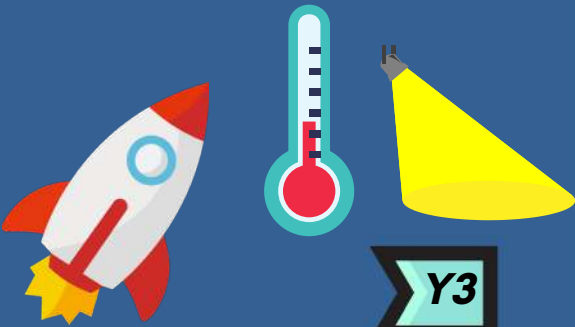
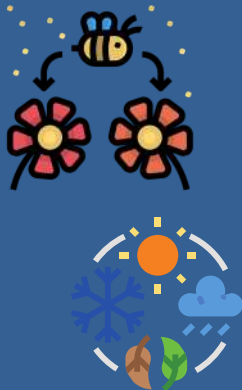


Science Curriculum Map

In Y5, we learn about the solar system, including how the Earth, Moon, and planets move to create day, night, and seasons. We explore forces like gravity, friction, and resistance, and investigate how mechanisms affect force. In materials, we study mixtures and solutions, learning how to separate and purify them. We also explore the human life cycle and how chemical reactions are affected.



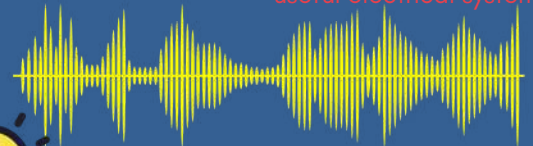
In Y3, we learn how plants grow, including the roles of roots, stems, leaves and flowers and how water moves through them. We explore nutrition and how it supports bones, muscles and movement as well as different diets and animal types. We investigate light, shadows, reflection and sun safety. We study rocks, soils and how fossils are formed. We also explore forces, surfaces and how magnets attract and repel.



In Y1, we learn about the properties of everyday materials such as absorbency. We begin to understand what helps plants to grow. We begin to explore circuits by creating simple circuits using cells and bulbs. We look at animals including how to classify them, their diets and comparing. We discover more about the seasons and our senses. We are introduced to states of matter to help explain the world around us.



In Y6, we learn about classifying animals and plants and examine microorganisms. We examine the human body and the different systems including the digestion and circulatory system. We study adaptation and evolution and the evidence to support. We explore how light and sound travel, including reflection, refraction, and how we see and hear. We investigate circuits, comparing series and parallel setups to design useful electrical systems.



In Y4, we learn about states of matter and how they change. We explore sound, how it travels and how volume and pitch vary. We build circuits and test the circuits by changing variables. We study different living organisms including reptiles and birds. We also learn about digestion and how to care for our teeth.

In Y2, we explore living things, their habitats, and simple food chains. We look at different environments such as the oceans and rainforest.

We learn about life cycles, healthy living, and what humans and animals need to survive. In materials, we investigate properties like magnetism, transparency, and elasticity, and consider the impact of plastic pollution. We also study the parts of a plant, what they need to survive, and carry out hands-on investigations to support our learning.



EYFS

We develop our scientific skills through the Understanding the World strand of our curriculum. We learn about the human body and how to keep it healthy. We begin to learn about some important processes and changes in the natural world, including the seasons and changing states of matter. We take part in a range of experiments and investigations.



Autumn Term – Marvellous Me!

National Curriculum Coverage	What I learn	Progression Pathway
- Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity – healthy eating - toothbrushing – sensible amounts of ‘screen time’ – having a good sleep routine – being a safe pedestrian	In this term, pupils learn all about themselves in the ‘Marvellous Me’ topic. They explore their bones and different body parts, finding out about the important role that their skeletons plays. They are also introduced to the digestive system and find out its role in the body. Pupils develop an understanding of what their body needs to keep healthy. Pupils have the opportunity to talk about healthy food options and bake nutritious cakes and make fruit salads and smoothies. They also learn about the importance of hygiene, keeping clean and why they need to look after their teeth	Pupils will be introduced to the human body and the basic function of some body parts. In Year 1, pupils will build upon their knowledge of their different body parts by naming and labelling their functions. In year 2, pupils explore food in more detail, looking at not only vegetables and fruit but processed food and the effects on the body.



Autumn Term 2 – Marvellous Me! (continued)

National Curriculum Coverage	What I learn	Progression Pathway
- Understand the effect of changing seasons on the natural world around them - Describe what they see, hear and feel whilst outside..	In this half term, pupils learn about Autumn and explore how their environment changes depending on the weather. Pupils use all their senses to build an understanding of what nature is, how it appears in Autumn; exploring the natural world through nature walks in their environments. They explore seasonal vegetables and plants and begin sorting foods into groups, looking at how different food groups help to keep us healthy. Pupils use their observational skills to examine different vegetables. The pupils then prepare and cook a delicious vegetable soup.	Pupils will be introduced to the environmental changes caused by the weather. In year 1 pupils will build upon their knowledge of the seasons and the natural changes they experience throughout the year as they look closely at the days and change in length and sunlight.

Spring Term 1 – Traditional Tales

National Curriculum Coverage	What I learn	Progression Pathway
- Explore the natural world around them - Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	In this term, pupils explore the characteristics of different materials. They investigate the best material for building a house for 'The Three Little Pigs' and experiment with making a waterproof jacket for 'The Gingerbread Man'. This introduces the pupils to the similarities and differences between materials and their suitability for certain jobs. Pupils plant their own beans, just like 'Jack and the Beanstalk' and explore what plants need to grow. They develop an understanding of what plants need in order to grow by watching their beans begin to shoot, recording and discussing their observations as they start to understand the life cycle of plants.	The pupils are introduced to the idea of different materials with different characteristics. In Year 1, pupils will build upon their knowledge of this by sorting and classifying materials depending on their characteristics. They will discuss and compare the suitability of different materials for a range of purposes. Pupils expand on their knowledge of a bean plant life cycle and start to look at different plants, their features and structures thinking about what it is to not just make a plant grow but how to keep it healthy.

Spring Term 2 – Amazing Adventures

National Curriculum Coverage	What I learn	Progression Pathway
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.	In this term, pupils journey across the seas as pirates and investigate objects that float and sink. They go into space as astronauts and look at the Earth in the solar system, developing understanding about our life on earth. They begin to understand that life in space is very different to Earth. They explore reflective materials in a dark tent using torches and are introduced to reflective and non-reflective materials	Pupils are introduced to planet earth and the solar system. In year 1, pupils they use their knowledge of the solar system, the sun and moon to build on their knowledge of space. They will be able to build on their understanding of the differences between Earth and the moon to investigate day and night.



Summer Term 1 – Mini-beast Adventures

National Curriculum Coverage	What I learn	Progression Pathway
• Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.	In this term, pupils learn about the different minibeasts that inhabit our environment and the different habitats that mini beasts live in. They look at the features and life cycles of some mini beasts. Pupils study the different stages of the butterfly lifecycle and begin to understand the process of metamorphosis. They learn to identify which minibeasts are insects.	Pupils will be introduced to features of various minibeasts and their lifecycles. In Year 2, pupils expand their knowledge on animal life cycles as they compare life cycles of different animals. They classify animals according to what they eat.



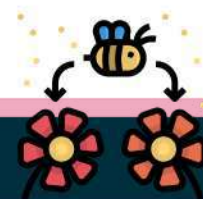
Summer Term 2 – Animals around the World

National Curriculum Coverage	What I learn	Progression Pathway
• Explore the natural world around them, making observations and drawing pictures of animals and plants. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	In this term, pupils learn about caring for the animals and the natural environment. Making comparisons between animals that live on land and those that live in the water. Pupils learn how humans can affect animals and the environment through the way they live. This is then linked to materials and recycling. Pupils look at different materials, name them and sort them into recyclable groups based on their characteristics. They explore the process of ice melting so they can understand one of the impacts of global warming.	The pupils are introduced to the basic principles of materials. In Year 1, pupils will build on their observations around solids and liquids to then go on to explore and investigate gasses around us.



Autumn Term 1 – Materials

National Curriculum Coverage	What I learn	Progression Pathway
- Distinguish between an object and the material from which it is made - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock - Describe the simple physical properties of a variety of everyday materials - Compare and group together a variety of everyday materials on the basis of their simple physical properties	In this unit, pupils will be introduced to different materials that they encounter in their daily life. They will explore how materials can be sorted by looking at various properties, e.g. hard, soft, flexible, waterproof and so on. They will use this understanding to describe and compare materials. This knowledge is then applied to their topic in Literacy – Little Bear – and they will be required to use their knowledge to suggest materials to build his house whilst considering the suitability of each type of material. Pupils investigate the absorbency of given materials and identify waterproof materials through investigation.	In this unit, pupils build on their knowledge about everyday materials explored in EYFS. In Year 2, pupils will continue with this topic with a greater focus on the purpose of materials and their features make them suitable for those.



Autumn Term 2 – Plants

National Curriculum Coverage	What I learn	Progression Pathway
- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees - Identify and describe the basic structure of a variety of common flowering plants, including trees	Pupils learn to identify various types of plants in their environment and learn to recognise the difference between basic plants, e.g. flowering plants and trees. Observing their differences. They will explore how to look after plants and what they need in order to survive. Pupils will also be introduced to structures of flowers and trees, find out what pollen is and why it is important for plants to have pollen.	Pupils will have been learning about plants and planting seeds in EYFS and will have an opportunity to revisit and build on prior knowledge. In Year 2, pupils will learn to classify trees in deciduous and evergreen trees. They will build on their knowledge from this year to learn about what plants need to grow well.

Working Scientifically

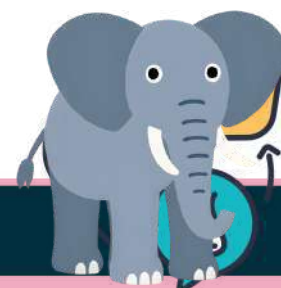
Pupils will be expected to do the following:

- ask simple questions and recognise that they can be answered in different ways
- observe closely, using simple equipment
- perform simple tests
- identify and classify
- use their observations and ideas to suggest answers to questions
- gather and record data to help in answering questions



Spring Term 1 – Circuits

National Curriculum Coverage	What I learn	Progression Pathway
- Identify common appliances that run on electricity - Construct a simple series electrical circuit, identifying and naming its basic parts Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery	In this unit, pupils will be introduced to current and electricity. They will be able to name different components including the switch and cell. Pupils will be able to tell the difference between a complete and incomplete circuit. Pupils will push their understanding testing out different circuits by adding and removing more components. Pupils will learn the symbols for each component and draw scientific diagrams of circuits.	The pupils are introduced to electricity and light. The topic, Light, will be explored thoroughly in Year 2. Electricity will be fully explained and embedded in Year 5 including different components and the variation in how they are placed in a circuit.



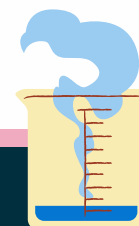
Spring Term 2 – Animals

National Curriculum Coverage	What I learn	Progression Pathway
Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	In this unit, pupils will explore how animals are classified using their characteristics. Pupils are introduced to the term vertebrae, including how to define them and their common characteristics. Pupils will also examine diets and classify animals according to their diets using the terms carnivore, herbivore and omnivore. Characteristics of animals are used to classify animals such as warm and cold blooded animals and skin texture.	This topic links closely to Year 1 learning about seasonal changes, as pupils begin to observe how animals behave differently throughout the year and how living things respond to their environment. Through comparing different animal groups, pupils start to recognise similarities and differences between living things, laying the foundations for later classification work. This knowledge is developed further in Year 2 when pupils learn that animals have offspring which grow into adults and explore the basic needs of animals for survival.



Summer Term 1 – Seasons

National Curriculum Coverage	What I learn	Progression Pathway
- Observe and describe weather associated with the seasons and how day length varies - Observe changes across the 4 seasons	Pupils are introduced to the different seasons, they are able to name the seasons, describe the each seasons and identify the difference between each. Pupils will be able to identify the signs of Spring and Summer and the weather that is associated with each season.	Learning about weather patterns and seasonal variation provides an important foundation for future science learning, including Year 3 work on plants, where pupils investigate the conditions needed for growth, and Year 4 studies of living things and their habitats, where they explore how environmental changes can affect organisms.



Summer Term 2 – States of matter

National Curriculum Coverage	What I learn	Progression Pathway
- compare and group materials together, according to whether they are solids, liquids or gases - observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) - identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	In this unit, pupils are introduced to different states of matter, explaining how things are either solid, liquid or gas and how gases are all around us. They learn to recognise the difference between solids liquids and gases and observe how liquids turn to gas when heated. They will also observe and investigate what happens to a gas when it is cooled. They are also introduced to the water cycle and begin to recognise how rain is formed.	This unit is only a brief introduction to solids, liquids and gases in which pupils learn the scientific vocabulary associated with this topic. Pupils will learn more in Year 4 when they understand how particles are arranged in each state of matter and how they can be separated and changed through different processes – heating, filtering and dissolving



Autumn Term 1 – Living things and their habitats

National Curriculum Coverage

- Explore and compare the differences between things that are living, dead, and things that have never been alive
 - Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
- Identify and name a variety of plants and animals in their habitats, including microhabitats
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

What I learn

In this unit, pupils have explored the world of living things and their habitats. They began by identifying the life processes that all living things share, helping them understand what makes something alive. They learned to name and classify animals based on the habitats they live in, such as oceans, seashores, woodlands, and rainforests. Through this, they discovered how animals and plants are specially suited to their environments, and how habitats meet their basic needs. Pupils also explored simple food chains, learning how energy is passed from plants to animals and understanding how living things depend on one another to survive. This unit has helped develop their understanding of life science, encouraging curiosity about the natural world and how different creatures live and thrive in their environments.

Progression Pathway

This unit builds on the learning from Year 1, where pupils began to identify and name a variety of common animals and plants, recognise the basic parts of animals and humans, and explore simple seasonal changes in the natural world.

In Year 2, this knowledge is deepened as pupils begin to understand the life processes shared by all living things. This learning provides a strong foundation for future science units.

In Year 4, pupils will investigate more complex food chains and explore how changes in the environment can affect habitats and populations. They will also build on their understanding of classification by grouping living things in more detail. In Year 6, this develops further with an in-depth study of evolution, inheritance, and adaptation.

Autumn Term 2 – Animals including humans



National Curriculum Coverage

- Notice that animals, including humans, have offspring which grow into adults
- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

What I learn

In this unit, pupils explored what humans and animals need to survive and how they grow and change over time. They learned about human and animal life cycles, recognising that all living things begin life, grow, and eventually become adults. They compared how different animals develop and identified the basic needs shared by all—food, water, and air. Pupils also learned about the importance of hygiene and how staying clean helps prevent illness. They explored healthy eating by designing and making their own balanced food plate and understanding the different food groups. As part of their scientific enquiry, pupils planned and carried out a simple investigation into heart rates, observing how exercise affects the body. This unit helped them understand how to take care of themselves and others, supporting both their science and personal development.

Progression Pathway

This unit builds on Year 1 learning where pupils named animals, identified body parts, and explored how humans and animals grow. They also began to understand basic needs like food, water, and air. In Year 3, this develops further with a focus on nutrition, balanced diets, and the human skeleton, while in Year 4 pupils explore digestion, teeth, and food chains in more detail.

 Science Curriculum Map Year Two 		
Spring Term – Materials		
National Curriculum Coverage	What I learn	Progression Pathway
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	In this unit, pupils will build on their knowledge of everyday materials by learning to identify and name a variety of materials and describe their uses. They will compare different materials based on their properties, such as whether they are hard or soft, bendy or rigid, or waterproof. Through practical investigations, pupils will explore the elasticity of materials to see how well they stretch, and test which materials are opaque or transparent, helping them understand which might be suitable for things like windows or greenhouses. They will also test the rigidity of materials to find out which are strong and which bend easily, applying this knowledge to build a strong paper bridge. Pupils will also learn that some materials are magnetic, using hands-on tasks to explore which items are attracted to magnets and why. In the second half of the term, the focus will shift to environmental responsibility. Pupils will explore the issue of plastic pollution, learn how and why plastic is recycled, and consider how to choose materials that are safer for the planet. They will write and deliver a persuasive speech about plastic pollution and apply their understanding of materials to create a waterproof structure and build a strong paper bridge. This unit helps children apply scientific knowledge to real-world problems, encouraging curiosity, responsibility, and creativity.	This unit links to the unit completed in Year 1 about materials, but with a greater focus on comparing the properties of materials and deciding which are most suitable for different uses. Pupils build on their earlier knowledge by exploring properties such as elasticity, rigidity, transparency, and magnetism through practical investigations. In Year 4, this understanding is developed further as pupils learn to classify materials into solids, liquids, and gases. They explore the characteristics of each state and investigate how materials can change state, particularly through the effects of heating and cooling. This sequence of learning helps children build a deeper understanding of how materials behave and prepares them for more complex concepts in upper Key Stage 2.

 Science Curriculum Map Year Two 		
Summer Term 1 – Plants		
National Curriculum Coverage	What I learn	Progression Pathway
Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	In this unit, pupils learn all about the structure, needs, and importance of plants. They begin by dissecting, drawing, and labelling the parts of a flower, helping them to understand how each part plays a role in the plant’s life cycle. They then explore why plants are important, learning how they give us food, air, shelter, and medicine. Pupils investigate what plants need to survive, including sunlight, water, air, soil, and space, and carry out simple experiments to see how light and water affect plant growth. They also explore the fascinating process of seed germination, observing how a tiny seed begins to grow into a new plant. Throughout the unit, children build scientific enquiry skills through observing, questioning, predicting, and recording, while developing a deeper appreciation for the natural world around them.	This unit builds on children's early experiences of the natural world by developing their ability to identify and describe a wider range of plants, including deciduous and evergreen trees. Pupils deepen their understanding from Year 1 by exploring the basic structure of flowering plants and trees, learning the function of parts such as pollen, and discovering what plants need to survive. Through hands-on observation and exploration, they begin to compare different types of plants and understand how to care for them. In Year 3, this understanding is developed further as pupils explore the functions of different parts of flowering plants, including roots, stems, leaves, and flowers. They investigate how water is transported within plants and what factors affect plant growth. This learning deepens their knowledge of plant life cycles and builds on earlier work by focusing more closely on processes such as reproduction and the role of flowers.



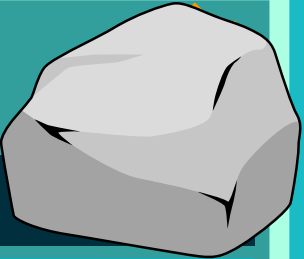
Summer Term 2 – Habitats and Materials

National Curriculum Coverage	What I learn	Progression Pathway
identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	In this unit, pupils will explore habitats and look at real world examples of habitats in nature. In the first lesson, Pupils will examine woodlice and identify what habitat they are best suited to. Pupils will observe, collect and record data on woodlice and then draw a conclusion on their habitat. Pupils will examine damp habitats and identify which animals prefer to live there. Pupils will examine adaptations including camouflaging and how animals are suited to for their habitats through their natural colouring. Pupils will then move onto materials. They will look at different properties such as being strong and waterproof. Pupils then design a shopping bag using their knowledge of material properties.	This unit builds on children's early experiences of the natural world by developing their ability to identify and describe a wider range of plants, including deciduous and evergreen trees. Pupils deepen their understanding from Year 1 by exploring the basic structure of flowering plants and trees, learning the function of parts such as pollen, and discovering what plants need to survive. Through hands-on observation and exploration, they begin to compare different types of plants and understand how to care for them. In Year 3, this understanding is developed further as pupils explore the functions of different parts of flowering plants, including roots, stems, leaves, and flowers. They investigate how water is transported within plants and what factors affect plant growth. This learning deepens their knowledge of plant life cycles and builds on earlier work by focusing more closely on processes such as reproduction and the role of flowers.

 Science Curriculum Map Year Three  		
Autumn Term 1 – Plants		
National Curriculum Coverage	What I learn	Progression Pathway
- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves, and flowers. Explore the role of leaves in - the process of photosynthesis and plant growth. Investigate and describe the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how these vary - from plant to plant. Explore the part that flowers play in the life cycle of - flowering plants, including pollination, seed formation, and seed dispersal. Investigate how water is transported within plants and describe this process through practical experiments.	This unit allows pupils to deepen their understanding of the structure and function of flowering plants. They explore the role of roots, stems, leaves, and flowers, and learn how each part contributes to the plant’s survival and growth. Through practical investigations, they examine how water is transported within a plant and what conditions affect growth. The children will develop their knowledge of the life cycle of a flowering plant, focusing on the role of flowers in pollination, seed formation, and dispersal. This unit builds on earlier learning and prepares pupils for more complex biological processes in later years.	This unit builds on pupils’ understanding from Year 2 and Year 1, where they explored the basic needs and structures of plants, by looking more closely at how plants function and grow. The children will investigate the specific roles of roots, stems, leaves, and flowers, and explore how water is transported through a plant. In Year 4, this knowledge is extended as the children explore how plants fit into wider ecosystems through the study of food chains, identifying producers, predators, and prey. They also consider how animals, including humans, are suited to their environments and begin to understand the impact humans can have on these systems. In Year 5, this understanding is developed further as pupils explore plant reproduction in more detail. They learn about both sexual and asexual reproduction in plants, deepening their understanding of the plant life cycle introduced in Year 3. This prepares them for more advanced biological concepts by looking closely at how new plants are created and how species are maintained.

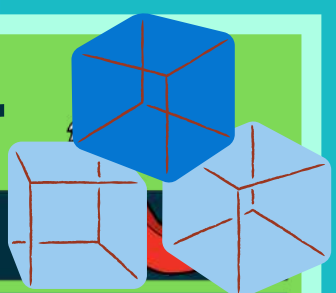
 Science Curriculum Map Year Three 		
Autumn Term 2 – Nutrition		
National Curriculum Coverage	What I learn	Progression Pathway
- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection, and - movement. Compare and group animals based on whether - they have skeletons, and explore how different body structures affect movement. Recognise that animals can be classified as carnivores, herbivores, or omnivores based on their diets. Apply understanding of nutrition and dietary needs by planning meals for different types of diets, including vegetarian, vegan, and omnivorous diets.	This unit allows pupils to understand the importance of nutrition and how it affects the human body. Pupils learn about the main food groups and how a balanced diet requires all groups. Pupils learn about the skeletal system and its purpose. They also learn how specific nutrients such as calcium and vitamin D have an effect on maintaining the skeletal system. Pupils identify the effects of poor nutrition. Pupils move onto muscles and how nutrition can impact muscle growth and maintenance, Pupils explore how animals can be grouped based on whether they have skeletons and how these help them move. They also discover the differences between carnivores, herbivores, and omnivores, and apply their knowledge by planning balanced meals for different types of diets including vegetarian and vegan diets.	This unit builds on pupils' understanding from Year 2, where they explored the life cycles of animals and humans, their basic needs, and how animals are suited to their environments. Children deepen their knowledge by focusing more closely on the importance of nutrition and how it supports the skeleton and muscles for movement and protection. They also build on their earlier work about animal classification by grouping animals with and without skeletons and investigating different diets. This progression helps pupils develop a more detailed understanding of animal biology and healthy living. In Year 4, pupils build on their knowledge of skeletons and muscles by learning to classify animals as vertebrates or invertebrates and exploring the characteristics of different groups like fish, amphibians, reptiles, birds, and mammals. They also study animal adaptations, food chains, human impact on ecosystems, and begin to explore the digestive system and teeth. In Year 5, learning focuses on plant and animal reproduction and life cycles, including metamorphosis, while pupils research famous naturalists to deepen their understanding of biology and its history. In Year 6, pupils deepen their study of human biology by investigating how the skeleton and muscles work together for movement and exploring the circulatory, digestive, and respiratory systems, including factors affecting health. This prepares them for more advanced scientific study.

 Science Curriculum Map Year Three 		
Spring Term 1 – Light		
National Curriculum Coverage	What I learn	Progression pathway
- Recognise that we need light in order to see things, and that darkness is the absence of light. Notice that light is reflected from surfaces and investigate - which materials make good reflectors. Recognise that shadows are formed when the light from a source is blocked by an opaque object. - Investigate how the size and position of shadows change depending on the distance and angle of the light source. - Recognise that light from the sun can be dangerous and describe ways to protect our eyes and skin. Apply understanding of light, reflection, and direction by exploring how mirrors and periscopes can be used to see around corners.	The pupils will have the opportunity to explore what light is and why it is needed in order to see. Through practical investigations, they will discover that light is reflected from surfaces and that shadows are formed when light is blocked by an opaque object. They will investigate how the size and direction of shadows can change depending on the position of the light source, carrying out fair tests to record and explain their findings. Pupils will also explore how different materials reflect light and apply this understanding to real-life examples, such as mirrors and periscopes. They will recognise the dangers of the sun and learn how to keep themselves safe by protecting their eyes and skin. By the end of the unit, pupils will not only have developed their scientific enquiry skills but will also be able to apply their knowledge of light, reflection, and shadows to practical contexts.	This unit builds on pupils’ understanding from Year 2, where they investigated how light affects plant growth. In Year 3, children develop their knowledge by exploring what light is, how it travels, and why it is needed in order to see. They investigate how light is reflected from different materials, how shadows are formed and change, and consider the dangers of the sun. Pupils also apply their knowledge of reflection through practical activities such as making periscopes. In Year 6, children return to light in greater depth, learning about the structure of the eye, the function of lenses, and why refraction occurs. They also investigate ultraviolet light and the spectrum of visible light, preparing them for more advanced concepts in physics at Key Stage 3.

 Science Curriculum Map Year Three 		
Spring Term 1 – Rocks		
National Curriculum Coverage	What I learn	Progression pathway
- Compare and group different types of rocks based on their appearance and simple physical properties. Investigate how igneous, sedimentary, and - metamorphic rocks are formed and explore their distinct characteristics. Recognise that soils are made from rocks and organic matter, and investigate differences between soil - types. Describe and explain the process of fossil formation within sedimentary rock. Apply knowledge of rock properties through practical investigations and fair tests, using observations to classify and explain findings.	The pupils will have the opportunity to explore and compare different types of rocks, investigating their properties and how they are formed. They will carry out practical enquiries into igneous, sedimentary, and metamorphic rocks, identifying their distinct features and uses. Pupils will also learn that soils are made from rocks and organic matter, examining different soil types and their properties. They will describe and explain how fossils are formed within sedimentary rock, linking this to their understanding of past environments. By the end of the unit, pupils will have developed their scientific enquiry skills and be able to classify rocks and soils, explain fossil formation, and apply their knowledge to the world around them.	This unit is taught as an independent topic in Year 3, introducing pupils to geology for the first time. Unlike other science topics, it does not directly build on content from Year 2 but instead provides a foundation for later learning. Pupils begin by classifying and investigating different types of rocks and soils, before extending their knowledge to fossil formation. While this unit stands alone, it supports wider scientific skills such as observation, comparison, and classification, which are revisited and developed further across subsequent science units in Key Stage 2.

 Science Curriculum Map Year Three S S S		
Summer Term 1 – Forces (Magnets)		
National Curriculum Coverage	What I learn	Progression pathway
Compare how different surfaces affect the movement of objects. Identify the main parts of a magnet and use this knowledge to predict outcomes in investigations. Observe and describe how magnets attract and repel each other, even at a distance. Recognise that some materials are magnetic while others are not, and test a variety of objects to explore this property. Investigate how the strength of a magnet can vary depending on its size, shape, and material. Apply understanding of magnetic forces by carrying out fair tests and using results to draw simple conclusions.	Pupils are introduced to the concept of forces by identifying push and pull forces causing objects to speed up or slow down. Pupils will explore friction and it's role in slowing down moving objects. Pupils will learn about the two sides of a magnet: the north and south side. Pupils will explore the different metals that are attracted by predicting and investigating each metal. Pupils will further investigate the effect distance has on the attraction force of a magnet. They will also investigate how the size, shape, and material of a magnet can affect its strength. By the end of the unit, pupils will have developed their scientific enquiry skills and be able to explain how forces and magnets work, applying their knowledge to everyday examples.	This unit introduces pupils to forces and magnets for the first time in Year 3. Children begin by investigating how objects move on different surfaces, exploring the effect of friction. They then learn about magnets, identifying their parts and discovering how they can attract or repel at a distance. Pupils also investigate which materials are magnetic and how the size, shape, and material of a magnet can affect its strength. These enquiries help them to develop skills of prediction, fair testing, and drawing conclusions. In Year 5, pupils build on this knowledge by studying forces in greater depth. They represent forces using diagrams and investigate the effects of friction, air resistance, and water resistance. They also explore gravity and begin to understand how mechanisms, such as pulleys and levers, allow a smaller force to produce a greater effect. This progression ensures pupils move from exploring and testing simple forces in Year 3 to applying more complex scientific ideas about how forces operate in the wider world.

 Science Curriculum Map Year Three 		
Summer Term 2 – Plants		
National Curriculum Coverage	What I learn	Progression pathway
- Identify and name a variety of everyday materials and describe their uses. Compare and group materials based on their physical properties, such as hardness, strength, and flexibility. Investigate elasticity and test how different materials can stretch or return to their original shape. Explore whether materials are - transparent, translucent, or opaque, and consider how this affects their use. - Test the rigidity of different materials and explain how this property makes them suitable for particular purposes. Recognise that some materials are magnetic and investigate how magnets can attract or repel certain objects.	Pupils will explore the purpose and impact of seed dispersal and how it helps plants to propagate. They will investigate this further by identifying different methods of travel based on the seed adaptation. Pupils will refer back to photosynthesis as a means of supporting the survival of the plants. Pupils will explore how leaves are important to this process and how a plant cannot function without leaves to photosynthesise. Pupils move onto roots by explaining their importance for water absorption and how plants are unable to function with the roots. Pupils go beyond nutrients and look at how plants survive and protect themselves from predators. Finally, pupils will look at edible plants, the clues which identify it as so and the parts of a plant that are usually edible.	As pupils learn about the functions of different parts of flowering plants and what plants need to grow and survive, they build on Year 1 learning where they first identified and named a variety of common wild and garden plants, including deciduous and evergreen trees. In Year 2, pupils develop this understanding by observing and describing how seeds and bulbs grow into mature plants and investigating what plants need to stay healthy. Year 3 extends this knowledge by introducing the structure and function of roots, stems, leaves and flowers, helping pupils understand how each part contributes to a plant's survival. Pupils explore the requirements of plants for life and growth, including air, light, water, nutrients from soil and room to grow, and investigate how these factors affect plant development. Learning about the way water is transported within plants and the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal, deepens pupils' understanding of reproduction and survival in living things.

 Science Curriculum Map Year Four 		
Autumn Term – States of Matter		
National Curriculum Coverage	What I learn	Progression pathway
Compare and group materials - according to whether they are solids, liquids, or gases. Observe and describe the arrangement of particles in solids, liquids, and gases, - explaining how this affects their properties. Explain how a change in temperature causes changes of state. Investigate melting, freezing, evaporation, and condensation, linking findings to particle theory. Explore evaporation and condensation within the water cycle and the role of temperature. Identify and investigate thermal conductors and insulators and - apply this knowledge to real-life contexts. Explore the unusual properties - of non-Newtonian fluids through enquiry and observation. Record observations, use scientific vocabulary, and apply particle models to explain results	This unit is all about exploring the three states of matter – solids, liquids, and gases – and how they can change from one state to another. Pupils will compare and group materials, observing the arrangement of particles and how this explains their behaviour. Pupils will look at gases and explain what a gas is. Pupils will also investigate if gases have mass. Pupils will define the term melting point and freezing point. They will investigate how different solids can have different melting points and how salt can affect the freezing point of liquids as well as the effect of low melting points on how quickly a liquid will evaporate. Pupils will also explore evaporation and condensation and it's change in states of matter. They will also investigate the factors that affect the rate of evaporation and condensation such as temperature. They will stretch these core concepts and apply them to the water cycle.	This unit builds on pupils' work in Year 2, where they identified and compared different materials, explored properties such as rigidity, transparency, elasticity, and magnetism, and began to understand how materials can be grouped. In Year 4, they revisit this knowledge but take it further by investigating how materials can change from one state to another and why these changes happen. In Year 5, pupils build on this foundation by classifying materials according to their wider properties and exploring more complex processes such as mixtures, solutions, and solubility. They also investigate methods of separating substances, including purification, linking their knowledge of states of matter to practical chemistry. This ensures a clear progression from describing material properties in Year 2, to understanding states and changes in Year 4, and then applying this to real-world chemistry in Year 5.

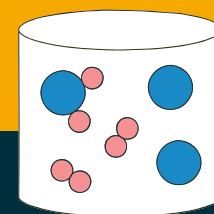
 Science Curriculum Map Year Four 		
Spring Term 1 – Sound		
National Curriculum Coverage	What I learn	Progression pathway
• Recognise that sounds are made by vibrations and explain how these vibrations travel through a medium to the ear. • Explore how sound travels through solids, liquids, and gases. Conduct investigations to • show that sounds get fainter as the distance from the source increases. Explore how distance affects volume and describe the • relationship between loudness and the strength of vibrations. • Investigate pitch, recognising how it is affected by the features of an object producing the sound. • Test different materials to identify which are the best at insulating against sound. • Record observations, carry out fair tests, and use scientific vocabulary to explain findings about how sound is made, travels, and can be changed. • •	This unit is all about exploring how sounds are made, how they travel, and how they can be changed. Pupils will learn that sounds are created by vibrations and travel through solids, liquids, and gases to reach the ear. Through practical investigations, they will explore how sounds become fainter with distance and how volume is affected by the strength of the vibrations. Pupils will also investigate pitch, discovering how it can change depending on the features of the object making the sound. Finally, they will test a range of materials to find out which are most effective at insulating against sound. By the end of the unit, pupils will have developed their enquiry skills and be able to explain how sounds are made, how they travel, and how both volume and pitch can be altered.	As pupils explore how sounds are made and travel through different materials, they build on Year 1 learning where they first used their senses to observe and describe the world around them, including identifying and comparing everyday sounds. This understanding develops further in Year 3 when pupils investigate forces and movement, providing a foundation for understanding that sound is produced by vibrations. This unit also links to prior learning about materials, as pupils consider how different substances transmit sound. As well as covering KS2 statutory requirements, this unit lays important foundations for KS3 physics topics such as wave motion, energy transfer, hearing, and the behaviour of sound waves in different media.

 Science Curriculum Map Year Four 		
Spring Term 2 – Electricity		
National Curriculum Coverage	What I learn	Progression pathway
- Identify and name the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches, and buzzers. Recognise and use common - circuit symbols, and design simple circuit diagrams. Construct and test simple circuits, including those with a - bulb and a switch, and record whether they work. Investigate how the number of cells in a circuit affects the brightness of a bulb or the - output of a buzzer. Compare and group materials - into conductors and insulators, explaining their everyday uses. Apply understanding of circuits by creating practical - outcomes, such as designing and building a simple alarm system. - Record results, carry out fair tests, and use scientific vocabulary to explain findings about circuits and electricity.	This unit is all about exploring how electrical circuits work and how they are used in everyday life. Pupils will learn to identify and name the basic parts of a simple circuit, including cells, wires, bulbs, switches, and buzzers. They will recognise and use circuit symbols to design and interpret simple circuit diagrams. Through practical investigations, pupils will construct and test circuits, including those with a bulb and a switch, and explore how the number of cells affects the brightness of a bulb or the strength of a buzzer. Pupils will also investigate different materials to decide whether they are conductors or insulators, linking their findings to real-life applications. Finally, they will apply their knowledge by creating a working alarm system. By the end of the unit, pupils will have developed their scientific enquiry skills and be able to build, test, and explain simple electrical circuits with increasing confidence.	This unit is first introduced in Year 1 where children learning about circuits and basic components. They learn to identify and name the basic parts of a simple circuit and begin to construct and test working circuits using bulbs, buzzers, and switches. Pupils also use common circuit symbols to design simple diagrams, investigate how the number of cells affects output, and explore the difference between conductors and insulators. Their learning is applied in practical contexts, such as creating a working alarm system, helping them to see the real-life applications of electricity. In Year 6, pupils build on this foundation by drawing and interpreting more complex circuit diagrams, including parallel circuits. They investigate how the number of components impacts the flow of current, compare simple and parallel circuits, and design useful circuits for real-world purposes, such as traffic lights. This progression ensures that pupils move from constructing and testing simple circuits in Year 4 to confidently designing, representing, and evaluating more complex electrical systems in Year 6.

 Science Curriculum Map Year Four 		
Summer Term – Animals including humans		
National Curriculum Coverage	What I learn	Progression pathway
Recognise how living things can - be classified into groups such as vertebrates and invertebrates. Explore the characteristics of different groups of vertebrates, including fish, amphibians, reptiles, birds, and mammals, and - understand how these groups are similar and different. Investigate the features of invertebrates and compare them with vertebrates. Explain how animals are suited to their environment, identifying adaptations that help them - survive. Explore food chains by identifying producers, predators, - and prey, and describe how energy is passed through an ecosystem. Investigate the impact of human activity on the environment and food chains. Identify the parts of the digestive system and describe their functions. Explore the different types of human teeth and their roles in eating and digestion. Investigate how teeth can be damaged and how to care for them. Describe and explain the process of digestion through practical enquiry and models.	This unit is all about how animals, including humans, can be classified, how they survive, and how their bodies work. Pupils will begin by recognising the differences between vertebrates and invertebrates before exploring the characteristics of fish, amphibians, reptiles, birds, and mammals. They will investigate how animals are adapted to their environments and compare how different groups survive on land or in water. Pupils will then study food chains, identifying producers, predators, and prey, while also considering the human impact on ecosystems. The unit also develops pupils’ understanding of the human body. They will investigate the role of different types of teeth, how they can be damaged, and how to keep them healthy. Moving from here, pupils examine the diet of other animals and creating food chains to represent the relationship between all organisms and their diets. Following this, pupils will look at classifying animals based on whether they are vertebrates or invertebrates. By the end of the unit, pupils will have developed their scientific enquiry skills and be able to classify animals, explain adaptations and food chains.	This unit builds on Year 3, where pupils explored the importance of nutrition and how skeletons and muscles provide support, protection, and movement. In Year 4, pupils extend this knowledge by classifying animals as vertebrates or invertebrates, investigating the characteristics of different groups, and exploring how animals are adapted to their environments. They also study food chains and the effects of human impact on ecosystems, while developing their understanding of the human body through the digestive system and teeth. In Year 5, pupils progress to studying life cycles and reproduction in plants and animals, including human growth and development. In Year 6, they deepen their knowledge of human biology by investigating the circulatory, respiratory, and digestive systems in more detail, alongside the impact of lifestyle choices on health. They also explore evolution and inheritance, making links back to adaptations studied in Year 4.

Autumn Term – Space

National Curriculum Coverage	What I learn	Progression pathway
Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Describe the movement of the Moon relative to the Earth Describe the Sun, Earth and Moon as approximately spherical bodies Use the idea of the Earth’s rotation to explain day and night and the apparent movement of the sun across the sky	In this unit, pupils will explore the Sun and the Solar System, developing an understanding of the key features and movements of the Earth, Moon, and other planets. Through a range of practical and creative activities pupils will describe how the Earth rotates on its axis and orbits the Sun, and how these movements lead to day and night and the changing seasons. They will also investigate the phases of the Moon and what causes them, deepening their knowledge of the relationship between the Earth, Moon, and Sun. As part of their learning, pupils will apply their scientific understanding in a hands-on design challenge, where they will create and launch their own air-powered rockets, using this as an opportunity to explore forces and motion in a space context. Through engaging activities—including model building, drama, and scientific investigations—they will learn about historical models of the solar system and how our understanding of space has evolved over time. Pupils will investigate the roles of satellites and discover how they support daily life, from communication and weather forecasting to navigation. They will also study the history of space travel, learning about significant missions and key figures who advanced our exploration of space. The unit will include a focus on meteorites and meteoroids, examining what they are, where they come from, and how they interact with planets. Pupils will carry out practical investigations to understand how impact craters are formed, exploring how variables such as speed and mass affect crater size. They will observe and record their findings, gaining a deeper understanding of cause and effect in a space context. By the end of the unit, pupils will be able to explain how heat, energy, and movement all play a role in space phenomena and apply their learning to broader scientific questions about our place in the universe.	This unit builds on the work pupils completed in Key Stage 1, where they were introduced to the Sun, Moon, and stars as part of their everyday observations of the world around them. It deepens their understanding by exploring historical models of the solar system, the role of satellites in modern life, and the position of the solar system within the universe—linking directly to the Year 5 science curriculum focus on Earth and Space. Pupils also develop investigative skills by learning about impact craters and how meteorites affect surface features, which ties into the national curriculum's emphasis on working scientifically and developing enquiry skills. This foundation supports later learning in secondary school, where students will explore more complex ideas in physics, such as forces, gravity, and space exploration.



Spring Term 1 – Properties and changes of materials

National Curriculum Coverage	What I learn	Progression pathway
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. To know that some materials will dissolve in liquid to form a solution. Describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials. 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.	In this unit, pupils will explore materials and how they can be classified, mixed, and separated. They will begin by identifying and classifying materials according to their physical properties such as hardness, flexibility, conductivity, solubility, and transparency. Pupils will then investigate mixtures, learning how different materials behave when combined. They will explore the concept of solutions, carrying out practical investigations to test the solubility of different substances in water and understand what makes a material soluble or insoluble. The unit will also focus on methods for separating mixtures into their original components. Pupils will learn how to separate mixtures using techniques such as filtration, sieving, and evaporation. They will apply this knowledge to real-world contexts by learning how water can be purified through separation techniques. Through hands-on investigations, observations, and analysis, pupils will develop a solid understanding of the differences between mixtures and solutions, and how materials can be separated and recovered based on their properties.	This unit builds on pupils' prior learning in Key Stage 1 and Lower Key Stage 2, where they explored the basic properties of everyday materials. It expands their knowledge by introducing the classification of materials based on more complex properties such as solubility and conductivity. Pupils begin to investigate mixtures and solutions, exploring how substances can be combined and then separated through filtering, sieving, and evaporation—key aspects of the Year 5 science curriculum focus on materials and their properties. This learning provides a foundation for understanding methods used in real-world contexts, such as water purification. These concepts are further developed in Year 6, where pupils explore changes of state and chemical reactions, building a clear progression towards secondary science topics such as the particle model, separating techniques, and the structure of matter.

Spring Term 2 – Forces

National Curriculum Coverage	What I learn	Progression pathway
Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	In this unit, pupils will develop their understanding of forces and how they affect the movement of objects. They will begin by learning how to represent forces using force diagrams, identifying the direction and size of different forces acting on an object. Pupils will then carry out investigations into different types of forces, including friction, air resistance, and water resistance. They will observe how these forces act against motion and explore how surface texture, shape, and speed can influence the effects of these forces. The concept of gravity will be explored as a force that pulls objects toward Earth, helping pupils understand its role in everyday phenomena. They will also learn how certain mechanisms—such as levers, pulleys, and gears—can make tasks easier by allowing a smaller force to produce a greater effect.	This unit builds on pupils’ earlier experiences of observing how things move and begin to explore forces informally in Key Stage 1. In Lower Key Stage 2, they may have looked at pushes and pulls in simple contexts. This unit, aligned with the Year 5 science curriculum focus on forces, introduces more detailed scientific concepts such as gravity, friction, air resistance, and water resistance. Pupils learn to represent forces using diagrams, enhancing their ability to communicate scientific ideas visually. They also explore how mechanisms such as levers, pulleys, and gears can change the size and direction of a force. These investigations support the development of scientific enquiry skills and lay important groundwork for more advanced physics topics at secondary school, including Newton’s Laws of Motion and mechanical advantage in systems.

 Science Curriculum Map Year Five 		
Summer Term 1 – All living things		
National Curriculum Coverage	What I learn	Progression pathway
Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals.	In this unit, pupils will explore the different ways plants and animals reproduce and grow. They will begin by learning about sexual reproduction in plants, understanding how flowers produce seeds and new plants. Pupils will also investigate asexual reproduction, discovering how some plants can reproduce without seeds. The unit will then focus on animal life cycles. Pupils will research and describe the life cycles of various mammals, including how eggs play a role in some species’ development. They will also study animals that undergo metamorphosis, such as butterflies and frogs, and describe the changes these animals experience through their life stages. In addition, pupils will learn about famous naturalists who have contributed to our understanding of living things and the natural world. Through this, they will appreciate the importance of scientific observation and discovery. By the end of the unit, pupils will have a well-rounded understanding of reproduction and life cycles in plants and animals, as well as the history of natural science.	This unit builds on pupils’ earlier learning in Key Stage 1, where they explored basic life processes and the needs of living things. It deepens their understanding of reproduction and life cycles by focusing on both sexual and asexual reproduction in plants, as well as the life cycles of mammals and other animals, including those that undergo metamorphosis. This aligns with the Year 5 national curriculum objectives on animals, including humans, and plants. Pupils also develop research skills by investigating famous naturalists and the significance of their contributions to biology. This knowledge provides a strong foundation for more detailed study of genetics, evolution, and ecology in later stages of education.



Summer Term – Life cycle and chemical reactions

National Curriculum Coverage	What I learn	Progression pathway
Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals Describe the changes as humans develop to old age 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	This term, pupils will move on from their understanding of animal life cycles and start to look at the human life cycle. This includes the names of the main stages and the emotional and physical changes attributed to each stage. Pupils will then focus on the last stage of the human life cycle: elderly adult. They will examine the challenges faced and the changes that occur through fun and practical activities. Following this, pupils will start to looking at reactions, identifying what is an irreversible change and how these are also called chemical reactions. Pupils will investigate the signs of a chemical reaction which include the release of gases and odours as well as the change in colour and temperature.	As pupils learn about the stages of the human life cycle, including infancy, childhood, adolescence, adulthood and old age, they build on Year 2 learning where they first explored how animals, including humans, have offspring which grow into adults. Year 5 extends this knowledge by examining the human life cycle in greater detail, including the physical and emotional changes that occur during puberty and the characteristics of each stage of life, including the elderly stage. As pupils explore chemical reactions and the formation of new materials, they build on Year 4 where pupils learn about states of matter, observing how materials can change state through heating and cooling, while recognising that these changes are usually reversible. Year 5 extends this understanding through the study of properties and changes of materials, where pupils compare materials based on hardness, solubility, transparency, conductivity and response to magnets.



Autumn Term 1 – Living things

National Curriculum Coverage

- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.
- Give reasons for classifying plants and animals based on specific characteristics.

What I learn

In this unit, pupils explore the classification of living things by learning how to sort and group animals based on observable features. They develop their understanding of how to use classification keys to accurately group and identify a range of living organisms, including plants. Pupils also investigate microorganisms, with a particular focus on yeast, to determine whether it is a living organism. They extend this knowledge by classifying different types of microorganisms and examining the role of bacteria in spreading disease. Through hands-on investigations and scientific inquiry, pupils deepen their understanding of the diversity of life and how scientists organise and categorise living things based on specific characteristics.

Progression pathway

Grouping animals using observable features builds on Year 1 and 2 work on identifying animals and Year 4's introduction to classification keys. Pupils now apply more detailed criteria to classify organisms scientifically. Using classification keys continues from Year 4, where pupils used simple branching keys. In Year 6, they develop this by using dichotomous keys to identify a wider range of organisms, including microorganisms, laying foundations for KS3 taxonomy. Investigating yeast reinforces understanding of life processes from Year 2 and Year 5. Pupils use MRS GREN to decide if yeast is living, developing their enquiry skills. Classifying microorganisms is new to KS2 but builds on prior classification knowledge. It introduces concepts that lead into KS3 biology, such as kingdoms and cell structure.

Working Scientifically In Year 5 and 6, pupils will encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They will also encounter lessons which deals changes in scientific ideas over times. Similarly to Year 4, pupils will follow their own line of enquiry but will look more closely at patterns in data. Working

- scientifically During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:
- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments

 Science Curriculum Map Year Six 		
Autumn Term 2 – Animals including humans		
National Curriculum Coverage	What I learn	Progression pathway
Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.	In this unit, pupils will take an in-depth look at the human body and its vital systems. They will begin by understanding the key life processes that keep living organisms alive. Building on this, they will investigate the purpose of the human skeleton and learn how bones and muscles work together to create movement. Pupils will then explore the circulatory system, understanding how blood is transported around the body and the importance of the heart and lungs in this process. The unit continues with a focus on digestion, where children will learn how the body breaks down food and absorbs nutrients. Pupils will also study the respiratory system, exploring how we breathe and identifying factors that can affect lung health, including smoking and vaping. Throughout the unit, pupils will carry out investigations, ask questions, and apply their scientific understanding to explain how the systems in the body work together to keep us alive and healthy.	As pupils learn about the life processes, they build on Year 2 work where they explored the basic needs of animals and humans and were introduced to what makes something living. Exploring digestion builds directly on Year 4 learning, where pupils studied the digestive system and the role of teeth. In Year 6, this knowledge is expanded as pupils explore how the body breaks down food and absorbs nutrients. The circulatory and respiratory systems are introduced for the first time in detail but connect to earlier learning on the importance of exercise and a balanced diet. As well as meeting the KS2 statutory requirements, this unit also introduces more complex biological concepts that will be studied in greater depth in KS3, such as organ systems, oxygen exchange, and cellular respiration.



Spring Term 1 – Evolution and adaptation

National Curriculum Coverage	What I learn	Progression pathway
Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	In this unit, pupils will explore how living things change over time through the study of inheritance, adaptation, and evolution. They will begin by identifying inherited characteristics in living things, recognising how traits are passed from one generation to the next. Pupils will then begin to understand how adaptation can help species survive in different environments, using real-world examples to see how these changes may eventually lead to evolution. As part of their learning, they will study the important contributions of Mary Anning, Charles Darwin and Alfred Russel Wallace, discovering how their work shaped our understanding of natural selection and evolutionary theory. Pupils will also be introduced to cladograms and how these diagrams show evolutionary relationships between different species. Finally, they will explore how fossils provide evidence of organisms that lived millions of years ago, helping scientists piece together the history of life on Earth.	As pupils explore inherited characteristics in living things, they build on Year 2 learning about how animals, including humans, have offspring that grow into adults. Beginning to understand adaptation links closely to the Year 4 topic on living things and habitats, where pupils learned how animals are suited to their environments. In Year 6, pupils take this further by identifying examples of adaptation that may lead to evolution, laying the foundation for understanding natural selection. Learning about the work of Mary Anning, Charles Darwin and Alfred Russel Wallace supports pupils in seeing how scientific ideas develop over time and provides valuable historical context. Introducing cladograms helps pupils begin to understand how scientists show evolutionary relationships between species. Studying fossils builds on earlier learning in Year 3, where pupils recognised that rocks can contain fossils, and now they explore how fossils provide evidence of organisms that lived long ago. As well as meeting KS2 statutory requirements, this unit also introduces fundamental biological concepts that will be explored in greater depth at KS3, such as variation, natural selection, and evolutionary theory.



Spring Term 2 – Light

National Curriculum Coverage	What I learn	Progression pathway
Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	In this unit, pupils will explore the fascinating properties of light and how it interacts with the world around us. They will begin by investigating how light travels and how different objects reflect light to make them visible. Pupils will then learn how we see by studying the structure of the human eye and the role it plays in processing light. The unit will continue with an exploration of how convex and concave lenses bend light, affecting the way images appear to us. Pupils will also discover how light bends, or refracts, when it passes through different materials, deepening their understanding of this important phenomenon. Additionally, they will explore the spectrum of light, learning about the different colours and wavelengths it contains. Finally, pupils will examine how ultraviolet (UV) light can penetrate the skin, understanding both its effects and importance.	As pupils explore how light travels and how objects reflect light, they build on Year 3 learning where they first investigated light sources and shadows. Explaining how we see and the structure of the human eye develops this knowledge by introducing anatomy and function, building on Year 4's work on the human body. Understanding how convex and concave lenses bend light connects to Year 5's science where pupils studied forces and materials, adding depth to their knowledge of light behaviour. Exploring refraction and how light bends through different materials extends Year 3's work on light travel and shadows, encouraging pupils to apply their understanding of how light interacts with various substances. Studying the spectrum of light builds on prior learning about colours in Year 3, deepening pupils' grasp of visible light and beyond. Finally, looking at how UV light penetrates the skin links science to health education, introducing effects of different types of light on the body. As well as covering KS2 statutory requirements, this unit lays important foundations for KS3 physics topics such as wave properties, optics, and the electromagnetic spectrum.

 Science Curriculum Map Year Six 		
Summer Term 1 – Electricity		
National Curriculum Coverage	What I learn	Progression pathway
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.	In this unit, pupils will develop a clear understanding of current electricity and how it flows through circuits. They will learn to draw and interpret circuit diagrams, using standard symbols to represent different components. Pupils will investigate resistance and how it affects the flow of electricity within a circuit. Applying their knowledge, they will design and create their own electrical objects. The unit also covers parallel circuits, teaching pupils how to draw and interpret them accurately. Through hands-on investigations, pupils will compare the properties of series and parallel circuits by observing what happens when components are added to each type, deepening their understanding of how different circuits behave.	As pupils learn what is meant by current electricity, they build on Year 4 work where they explored simple circuits and how electricity flows. Drawing and interpreting circuit diagrams develops these skills further, helping pupils understand and communicate how circuits are constructed. Investigating resistance extends their knowledge by introducing how different components affect electrical flow, linking to Year 6 physics concepts. Using their understanding to create objects encourages practical application and problem-solving, reinforcing scientific enquiry skills developed in earlier years. Drawing and interpreting parallel circuits builds on their prior work with series circuits and deepens their understanding of circuit complexity. Comparing series and parallel circuits through investigations helps pupils see how adding components affects current and voltage, preparing them for more advanced electrical concepts studied in KS3, such as circuit analysis and electricity in daily life.

 Science Curriculum Map Year Six 		
Summer Term 2 – Traits		
National Curriculum Coverage	What I learn	Progression pathway
Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution	In this unit, pupils will investigate traits and their variations. Pupils identify what inherited and environmental traits are and how these contribute to our genetic identity. Pupils will start to measure these variations using continuous and discontinuous data. They will apply this data to real world examples by examining one specie, ‘Canis Lupus’. Pupils will do this by examining the population as a whole and identifying variations and drawing conclusion. Moving on from inherited traits, pupils will look at how some characteristics can be manipulated through selective breeding. This understanding will be applied to horses. The effect of environmental factors will be fully investigated such as it’s effect in plant growth and how some species become extinct through natural selection.	As pupils learn about evolution and inheritance, they build on Year 1 learning where they first identified and named a variety of common animals, including fish, amphibians, reptiles, birds and mammals, and began to notice similarities and differences between them. This develops further in Year 2 when pupils learn that offspring grow into adults and understand the basic needs of animals for survival. In Year 5, pupils study the life cycles of mammals, amphibians, insects and birds, and learn about reproduction in some plants and animals, helping them understand how characteristics are passed on through generations. Year 6 then extends this knowledge by exploring how living things have changed over time, recognising that fossils provide evidence for evolution, and understanding that offspring are not identical to their parents. Pupils learn how variation within a species can lead to adaptation and, over long periods of time, evolution.