Science Overview Cycle B

2025 - 2026

At Edenham, as Science is a core subject, we teach lessons discreetly (not necessarily connected to the class topic for the term). Science is taught during weekly lessons with EYFs and Key Stage 1 children receiving at least thirty-six hours per year and Key Stage Two at least forty-five hours per year. Our curriculum (the knowledge children will learn) is split into substantive knowledge (Biology Chemistry Physics) and disciplinary knowledge (scientific methods, apparatus and techniques, data analysis and presentation and how Science uses evidence to develop explanations). This will ensure that all pupils develop scientific knowledge and conceptual understanding, work scientifically, and develop higher-order thinking skills. We use different contexts to maximise pupils' engagement with and motivation to study Science by actively encouraging children to work both independently and with others in practical ways, developing secure subject knowledge, skills and vocabulary at an age-appropriate level as seen in the progression documents below.

EYFS

EYFS children will be guided in their learning through four overarching principles: for a unique child, positive relationships, enabling environments and learning and development. They will build a good foundation for igniting their curiosity and enthusiasm for learning, forming relationships and thriving at school through the Seven Areas of Learning:

- Prime Areas of Communication and Language, Physical Development and Personal, Social and Emotional Development.

- Specific Areas of Literacy, Mathematics, Understanding the World and Expressive Arts and Design.

The Early Years Foundation Stage Curriculum supports children's understanding of Science by following the guidelines outlined in the 'Understanding the World – The Natural World' within the EYFS framework:

- Children know about similarities and differences concerning places, objects, materials and living things. They talk about the features of their immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.

In the EYFS children use a range of 'Characteristics of Effective Learning' in their independent learning. These can be seen as complementing 'Working Scientifically' by playing and exploring (engagement), active learning (motivation) and creating and thinking critically (thinking).

Knowledge	Skills	Why this? Why now?	Vocabulary	Key Scientist
Term 1 and 2-What makes me? – Healthy Me				
Informed from the Early Learning Goals: Term 1: - Describe how people are familiar to them. - Learn how to take care of themselves. - Explore the natural world around them, making observations and drawing pictures of animals. - Children know about similarities and differences in relation to living things. - Be able to identify different parts of their body. - Be able to show care and concern for living things. Term 2: - Explore animals in the natural environment. - Name and describe animals that live in different habitats. - Describe different habitats. - Can talk about things they have observed, including animals. **Key learning for children:** Term 1: - I know and can identify body parts, including the head, arm, leg, knee, feet, back, stomach, shoulders, and elbows. - I know that a face is made up of eyes, nose, lips, cheeks, and ears. - I know that my body is similar to someone else's body, e.g., we both have hair. - I know that my body is different from someone else's body, e.g. I have blonde hair and they have brown hair. Term 2: - I know that a habitat is the home of an animal. - I know that the following are examples of habitats: desert, forest, pond, polar regions and the sea. - I know what a given habitat (desert, forest, pond, polar regions and the sea) looks like. - I know animals that live in the following habitats: desert, forest, pond, polar regions and the sea.	**Working Scientifically Enquiries:** - Identify and Classify – How can we organise all the zoo animals? What are the names for all the parts of our bodies? - Observation Overtime – How does my height change over the year?	- Why this? We begin with the body and senses as the children have the experience of them but may not be able to explain. We work on extending their vocabulary to be able to talk about their observations. The children have the opportunity to use their senses to explain what they see, feel, and hear in relation to the world around them. - Why now? At the start of the year, pupils will be learning more about each other. This is a chance for them to begin to understand the similarities and differences that exists within the class. It also links in with EYFS' big question 'What makes me, me?	Term 1: hair (e.g. black, brown, dark, light, blonde, ginger, grey, white, long, short, straight, curly), eyes (e.g. blue, brown, green, grey), skin (e.g. black, brown, white), big/tall, small/short, bigger/smaller, baby, toddler, child, adult, old person, old, young, brother, sister, mother, father, aunt, uncle, grandmother, grandfather, cousin, friend, family, boy, girl, man, woman Term 2: names of animals, live, on land, in water, jungle, desert, North Pole, South Pole, sea, hot, cold, wet, dry, snow, ice,	• Conservationist: works for the protection and preservation of living things and the environment. • Farmer: grows crops and raises animals for food. • Marine biologist: studies living things in oceans. • Mammologist: studies mammals. • Naturalist: scientist who studies the natural world. • Vet: looks after unwell animals. • Wildlife filmmaker: creates films and documentaries about wildlife. • Wildlife photographer :takes pictures of animal

Term 3-What was lifelike once upon a time? – Materials				
Informed from the Early Learning Goals: - Explore a range of materials, including natural materials. - Make objects from different materials, including natural materials. - Observe, measure and record how materials change when heated and cooled. - Compare how materials change over time and in different materials. - Understand some important processes and changes, including the changing states of matter. - Know about similarities and differences in relation to objects. - Talk about the features of their immediate environment and how environments might vary from one another in relation to the objects within them. - Ask questions about the objects they use. - Manipulates materials to achieve a planned effect. **Key learning for children:** - I know the names of materials including wood, plastic, metal, brick, rock, paper and cardboard. - I know objects that are made out of the materials: wood, plastic, metal, brick, rock, paper and cardboard. - I can say materials in the classroom that are used for different roles. - I can explain why I would use material for a specific purpose. -	**Working Scientifically Enquiries:** - Competitive tests – Which materials are the most flexible? Which materials are the most absorbent? Which material would be best for the roof of the little pig's house? - Identify and Classify – We need to choose a material to make an umbrella. Which materials are waterproof?	- Why this? Pupils have the opportunity to explore the materials within their classroom. - Why now? This unit allows the pupils to make links between their observations of materials and the traditional stories they have been exposed to. It also links in with EYFS' big question 'What was lifelike once upon a time?'	- ice, water, frozen, icicle, snow, melt, wet, cold, slippery, smooth, big, bigger, biggest, smaller, smaller, smallest, hard, soft, bendy, rigid, wood, plastic, paper, card, metal, strong, weak, hot, apply heat, waterproof, soggy, not waterproof, best, change, change back	. **Architect**: uses art and science to design buildings that are strong. . **Builder**: builds structures. . **Materials scientist**: researches structures and properties of materials.
Term 4-What is happening outside my window? - Seasonal Change				
Informed from the Early Learning Goals: - Play and explore outside in all seasons and different weather. - Explore how wind can move objects. - Observe living things throughout the year. - Explore shadows. - Explore rainbows. - Listen to sounds outside and identify the source. - Explore the natural world around them. - Make comments and ask questions about the place they live in or the natural world. - Develop an understanding of seasonal change. - Observe and explain why certain things may occur (e.g., leaves falling off trees, weather changes). - Looked closely at similarities, differences, patterns and change. **Key learning for children:** - I know the names of the 4 seasons. - I know the different types of weather we get in the 4 seasons. - I can make comparisons between winter and summer. - I know that people live differently in winter compared to summer.	**Working Scientifically Enquiries:** - Competitive tests – In which season does it rain the most? - Pattern Seeking – Does the wind always blow the same way?	- Why this? Pupils have the opportunity to explore what happens to the local environment as the season changes. - Why now? This unit allows for comparison by observing what is different in the world now and what can now be seen in this season compared to the others. It also links in with EYFS' big question 'What is happening outside my window?'	- spring, summer, autumn, winter, seasons, sunny, cloudy, hot, warm, cold, shower, raining, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, windy, rainbow, animals, young, plants, flowers	. **Climatologist**: studies climate patterns. . **Horticulturist**: an expert in garden cultivation and management. . **Meteorologist**: studies and predicts the weather. They collect data about the atmosphere from weather stations and satellites. . **Park ranger**: maintains parks
Term 5 - Why is water wonderful? – Plants				
Informed from the Early Learning Goals: - Make observations of plants. - Know some names of plants, trees and flowers. - May be able to name and describe different plants, trees and flowers. - Explore how objects can move in water. - Show some care for the world around them. - Explore the natural world around them, observing and drawing pictures of plants.	**Working Scientifically Enquiries:** - Identify and Classify – Which tree is this? Which plant is this? - Research - Are there plants that are in flower in every season? What are they?	- Why this? Pupils have the opportunity to explore what is within the local environment. - Why now? This unit allows children the opportunity to begin to name plants and make observations about what is found within the local environment. It also links in with EYFS' big	- Names of plants they see, leaves, trunk, branch, root, seed, bulb, flower, stem, wild, garden, observe, grow,	• **Park ranger** :maintains parks • **Farmer** :grows crops and raises animals for food • **Gardener** :creates and maintains gardens and green spaces • **Tree surgeon** :plants, maintains and manages trees • **Forester** :works to deliver wood products to the market

Key learning for children: - I can name a sunflower, a rose, a daisy, an oak tree, a horse chestnut tree and an ash tree. - I know that flowers have leaves, flowers, petals and roots. - I know that trees have trunks and branches. - I know that plants start as bulbs or seeds. - I know we have to take care of plants for them to grow.		question 'Why is water wonderful?'		
Term 6-Where could I travel to? - Gravity				
Informed from the Early Learning Goals: - Explore how to change how things work. - Listen to sounds outside and identify the source. - Make sounds. - Learn about the Earth, Sun, Moon, planets and stars. - Learn about Space travel. - Explore the natural world around them. - Make comments and asked questions about the place they live in or the natural world. - Develop an understanding of seasonal change. - Looked closely at similarities, differences, patterns and change. **Key learning for children:** - I know the name of the planet I live on. - I know that some environments are different to the one in which I live. - I know that our solar system is made up of the Sun and all of the smaller objects including planets and moons that move around it. - I know the names of other planets, including Mercury, Venus, Mars, Jupiter, Saturn, Uranus and Neptune. - I know that space has no gravity.	**Working Scientifically Enquiries:** - Identify and Classify – How could you organise all the objects in the solar system into groups? - Pattern Seeking – Does the weight of an object affect how fast it falls to the ground?	- Why this? Pupils will be introduced to the fact that Earth, where they live, is a planet and that there are other planets. Why now? This unit also links in with EYFS' big question 'Where could I travel to?'	- Sun, Moon, Earth, star, planet, sky, day, night, space, round, bounce, float	• **Astronomer**: studies the universe beyond earth, including stars and planets. • **Astrophysicist**: studies the physics of space and objects in space. • **Astronaut**: travels to space to carry out research. • **Astronautical engineer**: work with cutting-edge technology and international companies to design, develop, maintain and tests the performance of satellites and space vehicles. • **Astrobiologists**: study how microbes might live and behave in outer space, and what this might mean for life on other planets. • **Astrophysicist**: studies the physics of space and objects in space. • **Mechanical engineer**: helps to design, analyse, make and maintain mechanical systems such as spacecraft, aircraft, trains and cars. • **Physicist**: studies physics.

KS1

Knowledge	Skills	Why this? Why now?	Vocabulary	Key Scientist
Term 1 – Use of Materials (Year 2 NC): How are materials chosen in design?				
National Curriculum Statements: - 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 based on their simple physical properties. **Key learning for children:** - I know the names of different materials including wood, plastic, metal, glass, brick, rock, paper and cardboard. - I can name items that are made out of all of the above. - I know that materials can be used for more than one purpose. - I know that different materials have different properties. - I know that the properties of a material make it best suited for a particular job. - I know how to explain what material I would use for an object based on its properties. - I know that Julie Brusaw invented solar roads that are strong enough to hold vehicles, but also can be used to turn sun energy into electricity.	**Working Scientifically Enquiries:** - Competitive tests – Which shapes make the strongest paper bridge? - Identify and Classify – Which materials will float, and which will sink? - Pattern Seeking – How do materials change with heat? How does the amount of water affect the strength of a kitchen towel? - Research - How have the materials we use changed over time? How are plastics made? **Working Scientifically Skills:** - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Performing simple tests. - Using their observations and ideas to suggest answers to questions. - Gathering and recording data to help in answering questions. - **Ongoing:** Be curious and ask questions about what they notice /asking simple questions and recognise that they can be answered in different ways - **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.	- Why this? The pupils will begin to think about the different materials that we have in our lives. The pupils will start to develop their reasoning skills by thinking about why they would choose different materials for different purposes. Looking at the properties of materials, the children will suggest why different materials are both useful and not useful. - Why now? This unit builds prior learning of naming materials and describing their properties from EYFS and KS1 Cycle A. Pupils can use this knowledge within their explanations of why objects are made out of the materials that they are. -	- opaque, transparent, translucent, reflective, non-reflective, flexible, rigid, shape, push, pull, twist, squash, bend, stretch	- Julie Brusaw (solar roadways inventor, material engineer).

Term 2 – Seasonal Change (Year 1 NC): What is it like in Autumn and Winter?				
National Curriculum Statements: - Observe changes across the four seasons. - Observe and describe weather associated with the seasons and how day length varies. **Key learning for children:** - I know that we have 4 main seasons. - I can describe where these seasons come in our year. - I know that the days are shorter in Autumn and Winter. - I know that in Winter the temperature decreases. - I know that in Winter the weather can still be sunny even though it is colder. - I can name the different types of weather we see in Autumn and Winter. - I know that Dr Steve Lyons is a meteorologist who studies extreme weather.	**Working Scientifically Enquiries:** - Competitive tests – In which season is it the hottest? - Observation Overtime – Take weather measurements and make observations over time. - Pattern Seeking – using data from the met office, look for patterns in evidence e.g. Does it rain more in spring? Do we have more sunny days in the summer? Which was the coldest month? **Working Scientifically Skills:** - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Observing closely, using simple equipment - Performing simple tests - Using their observations and ideas to suggest answers to questions. - Gathering and recording data to help in answering questions. - **Ongoing:** Be curious and ask questions about what they notice /asking simple questions and recognising that they can be answered in different ways - **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.	- Why this? Pupils have the opportunity to observe and talk about changes seen throughout the seasons of Autumn and Winter. - Why now? This unit builds upon prior learning from EYFS and allows the pupils to gain a greater understanding of the seasons of Autumn and Winter. In KS1 Cycle A, children have the opportunity to gain a greater understanding of the seasons of Spring and Summer.	- weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length	- Dr Steve Lyons
Term 3 – Understanding Animals, including Humans (Year 2 NC): Why do we need to keep healthy?				
National Curriculum Statements: - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **Key learning for children:** - I know that to support humans as they grow into healthy adults, we must eat the right types of food in the right amounts. - I know humans should eat a range of foods from the different sections of the Eat Well plate. - I know the names of the 5 food groups from the Eat Well plate. - I can name examples of foods for each of the five food groups. - I know that it is important to keep myself clean. - I know that exercise helps me stay healthy. - I know that Joe Wicks wants to encourage people to eat healthier and to encourage people to do more exercise.	**Working Scientifically Enquiries:** - Identify and Classify – Which foods belong to which food groups? - Observation Overtime –How much food and drink do I eat over a week? **Working Scientifically** (Yellow = that area MUST be done linked to the subject knowledge aspect, but the other areas can be chosen to suit investigations) - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Observing closely, using simple equipment - Performing simple tests - Identifying and classifying - Using their observations and ideas to suggest answers to questions. - **Ongoing:** Be curious and ask questions about what they notice / ask simple questions and recognising that they can be answered in different ways - **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.	- Why this? Pupils have the opportunity to explore exercise and nutrition and how these can combine to create a healthy lifestyle. This will not only help them now but also help prepare them for the future. - Why now? This unit builds upon Healthy Me from EYFS and prior learning of carnivores, omnivores and herbivores from KS1 Cycle A by focusing more on the needs of humans,	- survive, survival, water, food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g., meat, fish, vegetables, bread, rice, pasta, dairy)	- Joe Wicks (Personal Trainer)
Term 4 – Animals, including Humans (Year 2 NC): Do living things change or stay the same?				
National Curriculum Statements: - Know that animals, including humans, have offspring which grow into adults. - Know the basic stages in a life cycle for animals, including humans. - Find out and describe the basic needs of animals, including humans, for survival (water, food and air). **Key learning for children:** - I know that a life cycle is the journey of a living thing from beginning to end. - I know the stages of a life cycle for a human. - I know the stages of a life cycle for a frog. - I can describe changes in an adult compared to a child. - I know that animals, including humans, need water, air and food to survive. - I know that Steve Irwin was an Australian zookeeper and conservationist who was best known as 'the	**Working Scientifically Enquiries:** - Identify and Classify – Which offspring belongs to which animal? - Observation Overtime – How does a tadpole change over time? - Research - What do you need to do to look after a pet dog/cat/lizard and keep it healthy? **Working Scientifically** (Yellow = that area MUST be done linked to the subject knowledge aspect, but the other areas can be chosen to suit investigations) - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Observing closely, using simple equipment - Identifying and classifying - Using their observations and ideas to suggest answers to questions. - **Ongoing:** Be curious and ask questions about what they notice /asking simple questions and recognising that they can be answered in different ways	- Why this? Pupils have the opportunity to use the local environment to support them with this term's learning by focusing on the life cycle of animals found within the school pond, - Why now? This unit builds upon prior learning from last term by focusing more on the needs of other animals and comparing that to the needs of humans.	- offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g., chick/chicken, kitten/cat, caterpillar/butterfly), s	- Steve Irwin (Crocodile Hunter)

crocodile hunter'. **National Curriculum Statements:** - Explore and compare the difference between things that are living, and 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 micro-habitats. - Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food. **Key learning for children:** - I understand the terms living, dead and things that have never been alive. - I can identify examples of things that are dead and things that have never been alive within the local area. - I understand the term habitat is where living things find the things they need to survive. - I know that different animals are suited to different habitats. - I know a microhabitat is a very small habitat where minibeasts live. - I know some habitats are very large like oceans, forests, woodlands and rivers. - I know some habitats are very small such as under logs or rocks. - I know we have different habitats in our local area. - I know that animals can obtain their food from other animals or plants. - I know this is called a food chain. - I know that Liz Bonnin combines her scientific knowledge with her presentation skills to educate and entertain people around the world about animal welfare.	- **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. **Working Scientifically Enquiries:** - Identify and Classify – How would you group these plants and animals based on what habitat you would find them in? How would you group things to show which are living, dead, or have never been alive? - Observation Overtime – How does the school pond change over the year? **Working Scientifically Skills:** - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Identifying and classifying - Using their observations and ideas to suggest answers to questions. - **Ongoing:** Be curious and ask questions about what they notice /asking simple questions and recognising that they can be answered in different ways - **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.	- Why this? Pupils have the opportunity to explore habitats and food chains. - Why now? This unit builds upon prior learning from EYFS by identifying the habitats that animals live in.	- Living, dead, never alive, habitats, micro-habitats, food, food chain, leaf litter, shelter, seashore, woodland, ocean, rainforest, conditions, desert, damp, shade,	- Liz Bonnin (Conservationist)
Term 6- Plants (Year 2 NC): What should I do to grow a healthy plant?				
National Curriculum Statements: - Observe and describe how seeds and bulbs grow into mature plants. - Find out and describe how plants need water, light and warmth to grow and stay healthy. **Key learning for children:** - I know that plants have a life cycle. - I know that plants start as bulbs or seeds. - I know that seeds grow roots and shoots. Roots and shoots then grow leaves above ground. - I know many plants make flowers, which turn into fruits. - I know that we must take care of plants for them to grow. - I know that plants need water, light and heat to survive. - I know why plants grow better in spring and summer than in winter. - I know that plants change and grow over time. - I know that Beatrice Potter studied mushrooms under a microscope to investigate how they reproduced.	**Working Scientifically Enquiries:** - Competitive tests – Do cress seeds grow quicker inside or outside? - Pattern Seeking – Do bigger seeds grow into bigger plants? - Research - How does a cactus survive in a desert with no water? How did Beatrix Potter help our understanding of mushrooms and toadstools? **Working Scientifically Skills:** - Ask their own simple questions about what they notice and recognising that they can be answered in different ways. - Observing closely, using simple equipment - Performing simple tests - Using their observations and ideas to suggest answers to questions. - Gathering and recording data to help in answering questions. - **Ongoing:** Be curious and ask questions about what they notice / asking simple questions and recognising that they can be answered in different ways - **Ongoing:** Begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.	- Why this? We are surrounded by plants, particularly within our local environment at school. Pupils have the opportunity to learn about what plants need to grow and stay healthy in order to have a better understanding of preserving plants for the future. Where possible, they should observe the growth of flowers and vegetables that they have planted. - Why now? This unit builds upon identifying and naming common plants from KS1 Cycle A and EYFS. Pupils can explore plants in the local environment and can use their understanding to support them with growing of their own plants. This will support the children as they move into KS2 looking at a more in-depth look at plant anatomy.	- light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling	- Beatrix Potter (Author & Botanist)

Lower KS2

Knowledge	Skills	Why this? Why now?	Vocabulary	Key Scientist
Term 1- Rocks (Year 3 NC): How can we classify rocks?				
National Curriculum Statements: - Compare and group together different kinds of rocks based on their appearance and simple physical properties. - Describe in simple terms how fossils are formed when things that have lived are trapped within the rock. - Recognise that soils are made from rocks and organic matter. **Key learning for children:** - I know the names of the 3 different types of rock: metamorphic, sedimentary, and igneous. - I know the different characteristics of these rocks. - I know that a fossil is the preserved remains or traces of a dead organism. - I know the process by which a fossil is formed is called fossilisation. - I know that fossils are formed when a dead organism is buried under a rock. - I know that fossils are formed over great lengths of time. - I know that soils are made from rocks or organic matter such as dead plants, animals and water. - I know there are different types of soil including: chalk soil, sandy soil, clay soil and peat. - I know how to compare the qualities of different soil types. - I know that Mary Anning was a palaeontologist and fossil collector. - I know that Mary Anning discovered a 5.2-metre-long skeleton which was named Ichthyosaurus. - I know that Mary Anning wasn't taken seriously as a scientist in her lifetime because of her gender and poor background. But today, Mary is recognised as a pioneer in the field of palaeontology (the study of fossils) and is celebrated as the greatest fossil hunter of all time.	**Working Scientifically Enquiries:** - Identify and Classify – Can you use the identification key to find out the name of each of the rocks in your collection? - Research - Who was Mary Anning and what did she discover? **Working Scientifically** (Yellow = that area MUST be done linked to the subject knowledge aspect, but the other areas can be chosen to suit investigations) - Making systematic and careful observations and, where appropriate, taking accurate measurements - Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. - Identifying differences, similarities or changes related to simple scientific ideas and processes. - **Ongoing:** Ask their own questions about what they observe. - **Ongoing:** Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.	- Why this? Pupils have the opportunity to learn about natural disasters and different types of rocks and fossils. This helps to promote a love of the environment which is a golden thread within the curriculum for lower KS2 this year. - Why now? This unit builds upon prior learning from KS1 Cycle A in which children recognised rock as a material. It lays the groundwork for the Year 6 unit on evolution/inheritance with work on fossils.	- Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorbs water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, types of soil Rocks, igneous, metamorphic, sedimentary, anthropic, permeable, impermeable, fossil,	- Mary Anning (Discovery of Fossils)
Term 2 and 3 - Light (Year 3 NC): What is a shadow?				
National Curriculum Statements: - Recognise that they need light to see things and that dark is the absence of light. - Notice that light is reflected from surfaces. - Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. - Recognise that shadows are formed when the light from a light source is blocked by a solid object. - Find patterns in the way that the sizes of shadows change. **Key learning for children:** - I know that we see through reflections of different surfaces. - I know that light travels in straight lines. - I know that there are natural and artificial sources of light. - I know that light travels into the eyes. - I know transparent objects let light through. - I know translucent objects let some light through. - I know opaque objects do not let any light through.	**Working Scientifically Enquiries:** - Competitive tests – How does the distance between the shadow puppet and the screen affect the size of the shadow? Which pair of sunglasses will be best at protecting our eyes? - Identify and Classify – How would you organise these light sources into natural and artificial sources? - Observation Overtime – When is our classroom darkest? - Research - How does the Sun make light? **Working Scientifically Skills:** - Making systematic and careful observations and, where appropriate, taking accurate measurements - Using standard units, using a range of equipment, including dataloggers. - Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. - Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	- Why this? Pupils have the opportunity to learn about light as a formal unit. They will be learning about sun safety and will learn about how shadows are formed when a light source is blocked by an opaque object. - Why now? This unit builds upon prior learning from seasonal change within KS1 Cycle A and B in which they explored how day length varies.	- Light, Light source, dark, reflect, ray, mirror, bounce, visible, beam, sun, glare, travel, straight, opaque, shadow, block, transparent, translucent, dangerous	- James Clerk Maxwell (Visible and Invisible Waves of Light)

- I know that shadows are caused when an object blocks light. - I know that shadows will change in length throughout the day. - I know that I need to protect my eyes from the sun. - I know that James Clerk Maxwell was a physicist who made lots of discoveries about how we see light and colour. - I know that he worked out that any colour of light could be made by mixing different amounts of blue, green and red light and he made his colour wheel to experiment with mixing colours.	- Using straightforward scientific evidence to answer questions or to support their findings. - **Ongoing:** Ask their own questions about what they observe. - **Ongoing:** Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.			
Term 3 and 4- Forces and Magnets (Year 3 NC): How do magnets work?				
National Curriculum Statements: - Compare how things move on different surfaces. - Know how a simple pulley works and use making lifting an object simpler. - Notice that some forces need contact between two objects, but magnetic forces can act at a distance. - Observe how magnets attract and repel each other and attract some materials and not others. - Compare and group together a variety of everyday materials based on whether they are attracted to a magnet and identify some magnetic materials. - Describe magnets as having two poles. - Predict whether two magnets with attract or repel each other, depending on which poles are facing. **Key learning for children:** - I know that forces are the things that allow the movement of all objects around us. - I know that forces are pushes or pulls which can change an object's speed, its direction, and even its shape. - I know that a magnet has two poles called north and south. - I know that a north and south pole will attract whilst a south-south or north-north will repel. - I can recognise different materials that will be attracted to magnets. - I know how to categorise materials based on whether they are magnetic. - I know how different magnets have different strengths. - I know that William Gilbert was a physician who discovered that the Earth's core contained iron and is one big magnet. - I know that William Gilbert carried out lots of studies of magnets and electricity and wrote up his findings.	**Working Scientifically Enquiries:** - Competitive tests – How does the mass of an object affect how much force is needed to make it move? Which magnet is strongest? - Identify and Classify – Which materials are magnetic? - Pattern Seeking –Does the size and shape of a magnet affect how strong it is? - Research - How does a compass work? **Working Scientifically Skills:** - Setting up simple practical enquiries, comparative and fair tests - Making systematic and careful observations and, where appropriate, taking accurate measurements - Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables - Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. - **Ongoing:** Ask their own questions about what they observe. - **Ongoing:** Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.	- Why this? Pupils have the opportunity to explore different metals and explore which metals are magnetic/non-magnetic. - Why now? This unit builds upon prior learning from KS1 where pupils classified materials, including metals. This unit will provide a basis for work in Years 5 and 6 on Forces.	- Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole.	- William Gilbert (Theories on Magnetism)
Term 5: Animals including Humans (Year 4 NC): How is energy transferred in living things?				
National Curriculum Statements: - Describe the simple functions of the basic parts of the digestive system in humans. - Identify the different types of teeth in humans and their simple functions. - Construct and interpret a variety of food chains, identifying producers, predators and prey. **Key learning for children:** - I know that the digestive system helps give us energy to survive. - I know the different stages of the digestive system. - I know how to label the key parts of my body involved in the digestive system. - I can label the different teeth that I have using the correct names: canines, molars, and incisors. - I know the roles of the different types of teeth in my	**Working Scientifically Enquiries:** - Identify and Classify – What are the names of all the organs involved in the digestive system? How can we organise teeth into groups? - Observation Overtime – How does an eggshell change when it is left in cola? - Pattern Seeking – Are foods that are high in energy always high in sugar? - Research - How do dentists fix broken teeth? **Working Scientifically Skills:** - Making systematic and careful observations and, where appropriate, taking accurate measurements - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	- Why this? Pupils have the opportunity to explore what happens to the food they eat. - Why now? This unit builds upon prior learning with regards to the concept of nutrition from KS1 Cycle B in which children learnt about the five food groups. It also links in with Animals, including Humans from Lower KS2 Cycle A in which the children learnt about how the systems inside our body work to make a healthy human.	- Herbivore, Carnivore, Digestive system, tongue, mouth, teeth, oesophagus, stomach, gall bladder, small intestine, pancreas, large intestine, liver, tooth, canine, incisor, molar, premolar, producer, consumer, prey, predator.	- Paul Sharpe (Bioengineer)

mouth. - I know that different animals have different teeth. - I know the difference between the teeth of a carnivore to those of a herbivore. - I know that producers start a food chain. - I know that producers produce their own food. - I know that predators eat other animals. - I know that when an animal is eaten by another it is known as prey. - I know that energy is being transferred through the food chain. - I know when drawing a food chain, the arrow points in the direction that the energy is moving. - I know that Paul Sharpe is a bioengineer who studies how to regrow teeth if they become damaged.	- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. - **Ongoing:** Ask their own questions about what they observe. - **Ongoing:** Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.			
Term 6 – Materials: States of Matter (Year 4 NC): How does temperature affect different materials?				
National Curriculum Statements: - Compare and group materials together, according to whether they are solids, liquids or gases. - Observe that some materials change state when heated or cooled, and measure and research the temperature at which this happens in degrees Celsius. - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Key learning for children:** - I know the 3 states of matter are solids, liquids and gases. - I know that solids hold their shape. - I know that liquids take the form of the object they are in. - I know that gases will escape from a container. - I know how to label objects as solids, liquids or gases based on their properties. - I know that when a gas turns into a liquid it is called condensation. - I know when a liquid turns into a gas it is called evaporation. - I know when a liquid turns into a solid it is called freezing. - I know that the water cycle involves evaporation and condensation. - I know the temperature at which water changes to solid is 0 degrees. - I know that the temperature at which water changes to gas is 100 degrees. - I know that different materials change state at different temperatures. - I know that Anders Celsius was an Astronomer who invented the degrees Celsius temperature scale.	**Working Scientifically Enquiries:** - Competitive tests – How does the mass of a block of ice affect how long it takes to melt? How does the surface area of water affect how long it takes to evaporate? - Identify and Classify – Can you group these materials and objects into solids, liquids, and gases? - Observation Overtime – How does the level of water in a glass change when left on the windowsill? - Pattern Seeking – Is there a pattern in how long it takes different-sized ice lollies to melt? How does the evaporation rate change as you add more salt to your water? **Working Scientifically Skills:** - Setting up simple practical enquiries, comparative and fair tests - Making systematic and careful observations and, where appropriate, taking accurate measurements - Using standard units, using a range of equipment, including thermometers and dataloggers. - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. - Using straightforward scientific evidence to answer questions or to support their findings. - **Ongoing:** Ask their own questions about what they observe. - **Ongoing:** Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.	- Why this? Pupils have the opportunity to build upon their good foundation of knowledge and understanding from KS1 to progress to comparing and grouping materials into solids, liquids and gases. - Why now? This unit builds upon prior learning about the water cycle from Connections that occur during this cycle. It also builds upon the children's prior understanding of solids, liquids and gases they have encountered through previously taught Physics units. This unit introduces the change of state in preparation for Upper KS2.	- Solid, liquid, gas, particles, state, materials, properties, matter, melt, freeze, water, ice, temperature, process, condensation, evaporation, water vapour, energy, precipitation, collection,	- Anders Celsius (Celsius Temperature Scale)

Upper KS2

Knowledge	Skills	Why this? Why now?	Vocabulary	Key Scientist
Term 1: Evolution and Inheritance (Year 6 NC): How have living things evolved over time?				
National Curriculum Statements: - Know about evolution and can explain what it is. - Know how fossils can be used to find out about the past. - 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	**Working Scientifically Enquiries:** - Identify and Classify – Compare the skeletons of apes, humans, and Neanderthals – how are they similar, and how are they different? Can you classify these observations into evidence for the idea of evolution and evidence against it? - Observation Overtime – How has the skeleton of the horse changed over time?	- Why this? Pupils have the opportunity to find out more about how living things on Earth have changed over time. - Why now? This unit builds upon prior learning from KS1 about living and non-living things including things that are alive, things that are dead and things that have never been alive. They will also build on learning from Lower KS2 about fossils and rocks.	- Fossils, Adaptation, Evolution, Characteristics, Reproduction, Genetics, Variation, Inherited, Environmental, Mutation,	- Charles Darwin and Alfred Russel Wallace (Theory of Evolution

lead to evolution- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. - Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. **Key learning for children:** - I know that the Earth is millions of years old. - I know what the theory of evolution is. - I know that different types of animals were on the Earth millions of years ago. - I understand that adults pass on characteristics to their offspring. - I know that I have characteristics similar to my parents. - I know that there are inherited characteristics and environmental characteristics. - I know that inheritance takes place across all animals. - I know that we all have genes that are individual to us. - I know what adaptation is. - I know that all animals must adapt to the environment they are in. - I know that adaptations and habitats are linked together. - I know that Charles Darwin and Alfred Russel Wallace were Natural Historians who developed the theory of evolution by natural selection.	- Pattern Seeking – Is there a pattern between the size and shape of a bird's beak and the food it will eat? - Research - What happened when Charles Darwin visited the Galapagos islands? **Working Scientifically Skills:** - Select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using wide range of secondary sources. - Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. - Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. - Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and 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. - **Ongoing:** Ask their own questions about scientific phenomena - **Ongoing:** Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.		Competition, Survival of the Fittest, Evidence,	by Natural Selection)
Term 2- Living Things and Their Habitats (Year 6 NC): How can we classify living things into groups?				
National Curriculum Statements: - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. - Give reasons for classifying plants and animals based on specific characteristics. **Key learning for children:** - I know what microorganisms are. - I know which animals are vertebrates and invertebrates. - I know what classification means. - I know what a classification web is. - I know how to classify people in my classroom. - I know how to apply classification questions to unfamiliar and familiar animals. - I know how to explain how a classification system works. - I know that Carl Linnaeus was a Botanist and Zoologist who developed a taxonomy for classifying organisms.	**Working Scientifically Enquiries:** - Identify and Classify – How would you make a classification key for vertebrates/invertebrates or microorganisms? - Observation Overtime – What happens to a piece of bread if you leave it on the windowsill for two weeks? - Research - What do different types of microorganisms do? Are they always harmful? **Working Scientifically Skills:** - Select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources. - Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. - Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs - Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and 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. - **Ongoing:** Ask their own questions about scientific phenomena - **Ongoing:** Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.	- Why this? Pupils have the opportunity to use classification systems and keys to identify both animals and plants in the local environment. - Why now? This unit builds upon prior learning from Lower KS2 by looking at the classification system in more detail.	- Variation, Organisms, Populations, Classification, Characteristics, Environment, flowering, non-flowering, plants, animals, vertebrates, fish, amphibians, reptiles, mammals, invertebrates, human impact, nature reserves, deforestation. Classify and Compare, bacteria, microorganisms, organisms, invertebrates, vertebrates, and Linnaean.	- Carl Linnaeus (Identifying, Naming and Classifying Organisms)
Term 3 - Animals including Humans (Year 6 NC): How do our choices affect how our bodies work?				
National Curriculum Statements: - 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	**Working Scientifically Enquiries:** - Competitive tests – How does the length of time we exercise for affect our heart rate? Can exercising regularly affect your lung capacity? Which type of exercise has the greatest effect on our heart rate?	- Why this? Pupils have the opportunity to recognise how their bodies can be damaged by recognising the impact of drugs and other substances. They will look at the impact that a diet that is not balanced might have on the body and the importance of exercise.	- Oxygenated, Deoxygenated, Valve, Exercise, Respiration Circulatory system,	- Sir Richard Doll

lifestyle on the way their bodies function. - Describe the ways in which nutrients and water are transported within animals, including humans. **Key learning for children:** - I know blood is pumped around the body by the heart. - I know that blood moving around our body is called the circulatory system. - I know that veins take blood to the heart. - I know that arteries take blood away from the heart. - I know that blood is to the body through the pulmonary artery. - I know that blood is oxygenated in the lungs. - I know blood returns to the heart through the pulmonary vein. - I know oxygenated blood is pumped out through the aorta. - I know that blood travels around the body delivering oxygen and nutrients. - I know the impact of a healthy and an unhealthy diet on the human body. - I know how to create a balanced meal involving foods from each of the five food groups. - I know how the food groups impact my body. - I know that cardiovascular exercises help to strengthen the heart and pulse rate. - I know how to measure my heart rate accurately. - I know the benefit of regularly increasing my heart rate. - I know that smoking causes less oxygen to be in my body. - I know how smoking can cause fatty deposits and poison lungs. - I know that drugs can both be harmful and helpful to my body. - I know that Sir Richard Doll was a Doctor who proved the link between lung cancer and smoking.	- Identify and Classify – Which organs of the body make up the circulation system, and where are they found? - Pattern Seeking – Is there a pattern between what we eat for breakfast and how fast we can run? - Research - How have our ideas about disease and medicine changed over time? **Working Scientifically Skills:** - Select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources. - Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. - 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 degree of trust in results, in oral and written forms such as displays and other presentations. - **Ongoing:** Ask their own questions about scientific phenomena - **Ongoing:** Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.	- Why now? This unit builds upon prior learning about the circulation system and balanced diet from Lower KS2. -	heart, lungs, blood vessels, blood, artery, vein, pulmonary, alveoli, capillary, digestive, transport, gas exchange, villi, nutrients, water, oxygen, alcohol, drugs, tobacco.	
Term 4 and 5 - Light (Year 6 NC): How do our eyes work?				
National Curriculum Statements: - 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. - Know how simple optical instruments work, e.g., periscope, telescope, binoculars, mirror, magnifying glass etc. **Key learning for children:** - I know that light travels into my eye in a straight line. - I know that I can use reflection to see in different directions. - I know the different parts of the eye. - I know that when a light hits an object it reflects off the object at the same angle. - I can draw a diagram representing how light is reflected. - I know that smooth, shiny surfaces reflect light better than rough, dull surfaces. - I know that refraction involves the bending of light. - I know why we have different colours within a rainbow. - I know that Ibn Al-Haytham (Alhazen) was a Physicist and a Mathematician who developed a theory that light	**Working Scientifically Enquiries:** - Competitive tests – How does the angle of a light ray when it hits a plane mirror, affect the angle at which it reflects off the surface? Which material is most reflective? - Identify and Classify – Can you identify all the colours of light that make white light when mixed together? What colours do you get if you mix different colours of light together? - Observation Overtime – Does the temperature of a light bulb go up the longer it is on? - Pattern Seeking – Is there a pattern to how bright it is in school over the day? And, if there is a pattern, is it the same in every classroom? **Working Scientifically Skills:** - Select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources. - 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	- Why this? Pupils have the opportunity to explore the way that light behaves, including light sources, reflection and shadows. Completing this work in the summer term allows for experiments regarding light and shadows at different times of the day. - Why now? This unit builds upon prior learning from Lower KS2 Cycle B where the pupils gained the knowledge that you need light in order to see things and that dark is the absence of light.	- Light source, dark, reflect, ray, mirror, bounce, visible, beam, sun, glare, travel, straight, opaque, shadow, block, transparent, translucent, reflect. Absorb, emit, scattered, refract,	- Ibn Al-Haytham (Alhazen)

travels in a straight line and proved it by carrying out the first scientific experiment.	- 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 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. - **Ongoing:** Ask their own questions about scientific phenomena - **Ongoing:** Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.			
Term 6 - Electricity (Year 6 NC): Can we vary the effects of electricity?				
National Curriculum Statements: - 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. **Key learning for children:** - I know that electricity is measured in volts. - I know how to construct different circuits using components including; switches, bulbs, buzzers, cells and wires. - I can describe the direction that the current is travelling in. - I know the difference between a series and a parallel circuit. - I know how to control when a bulb is turned on or off. - I recognise how the number of volts in a circuit will increase the brightness of the bulb. - I know when series or parallel circuits are used. - I can explain the benefits and downfalls of a series or parallel circuit. - I can draw circuits using the correct symbols for components. - I know which materials will make good conductors or insulators. - I know how to keep safe using electricity. - I know that Nicola Tesla was an Electrical and Mechanical Engineer who developed the AC electrical system and made important advances in technologies such as x-rays, neon lights and robotics.	**Working Scientifically Enquiries:** - Competitive tests – How does the voltage of the batteries in a circuit affect the brightness of the lamp? How does the voltage of the batteries in a circuit affect the volume of the buzzer? Which make of battery lasts the longest? - Identify and Classify – How would you group electrical components and appliances based on what electricity makes them do? - Pattern Seeking – Does the temperature of a light bulb go up the longer it is on? - Research - How has our understanding of electricity changed over time? **Working Scientifically Skills:** - Select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources. - 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 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. - **Ongoing:** Ask their own questions about scientific phenomena - **Ongoing:** Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.	- Why this? Pupils have the opportunity to learn about the current uses for electricity and what we might see develop in the future. - Why now? This unit builds upon prior learning from Lower KS2 Cycle A where they drew circuits pictorially and were introduced to conventional circuit symbols, using them to draw diagrams.	- Electricity, neutrons, protons, electrons, nucleus, atom, electric current, appliances, mains, voltage, crocodile clips, wires, bulb, battery cell, battery holder, motor, buzzer, switch, conductor, electrical insulator, conductor.	- Nicola Tesla (Alternating Currents)