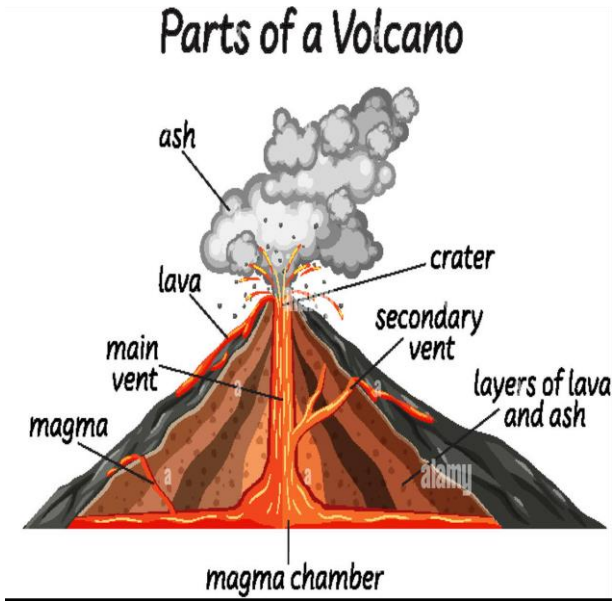
Key Vocabulary

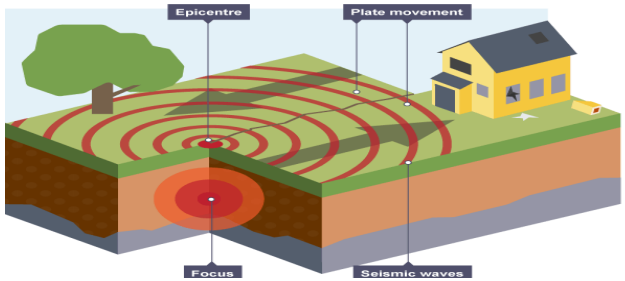
Cumulonimbus cloud	Large thunderstorm clouds.
Erupt	To suddenly burst out causing lava to explode out of the earth's surface.
Fossils	The remains of plants or animals that lived a long time ago which can be found deep in the earth.
Magma	Extremely hot, liquid rock.
Tectonic plates	The earth's crust is made up of large areas called tectonic plates that join together.
Ring of Fire	The circle of volcanoes and earthquake sites in the pacific ocean.
Climate zones	A world area or region distinguished from a neighbor by a major physical climatic characteristic that is of global scale.
Summit	The highest point of a mountain.
Epicentre	The central point of origin of the earthquake.

Theme Name: Earthquakes, Zones and Volcanoes

Summary:

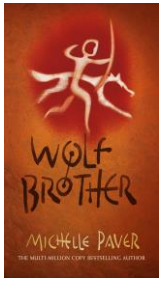
During this topic, I will be learning about Earthquakes, Zones and Volcanoes. I will become a geographer and will investigate patterns of earthquakes, mountains and volcanoes around the world. Also, I will explore the different climatic and vegetation zones of the world, find out where natural resources are found and explore how countries are linked through their use of natural resources. This will be my Geography and English focus for the whole of Summer Term.





Texts that we can read that will link to our learning:

This term, I will be reading a fictional book called 'Wolf Brother' by Michelle Paver. This text is the first episode in Michelle Paver's riveting saga, set 6000 years ago. In Torak's shadow-world of snow, forests, bears and shamanic rituals, life is harsh and fragile. Torak must seek and find the mythical Mountain of the World Spirit, who will give him the strength to defeat the demonic beast.



Activities:

- In Maths, I will describe the strength of earthquakes, using a scale of numbers called the Richter scale. The Richter scale grows by powers of 10.
- In English, I will be writing an explanation text all about volcanoes, along with learning about poetic styles and writing a climate zone poem. To conclude the term, we will be planning and writing portal stories based on our journey to a volcanic island.

Art and DT

Art:

At the end of this half term I will know:

At the end of this half-term, I will be taking influence from the artist Stephanie Peters to create original pieces that combine colours, tones and tints to enhance the mood of a piece. Stephanie Peters is a mixed media artist creating bold, colourful works of art in pastels, charcoal, acrylic, graphite, watercolour, oil and mixed media. Her style ranges from vibrant abstracts to soft portraits of wildlife. This series of natural disasters show each disaster abstractly imitated through action and colour, and then stitched up to show the days after. This series was created to spark a conversation about our changing planet, an inspire the future to look at our new reality with love and action. Even if it presents itself in a chaotic mess.

Whilst learning about mountains I will focus on the artist Jen Aranyi to combine line and build up layers of colour. Jen Aranyi is a watercolour nature artist and graphic designer. Her artwork is heavily influenced by nature and the world around us. She is drawn to bright colours and often creates work with vibrant pops of colour, which contrast with simplified black and white line art. Her work predominately features landscapes and nature scenery, and often incorporates colourful night skies dotted with stars and constellations.

Also, I will be focusing on the artist Georgia O'Keeffe, who was at forefront of the American Modernism her art career spans decades. She liked the idea of expressing herself through using line, colour and shading in a harmonious way. "Colours and shapes make a more definite statement than words." Many of her paintings were produced by looking closely and imaginatively at the world. By observing her artwork, I will be using her influence and style to create a landscape using lines to show movement.

Finally, when I learn about volcanoes, I will be focusing on the artist Nick Rowland. He is inspired by shapes, colour, trees and nature. He likes to push his boundaries with paint, colour and building his pictures up in layers. His paintings are a process of abstraction, which continues in all of his artwork. By observing his work, I will develop a personal style of painting using brush techniques and the qualities of paint to create texture.

DT

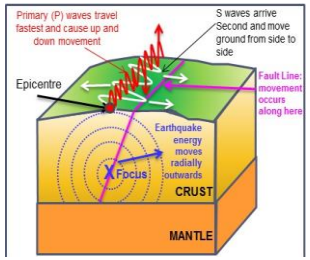
At the end of this half term I will know:

At the end of this half-term, I will know that rock cakes are a light, crumbly cake that can incorporate a number of different flavours. Also, I will know that the basic process involves mixing of ingredients until the mixture is a thick, lumpy dough and will know that rubbing in is a method used to combine cubed butter and flour to make a bread crumb mix. When making rock cakes, I will know how to measure accurately and calculate ratios of ingredients to scale up and down from a reciepe. In addition, I will know a range of baking techniques in order to create rock cakes well. Furthermore, I will know how to effectively refine reciepes, including ingreidents, menthods and cooking times to make a rock cake.

Geography

Earthquakes

An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and sometimes get stuck. When this happens pressure builds up. When this pressure is eventually released an earthquake tends to occur.



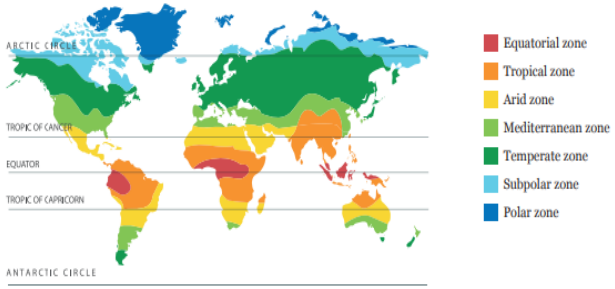
I will be learning about the earthquake 'Haiti' that occurred on 12th January 2010, which had a magnitude of 7. Haiti is part of a large Caribbean island called Hispaniola. The Dominican Republic is located to the east of Haiti and covers over half of the island. Haiti lies right on the boundary of the Caribbean and North American plates. There was slippage along a conservative plate boundary that runs through Haiti. Some of the social impacts of this earthquake were: 3 million people affected and several hospitals collapsed.

Time Zones

A time zone is an area on Earth that has a specific time that all citizens can set their clocks to. The Prime Meridian line is a time line that runs through London, which splits the earth into Eastern and Western hemispheres. I will be learning that there are different time zones across the world and I will be able to work out time differences in different places around the world.

Furthermore, I will know that lines extending around the Earth horizontally are called lines of latitude; vertically are called lines of longitude. I will be able to place these lines accurately on a world map.

Climate Zones



Climate zones are areas around the world with specific patterns of weather. In a certain place, if there is a pattern of weather that occurs over a long period of time, this can be described as its climate. If a place has colder temperatures and high rainfall in the winter, but sunny, warmer conditions in the summer, this would be a temperate climate zone. The coldest climates are found in the Arctic and Antarctic, whilst the hottest areas are found in countries near the Equator. It is important to note that the weather is the general day-to-day conditions of a place, while the climate is the pattern of this weather over a long time.

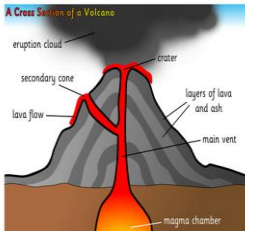
Climate zones are formed when a country is close to the Equator, the Sun's rays are extremely intense and concentrated on a very small area, which heats the Earth much more. This creates hotter climates, such as arid, semi-arid and desert areas. The Sun's rays, therefore, reach the Polar Regions at an angle, rather than in a direct beam. With less heat, these areas have a much colder climate that we typically associate with the Arctic and Antarctic regions. These also have much wetter conditions, as the warm, moist air from the Equator rises and travels up towards the Polar Regions. Between the hottest and coldest regions, there are a variety of different climates across the globe, each with varying temperatures, rainfall and wildlife.

The 6 major climate zones are:

- **Tropical:** These climate zones are hot and humid as they sit directly opposite the Equator.
- **Arid:** These areas are characteristic for being extremely dry and most often these are deserts.
- **Mediterranean:** These locations have hot, dry summers but cold, dry winters.
- **Temperate:** Temperate areas have mild summers and winters that aren't too cold, very typical of our climate here in the United Kingdom. They have moderate conditions all year round.
- **Polar:** The polar climate zones have long periods of extremely cold conditions.

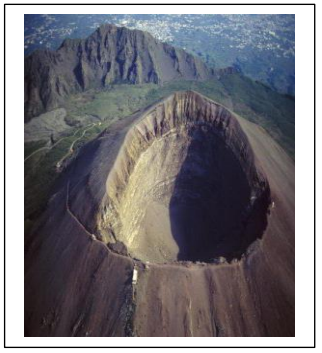
Volcanoes

Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it. There are 3 types of volcanoes. These are: active, dormant and extinct. If a volcano is classified as active it has erupted in the last 10,000 years. Dormant volcanoes haven't erupted in the last 10, 000 years but may erupt again. Extinct volcanoes aren't expected to erupt again in the future.

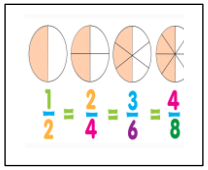


The Ring of Fire is the geographical area around the edges of the Pacific Ocean. It is called so because it is shaped as a horseshoe and it has more exploding, active volcanoes and earthquakes than any place on the earth. It stretches for 40,000 kilometres and has 755 of the world's volcanoes. 80% of the world's earthquakes occur in this area.

I will be learning about the volcanic eruption 'Mount Vesuvius', which is an active, stratovolcano on the Gulf of Naples in southern Italy. Mount Vesuvius is famous for an eruption that happened in 79CE. Thousands of people died when lava, ashes and mud buried the cities of Pompeii, Herculaneum and Stabiae. The cities were forgotten until archaeologists began digging up their ruins in the 1700s.

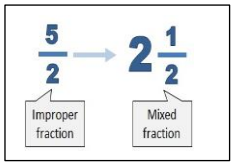


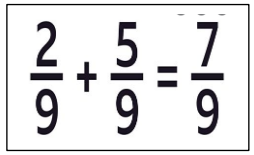
Maths:

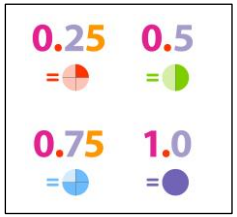


Here are the National Curriculum objectives that we will cover this term:

- I can compare and order fractions whose denominators are all multiples of the same number.
- I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- I can recognise mixed numbers and improper fractions and convert from one form to the other and write
- Mathematical statements > 1 as a mixed number.
- I can add and subtract fractions with the same denominator and denominators that are multiples of the same number.
- I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- I can read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$].
- I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
- I can round decimals with two decimal places to the nearest whole number and to one decimal place.
- I can read, write, order and compare numbers with up to three decimal places.
- I can add and subtract decimals.
- I can solve problems involving number up to three decimal places.
- I can recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.
- I can solve problems which require knowing percentage and decimal equivalents.

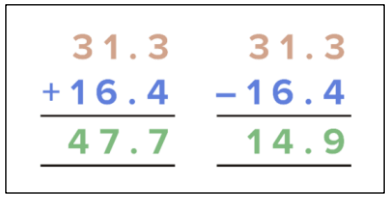






At the end of the half term:

- I will know what a proper fraction is. A proper fraction is a fraction that is less than one, with the numerator less than the denominator.
- I will know what a numerator and denominator is. A numerator is the top number in a fraction and shows how many parts we have.
- A denominator is the bottom number and shows how many equal parts the item is divided into.
  I will know that the line that separates the numerator and denominator is called a vinculum.
- I will know how to compare and order fractions whose denominators are all multiples of the same number.
- I will know what an equivalent fraction is and be able to identify and write equivalent fractions. For example, fractions equivalent to 1/2 are 6/12, 4/8, etc.
- I will know the difference between a mixed number and an improper fraction. Mixed numbers are made up of a whole number and a separate fraction, e.g. 7 2/3. Improper fractions do not show whole numbers separately and the numerator is bigger than the denominator, e.g. 23/3. This is equivalent to 7 2/3.
- I will know how to convert between a mixed number and an improper fraction.
- I will know how to add or subtract two or more fractions with the same denominator.
- I will know what a common denominator is and how to find the lowest common denominator. A common denominator is a common multiple of the denominators of two or more fractions. For example, for the fractions 24 and 48 are two of the common denominators for denominators 8 and 12.
- I will be able to add and subtract fractions with denominators that are multiples of the same number.
- I will know that a decimal is a number expressed in the scale of tens.
- I will know that a decimal point is a point or dot used to separate the whole part of a number from the fractional part of a number.
- I will know that when I talk about decimals, it is as if I were splitting one whole up into smaller parts.
- If I coloured in one of the squares in the diagram, this would be represented as the decimal 0.01 (which is one hundredth or 1/100).
- If I coloured in ten of the squares in the second diagram (therefore colouring in 10/100 or 1/10), this would be represented by the decimal 0.1.
- I will know how to round decimals with two decimal places to the nearest whole number (for example, 2.56 to the nearest whole number
- equals 3) and to one decimal place (for example, 2.56 to one decimal place equals 2.6).
- I will know how to order and compare decimal numbers up to three decimal points.
- I will know how to add and subtract decimals, with up to two decimal places.
- I will know how to work out equivalent fractions and decimals (for example: knowing that 0.71 = 71/100). I will learn about thousandths and know that they are represented in the third column after the decimal point (0.001 = one thousandth = 1/1000).
- I will know what the percent symbol looks like (%) and I will know that percent relates to 'number of hundred parts'.
- I will be able to write percentages as a fraction with a denominator of 100 and as a decimal. For example: 20% = 20/100 = 0.2.
- I will be able to work out percentages of an amount. For example 50% of 100 = 50.



PSHE :

In PHSE we will be following the lessons set out in My Happy Mind. We will start with 'Appreciate', then move on to 'Relate' and complete the term by beginning the final module 'Engage'.

Appreciate

In this unit we will learn about what happens in our brain when we give and receive gratitude. When thinking about ourselves, gratitude focuses on building self-esteem and thinking about our own character strengths and what we appreciate about ourselves. When showing gratitude of others we are encouraged to stop and reflect about who in our lives we appreciate and why.

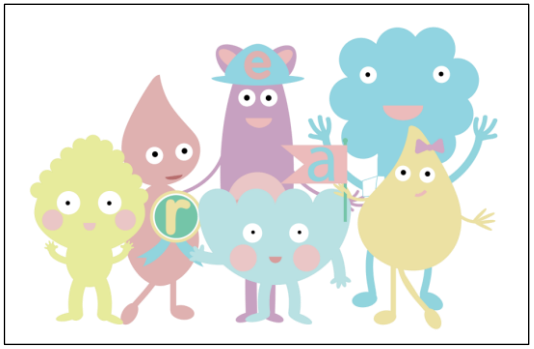
At the end of this term, I will know:

To learn what appreciate means.
To learn why Gratitude is important.
To learn how to develop a deeper sense of Gratitude.
To know what happens when we give and receive gratitude.
To know what the Domino Effect is.
To know what three things are important to appreciate.
To know which hormone gets released when we give and receive gratitude.
To learn how to create a habit of giving gratitude.
To learn how gratitude can help us face problems.
To learn how to appreciate ourselves.
To learn about the links between character strengths and gratitude for ourselves.

Relate

In this unit we will learn the importance of being able to relate or get along with other in order to have positive relationships.

At the end of the term, I will know:



To learn how to understand and celebrate our differences.
To learn what Stop, Understand and Consider mean and how it can help.
To learn how to use our strengths in different ways.
To know what makes a good friend.
To know how friends help us to solve problems.
To know why it is important to show Gratitude to friends.
To know how Active Listening can help us to Relate with others.
To know how Active Listening can help us to Stop, Understand and Consider.

Engage

In this unit we will focus on bringing together everything we have learnt throughout the My Happy Mind curriculum. We will focus in particular on using the knowledge and skills they have acquired to help them engage in the world through goal setting. Integral to this is focusing on the character strengths of perseverance, which links closely to resilience.

At the end of this term, I will know:

To identify all the habits, we've learnt so far.
To know about what we Engage in.
To know how we can feel good.
To know how we can feel good and do good.
To know what Big Dream Goals are.
To know how our feelings affect our Engagement levels.
To know how perseverance and resilience helps us.
To know how to stay focussed on our goals.
To know how we already have the skills of perseverance and resilience.
To bring our My Happy mind journey to an end for the year.
To recap on everything, we can learn about ourselves this year.

Also, this term in PSHE we will be learning about how to manage a successful enterprise.

Enterprise:

This unit will encourage us to develop skills for life, learning and employment. We will learn how to be our own boss, to start our company or to make a living from a personal passion. Our enterprise will benefit the economy, our local community and myself.

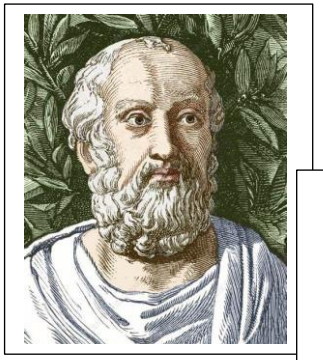
At the end of the half-term I will know:

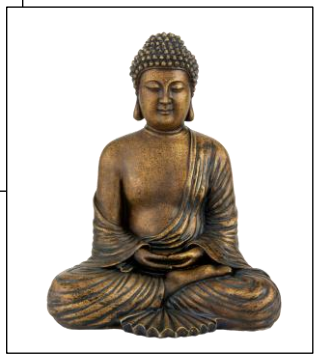
- How to reflect on and celebrate my achievements.
- Identify my strengths and areas for improvement.
- Set high aspirations and goals.
- Understand what is meant by enterprise and begin to develop enterprise skills.
- Work collaboratively towards shared goals.

RE:

Spring 1

In this unit we will be enquiring 'Why should we be good? And 'What do the great philosophers teach about the meaning of life'. The main discipline for this unit will be philosophy.





At the end of the term, I will be able to:

- Explore and interpret Plato's thoughts experiment 'The Allegory of the Cave'.
- Compare Karmis and Christian beliefs and how they affected behaviour.
- Examine Buddhist teachings on how life a good life.
- Compose an argument which includes ideas from religious and philosophical concepts.

Spring 2

In this unit we will be enquiring 'What difference does the resurrection make to Christian?'. The main discipline for this unit will be Theology.

At the end of the term, I will be able to:

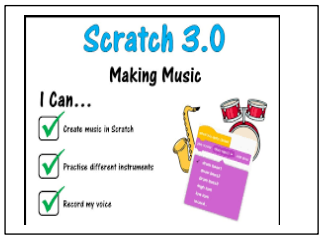
- Examine the purpose of religious and secular celebrations.
- Compare and contrast the Gospels of Christ's Resurrection.
- Explain the significance of a religious festival to Christian beliefs.
- Debate the significance of the Easter festival and Christian beliefs.
- Create an infographic poster explaining the relevance of the Resurrection.

Computing:

This term, I will be developing my coding and music skills to different sounds, beats and melodies. I will use the programming software scratch to develop these skills.

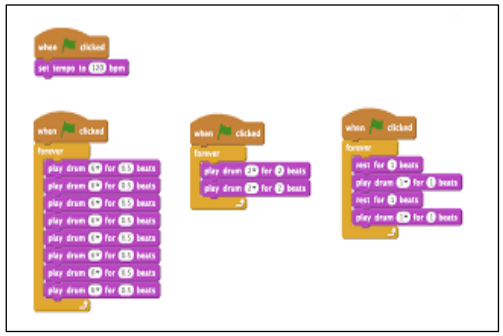
Programming:

- Design, write and debug programs that accomplish specific goals.
- Use sequence, selection, and repetition in programs.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs.
- Solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.



At the end of the term I will know:

- I will know how to use the software scratch, know its capabilities and practise their debuging skills.
- I will know how to use scratch to create a piece of music based upon a theme.
- I will know how music can affect the mood of a scene.
- I will know how to compose my own music to a story, conisdering the pitch, tempo, timbre and rhythm of my piece.
- I will know how to include loops in my programming.
- I will know how to adapt my code when performing.



I will also be learning about the automated motor vehicle, Mars Rover, exploring how and why the Mars Rover transfers data, understanding how messages can be sent using binary code and experiencing how to: programme a Mars Rover, calculate binary addition and represent binary as text.

Data Handling :

- I can understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration.
- I can use search technologies effectively, appreciate how the results are selected and ranked, and be discerning in evaluating digital content.

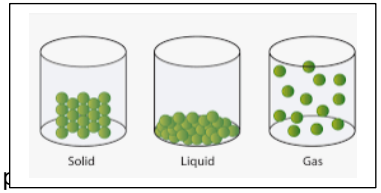
At the end of the term I will know:

- How and why data is collected from space.
- How messages can be sent using binary code.
- How to read and calculate binary conde.
- How to identify the computer architecture of the Mars Rover.
- How to use simple operations to calculate bit patterns.
- How to represent binary as text.

Science:

In Science, I will continue learning about properties and changes of materials.

Properties and Changes of Materials:



- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
- Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and p
- Demonstrate that dissolving, mixing and changes of state are reversible changes.
- Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

At the end of this topic, I will know:

At the end of this topic, I will know that different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency. For example, glass is used for windows because it is hard and transparent. Oven gloves are made from a thermal insulator to keep the heat from burning your hand. Also, I will know that reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by: sieving, filtering and evaporating. For example, smaller materials are able to fall through the holes in the sieve, separating them from larger particles. The solid particles will get caught in the filter paper but the liquid will be able to get through. Lastly, I will know that liquids change into gasses, leaving the solid particles behind. Additionally, I will know that a solution is made when solid particles are mixed with liquid particles. Materials that will dissolve are known as soluble and materials that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Living things and their habitats:

- I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- I can describe the life process of reproduction in some plants and animal

At the end of this topic, I will know:

At the end of this topic, I will know that humans develop inside their mothers and are dependent on their parents for many years until they are old e elves. In addition, I will know that amphibians such as frogs are laid in eggs then, once hatched, go through many changes until they become an adult. Some ies, go through metamorphosis to become an adult. Furthermore, I will know that birds are hatched from eggs and are looked after by their parents until they are able to live independently.

Some living things, such as plants, contain both the male and female sex cells. In others, such as humans, they contain either the male or female sex cell. Most plants contain both the male sex cell (pollen) and female sex cell (ovules), but most plants can't fertilise themselves. Wind and insects help to transfer pollen to a different plant. The pollen from the stamen of one plant is transferred to the stigma of another. The pollen then travels down a tube through the style and fuses with an ovule. Unlike some plants, such as strawberry plants, potatoes, spider plants and daffodils, which use asexual reproduction, mammals use sexual reproduction to produce their offspring. The male sex cell, called the sperm, fertilises the female sex cells. Then, the fertilised cell divides into different cells and will form a baby with a beating heart. Lastly, the baby will grow inside the female until the end of the gestation period when the baby is born. Unlike these mammals, Echidnas and Platypus are mammals, but they lay eggs rather than giving birth to live young.