thin flexible thread or rod.		
<b>Circuit</b>	A closed path through which electricity flows or may flow.		
<b>Insulator</b>	a material or object that stops electricity or heat from transferring.		
<b>Conductor</b>	a material or object that lets electricity or heat transfer.		
Key Facts			
1. A <u>bulb</u> will light only when it is part of a <u>complete loop</u> with a working battery so the electricity can <u>flow</u> .			
2. Electricity can only flow in <u>one direction</u> .			
3. Circuits can have many <u>components</u> such as <u>batteries, wires, bulbs, buzzers, motors and switches</u> .			
4. <u>Conductors</u> allow electricity to pass through the object. <u>Insulators</u> stop electricity from passing. Most <u>metals</u> are good conductors.			
5. Common <u>appliances</u> in our homes run on <u>electricity</u> such as a refrigerator and many everyday objects would not work without an <u>electrical charge</u> such as a mobile phone.			
6. Electricity can be <u>dangerous</u> , it should be kept away from <u>water</u> especially and used safely.			

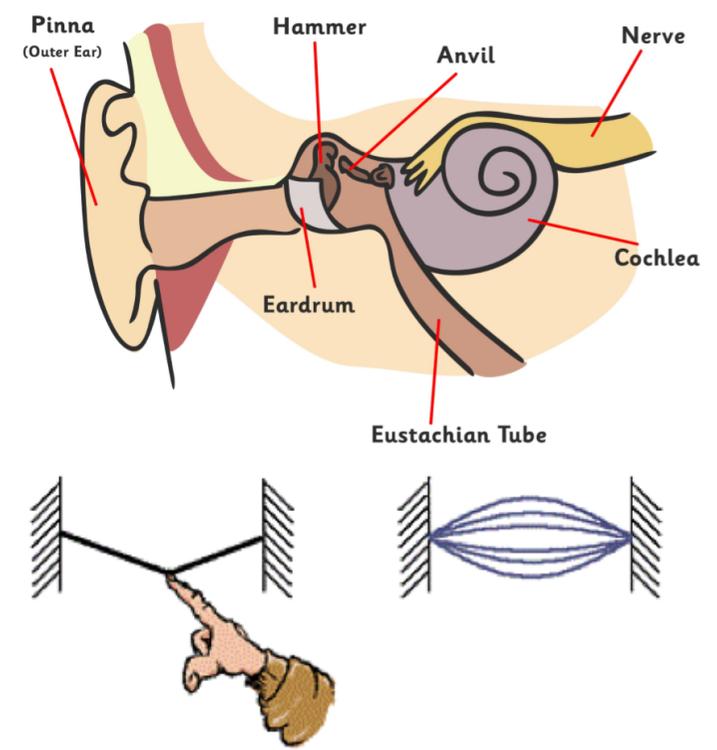
## Year 3 and 4 - Sound

Prior Learning
<ul style="list-style-type: none"> <li>• I know that we hear with our ears.</li> <li>• I know many objects make sounds when you tap or hit them.</li> <li>• I know that the volume on the television relates to sound.</li> <li>• I know sound is quieter the further away it is.</li> <li>• I know that different objects and instruments make different sounds.</li> </ul>

Concepts	
Travel	move, typically in a constant or predictable way.
Absorb	take in or soak up energy or a liquid or other substance.

Vocabulary	
Volume	quantity or power of sound; degree of loudness.
Vibration	quickly moving back and forth or up and down.
Pitch	the quality of a sound; the degree of highness or lowness of a tone.
Distance	the length of the space between two points.
Wave	transporting energy from one location to another location.
Instrument	an object or device for producing musical sounds.

### Diagram



Key Facts	
1)	Sound travels in waves and are made from <u>vibrations</u> .
2)	Sound can travel through <u>solids, liquids or gases</u> .
3)	The <u>pitch</u> is how high or low a sound is.
4)	The strength of vibrations changes the <u>volume</u> of the sound.
5)	We hear using our <u>ears</u> . The vibrations hit the <u>ear drum</u> and are passed to the <u>middle</u> and then the <u>inner</u> ear. Signals are then sent to your <u>brain</u> to tell you there is a sound.
6)	Sounds are measured in <u>decibels</u> . A normal conversation is about <u>60</u> and an aircraft taking off is about <u>180</u> . Very loud sounds, anything about <u>90</u> <u>decibels</u> , can cause <u>damage</u> to our ears.

## Year 3 and 4 - Living Things and Their Habitats

- Prior Learning**
- I can name different animal groups: fish, amphibians, reptiles, birds and mammals and carnivores, herbivores and omnivores.
  - I can identify structures of some animals such as fish having gills and mammals having hair or fur.
  - I know environments change over time and human activity influences this such as cutting down trees.
  - I know plants and animals are suited to their habitat such as a polar bear in the Arctic.

Concepts	
<b>Endanger</b>	to put in a dangerous situation.
<b>Survive</b>	to continue to exist or be in use.

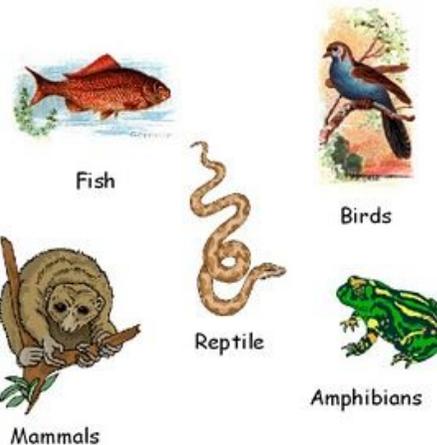
**Vocabulary**

<b>Deforestation</b>	the act or process of cutting down the trees of a forest.
<b>Ecological</b>	the scientific study of the relationships between living things and their environments.
<b>Environment</b>	everything that surrounds a particular type of living thing and affects its growth and health.
<b>Habitat</b>	the natural environment of an animal or plant.
<b>Invertebrate</b>	without a backbone
<b>Vertebrate</b>	with a backbone.

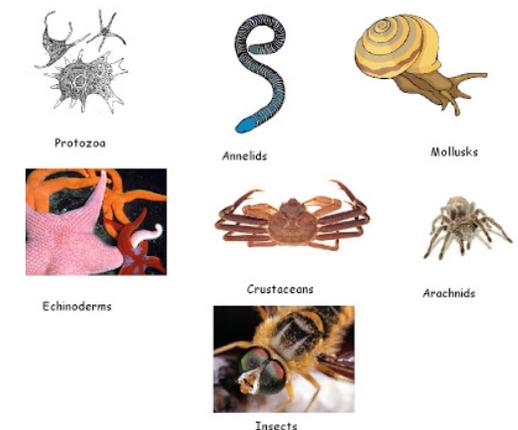
**Diagram**

# Vertebrates      Invertebrates

Animals with backbones



Animals without backbones



- Key Facts**
- 1) Living things are classified into groups such as vertebrates, invertebrates, flowering and non-flowering plants. Scientists use different classification keys for different reasons.
  - 2) Vertebrates have a backbone and include mammals, reptiles, amphibians, fish and birds.
  - 3) Invertebrates do not have a backbone and include snails, slugs, worms, spiders and insects.
  - 4) Recognise the impact of humans on an environment, both positive such as bird feeders and negative such as plastic pollution.
  - 5) Environments can change quickly and pose dangers to living things such as bush fires and avalanches.
  - 6) Environments can change over longer periods of time and pose dangers to living things such as global warming melting the ice caps

## Year 3 and 4 - Animals Including Humans

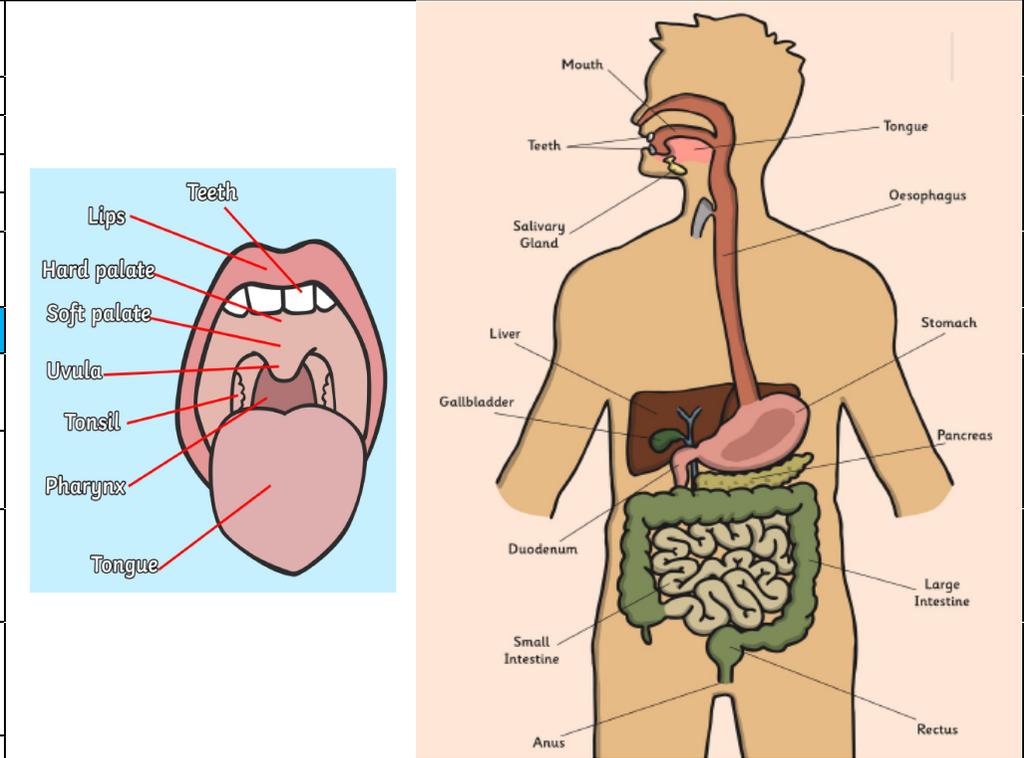
Prior Learning	Concepts	
<ul style="list-style-type: none"> <li>I know animals often hunt to obtain food and that many animals eat other animals to survive.</li> <li>I know the body parts that relate to the senses are the nose, eyes, ears, hands and mouth.</li> <li>I know it is good for my body to exercise regularly, eat a balanced diet, sleep around 10-12 hours per night and be hygienic.</li> <li>I know we put food into our mouth, we use our teeth to chew and we have to use the toilet as humans.</li> </ul>	<b>Function</b>	the purpose or role that an object or a person fulfils or is suited for.
	<b>System</b>	a group of related things or parts that work together as a whole.

Vocabulary	Diagram
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<b>Digestion</b>	the process by which the stomach and intestines change food into a form that the body can use as energy.
<b>Organs</b>	a part of plants or animals that performs a particular task.
<b>Predator</b>	an animal that hunts other animals for food.
<b>Prey</b>	an animal being hunted, caught, and eaten by another animal.
<b>Producer</b>	things that make their own food. Plants are producers.
<b>Teeth</b>	the hard, white, bony objects that grow in rows in the jaws of people and animals. Teeth are used for biting and chewing

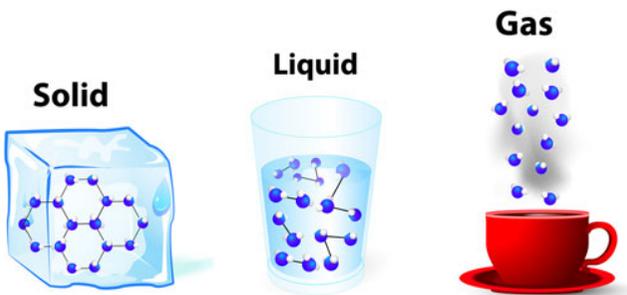
Key Facts
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- The main organs in the digestive system are mouth, teeth, tongue, oesophagus, stomach, small and large intestine, rectum and anus.
- The nutrients from food are absorbed into the body as it travels through the digestive system.
- Omnivores have the four different types of teeth to allow them to eat meat and plants, these are canines, incisors, molars and premolars. Herbivores have mainly molars.
- Teeth have different functions. Incisors for gripping and biting chunks off. Canines for tearing and ripping flesh. Premolars for holding and crushing food. Molars for chewing and crushing food to help with swallowing
- A food chain will usually always start with a producer (plant) which is something that makes its own food.
- Food chains have one producer and can contain many prey and predators. They are relevant to an animal's habitat.



## Year 3 and 4 - States of Matter

Prior Learning	Concepts	
<ul style="list-style-type: none"> <li>I know materials have different properties such as texture, shape, colour, transparency, absorbency and flexibility.</li> <li>I know that materials/objects can melt, freeze and burn.</li> <li>I know it rains when the sky is very cloudy.</li> <li>I know puddles get smaller and "disappear" when it is sunny.</li> <li>I know windows sometimes become unclear when it is raining or cold outside.</li> </ul>	<b>Material</b>	anything used for building or making something else.
	<b>Temperature</b>	the measurement of heat or cold as shown in degrees on a thermometer.

Vocabulary		Diagram	
<b>Condensation</b>	the act or process of changing from a gas to a liquid.		<p><b>Gas</b></p>
<b>Evaporation</b>	to turn from liquid into gas; pass away in the form of vapor. Heat.		
<b>Gas</b>	a gas rapidly spreads out when it is warmed and contracts when it is cooled.		
<b>Liquid</b>	flows easily. Liquid can take on the shape of any container it is poured into.		
<b>Solid</b>	having a firm shape or form.		
<b>State</b>	the condition of a person or thing.		

Key Facts
1. There are 3 states <u>solid, liquid and gas</u> . Materials can change their state dependent on <u>temperature measured in Celsius (°C)</u> . Materials may turn to a liquid or gas if <u>heated</u> and turn to solid or liquid if <u>cooled</u> .
2. <u>Solids</u> have a definite shape. All particles are <u>close together</u>
3. <u>Liquids</u> take the shape of the container they are in. Particles are <u>not close together and flow</u> .
4. <u>Gases</u> can spread out continuously. Particles <u>move freely and are far apart</u> .
5. <u>Water evaporates</u> from a source such as a puddle, seas, rivers or lakes. It rises into the air and cools to form clouds which is known as <u>condensation</u> . <u>Precipitation</u> happens when the clouds become heavy and water is released. The water travels back to the source and the process starts again.
6. <u>Precipitation</u> comes in many forms such as <u>rain, ice, hail, sleet or snow</u> .

