

# Year 5 Autumn Term 2023

## Knowledge Organisers



### Lesson Sequence



1. Understand the life processes of a plant.



2. Understand the life cycles of mammals.



3. Compare the life cycles of insects and amphibians.



4. Understand the life cycle of birds and reptiles.



5. Know about the life and work of Jane Goodall and David Attenborough.



6. Research and present the life cycle of a creature.

### Reproduction in plants

Plants contain both male and female cells. Some need to be pollinated in order to be fertilised. Others use asexual reproduction to reproduce.

#### Common Flower Parts



### Mammals

Mammals reproduce and give birth to live young. They can be either placental, monotreme or marsupial.



### Birds and Reptiles

Most birds and reptiles are born when the mother lays eggs and incubates them until they are ready to hatch. Once the egg is hatched, the baby is looked after by the mother before leaving the nest.

### Important People

David Attenborough and Jane Goodall study living things. They present the life of animals on earth and have made important documentaries so we can learn about the world around us.





### Metamorphosis

Amphibians are a bit different. Many are born live or underwater. They complete a metamorphosis as adults and can live and breathe on land. Metamorphosis is the change in body form and habits during the life cycle.





## Rocket Words

	<b>living organism</b>	something that can move, use energy and reproduce
	<b>naturalist</b>	an expert in the studies of natural history
	<b>primatologist</b>	a person who carries out a scientific study of primates
	<b>metamorphosis</b>	when insects and amphibians transform from larval stage to their adult form
	<b>endangered</b>	an animal is considered endangered when there are very few of them alive
	<b>asexual</b>	where only one parent is needed to create offspring
	<b>reproduction</b>	to make offspring either sexually or asexually
	<b>fertilisation</b>	when a sperm and egg cell join together
	<b>placental mammal</b>	has live young which develop before birth inside a female mammal
	<b>monotreme mammal</b>	a mammal who lays eggs to reproduce



### Lesson Sequence

-  1. Explore properties of materials
-  2. Explore thermal conductors and thermal insulators
-  3. Explore hardness of materials
-  4. Discover materials that are soluble in water
-  5. Investigate the solubility of materials
-  6. Explore how mixtures can be separated by filtering, sieving, evaporating or magnets

### Properties of Materials

conducts energy	
insulates energy	
transparent	
waterproof	
durable (strong)	
magnetic	

### Everyday Materials

Metal saucepans **conduct** heat to warm food.



Wooden spoons and plastic handles **insulate** heat so hands do not get burned.

### Soluble Materials

Some solids **dissolve** in water (**SOLUBLE**).



Some solids do not **dissolve** in water (**INSOLUBLE**).



### Separating Materials

#### Sieving



#### Filtering



#### Magnetism



- Magnetic metals:
- iron
  - nickel
  - steel



## Rocket Words

	conductive	a material that allows heat and/or electricity to pass through it
	magnetic	material that is attracted to a magnet
	thermal	using or producing heat
	conduction	heat moving from one object to another through contact
	hardness	resistance to scratching and pressure
	force	when an object is acted upon by a pull or push motion in a specific direction
	dissolve	to mix with a liquid and become part of the liquid
	solute	a substance that can be dissolved in liquid
	solvent	a substance that can dissolve in a solute, water is a solvent
	substance	any material, such as sugar
	filtering	the separation of a mixture using a tool with small holes to separate particles
	evaporation	the process where a liquid changes into a gas

## Knowledge organiser – Volcanoes and Earthquakes



### What will we be learning?

- The structure of the Earth.
- Features of a volcano.
- Famous volcanoes and earthquakes.
- Effects of volcanoes and earthquakes.
- Preparing for an earthquake.
- What it's like living near a volcano.

### Key facts

Famous volcanoes:

Soufrière (St Lucia, North America), ~~Eyjafjallajökull~~ (Iceland, Europe), ~~Popocatepetl~~ (Mexico, North America), Vesuvius (Italy, Europe), St Helens (USA, North America), Etna (Italy, Europe).

### Key knowledge

The Earth is made up of layers. The top layer, the Earth's crust, consists of large slabs of rocks, called plates. The plates move as the hot mantle flows beneath them. The movement of the plates causes earthquakes and leads to volcanoes erupting.

Earthquakes are measured on the Richter scale. They can cause devastating damage to buildings, roads and land. When volcanoes erupt they spew out lava. This is a very hot liquid that destroy anything in its path.



Place names	Geographical terms and processes	Locational terms
Great African Rift Valley Haiti Iceland Japan Mauna Loa Pacific Ring of Fire	crater disaster dormant eruption magma tsunami	epicentre plate boundary

### Glossary

**dormant:** a dormant volcano is a volcano, like Kilimanjaro, that has not erupted for a long time

**epicentre:** where an earthquake starts and is felt most strongly

**tsunami:** a huge, powerful wave caused by an earthquake