



Corporation Road Community Primary School

Science LTP

Science: Year 5					
Vision: At Corporation Road, we believe that by studying science, children will develop a sense of the world around them and how it works. We aim to use science as a tool to help children work together and begin to build the collaborative skills that they will continue to use as they grow older. Our curriculum aims to teach our pupils about the natural world as well as imparting the knowledge that they can take into their secondary education. We strongly believe that learning is better when it is kept simple and through discussions, demonstrations, experiences and 'hands on' learning', children will be better prepared to retain the knowledge and skills that they have been taught.					
Domains		Key Concepts			
Earth and Space		Identifying and Naming, Moons, Spherical Bodies, Day and Night, Day Length and the Seasons			
Light and Sound		Identifying and Naming, Phenomena, Physical Processes, Classifying, Comparing and Safety			
Seasonal Changes		Identifying and Naming, Effects of the Weather, Recording the Weather, The Seasons and Day Length			
Forces		Identifying and Naming, Physical Processes, Phenomena, Testing, Comparing and Classification			
Electricity		Identifying and Naming, Series Circuits, Circuit Symbols, Current and Voltage, Conductors and Insulators and Safety			
Substance, Matter and Materials		Identifying and Naming, Classification, Uses, Physical Processes, Physical Properties and Comparisons			
Plants		Identifying and Naming, Classification, Plant Parts and Their Functions, Habitats and Adaptation, Growth and Survival, Life Cycles, Seasonal Changes and Comparisons			
Animals Including Humans		Identifying and Naming, Classification, Habitats, Adaptation and Interdependence, Growth, Health and Survival, Diet and Teeth, The Body, Life Cycles and Comparing			
Evolution and Inheritance		Identifying and Naming, Inheritance, Evolution, Adaptation, Fossils and The Future			
Working Scientifically		Asking and Answering Questions, Investigating, Observing, Equipment and Measuring, Identifying and Classifying, Recording and Reporting on Findings, Analysing Data and Drawing Conclusions			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Domain: Animals Including Humans	Domain: Forces	Domain: Earth and Space	Domain: Light	Domain: Substance, Matter and Materials	Domain: Plants
Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Classification - Habitats, Adaptation and Interdependence - Growth, Health and Survival - Diet and Teeth - The Body - Life Cycles - Comparing 	Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Physical Processes - Phenomena - Testing - Comparing - Classification 	Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Moons - Spherical Bodies - Day and Night - Day Length and the Seasons 	Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Phenomena - Physical Processes - Comparing - Safety 	Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Classifying - Uses - Physical Processes - Physical Properties - Comparisons 	Key Concepts: <ul style="list-style-type: none"> - Identifying and Naming - Classification - Plant Parts and Their Functions - Habitats and Adaptation - Growth and Survival - Life Cycles - Seasonal Changes - Comparisons
End Point: Biology The end-point for biology at Corporation Road is for our children to understand that it is the study of life and living things.	End Point: Physics The end-point for physics is that children know that it is the study of things around them as well as energy and forces. Children should name and be able to identify the eight planets of the solar system. From their learning, children will understand the force of gravity and as well as how other forces work on objects moving through the air, water and along a surface. Our children will learn how to create simple circuits and			End Point: Chemistry The end-point for chemistry at Corporation Road is for our children to understand that it is the study of what everything is	End Point: Biology The end-point for biology at Corporation Road is for our children to understand that it is the study of life and living things.

<p>We want our children to be able to name a range of animals and plant life from their local environment but also the wider world. Building upon this, children will also be able to know the difference between vertebrates and invertebrates and be able to identify them and their features. Additionally, through their studies, children should understand the concept of adaption and why it is important for a species to survive. Finally, we want our children to understand evolution and be able to give examples where this has taken place in an animal or plant species.</p>		<p>understand key terms such as current and voltage. Finally, children will have a working understanding of light and sound.</p>		<p>made of and how it works. We want children to be able to understand the difference between a solid, a liquid and a gas and be able to name examples of them independently. Children should know the names of different physical properties of materials and identify how this can impact on how a material is used in everyday life. Finally, children should know how these different materials help during physical processes.</p>		<p>We want our children to be able to name a range of animals and plant life from their local environment but also the wider world. Building upon this, children will also be able to know the difference between vertebrates and invertebrates and be able to identify them and their features. Additionally, through their studies, children should understand the concept of adaption and why it is important for a species to survive. Finally, we want our children to understand evolution and be able to give examples where this has taken place in an animal or plant species.</p>	
<ul style="list-style-type: none">- Identify, and present in an appropriate way, the key stages in human growth and development from birth to old age.- Describe how we define a mammal and how this relates to classification.- Complete own research/watch documentaries, noting detail on animals and plants in their habitats. Include the work of naturalists such as Attenborough or Goodall.- Describe the process of sexual reproduction in a familiar animal and why it is important for species survival.- Make informed choices to maintain their health and well-being, explaining reasons for these choices.- Describe the key physical changes in the male and female human body during puberty.- Draw the life cycle of an insect, an amphibian, a bird and a mammal, highlighting the key differences and similarities.- Compare key facts about mammalian gestation and birth and suggest reasons for variation within a species (e.g. typical gestation in humans being between 37-42 weeks).	<ul style="list-style-type: none">- Identify and define the opposing forces that act upon objects moving through air, water or along a surface.- Describe the force of gravity, what causes it and how the force of gravity changes (e.g. if we were standing on a different planet). Use study skills to research the work of scientists such as Galileo and Newton.- Demonstrate, using a model, how simple levers, gears and pulleys assist the movement of objects using less force.- Make predictions, supported by scientific reasoning to test the effects of friction on movement and distance travelled.- Compare the speed with which objects of different shapes and surface area fall through the air or water, and explain the reason for any differences in terms of the forces acting on the objects.- Classify and group forces based on their actions or whether they act directly, or at distance.	<p><u>Year 5</u></p> <ul style="list-style-type: none">- Name the eight planets of the solar system and describe their position and movement relative to the Sun and neighbouring planets. Describe what a moon is, how they maintain an orbit around a planet and which planets in our solar system have them.- Describe what a moon is, how they maintain an orbit around a planet and which planets in our solar system have them.- Explain day and night using the Earth’s rotation, correct terminology and a model if required.- Explain how the Earth’s ‘position’ affects day length. <p><u>Year 6</u></p> <ul style="list-style-type: none">- Compare times in other parts of the world and relate this to the use of time zones.- Explain how the Earth’s ‘position’ affects day length.	<ul style="list-style-type: none">- Identify by investigation if and how light and sound travel through space, using specific examples to validate their thinking.- Investigate shadows in relation to times of day and explain why the Sun appears to move across the sky.- Describe the Earth’s rotation to explain day and night.- Compare day lengths during different seasons and provide an explanation for why they differ.- Recognise that it isn’t safe to look directly at the Sun, even when wearing dark glasses.	<ul style="list-style-type: none">- Identify a wide range of reversible and irreversible changes that are in use in everyday life.- Classify and group mixtures for how they can be separated, including sieving, filtering and evaporating.- Provide evidence and reasons why a material has been chosen for a specific use. Scientifically and systematically compare the functionality of a range of materials to perform a specific function.- Describe what happens when a solute dissolve in a solvent to form a solution and how this process can be reversed.- Describe comprehensively some familiar and unfamiliar material’s physical properties, including transparency, conductivity, solubility and magnetism.- Measure or research the temperature, in degrees Celsius (°C), at which materials change state and compare to the temperatures at which water changes state.	<ul style="list-style-type: none">- Identify the key structures involved in plant sexual reproduction.- Classify plant types according to how they reproduce.- Explain why plants have flowers and why it is important for them to attract insects and other pollinators.- Describe features of flowers, such as scent, colour, shape and size, and how they have evolved to ensure successful pollination.- Describe the different ways in which new plants can be grown from the parent plant, including seeds, bulbs, tubers, cuttings and grafting.- Describe the process of plant reproduction using the correct scientific language. Observe/comment on/record plant life cycles.- Grow a range of plants/vegetables from seeds, cuttings, tubers and bulbs across the different seasons and note the conditions needed for successful growth.- Make comparisons between asexual and sexual reproduction in plants, suggesting reasons why plants may reproduce in different ways.		
Domain: Working Scientifically							
<p>Key Concepts:</p> <ul style="list-style-type: none">- Identifying and Classifying- Analysing Data	<p>Key Concepts:</p> <ul style="list-style-type: none">- Asking and Answering Questions- Investigating- Observing- Equipment and Measuring- Recording and Reporting on Findings- Analysing Data- Drawing Conclusions	<p>Key Concepts:</p> <ul style="list-style-type: none">- Analysing Data	<p>Key Concepts:</p> <ul style="list-style-type: none">- Analysing Data	<p>Key Concepts:</p> <ul style="list-style-type: none">- Identifying and Classifying- Analysis Data	<p>Key Concepts:</p> <ul style="list-style-type: none">- Identifying and Classifying- Recording and Reporting on Findings- Analysing Data		
End Point							
Working Scientifically							

The end-point for working scientifically involves the children being able to apply a number of skills when completing an experiment or an investigation independently. These skills involve the children being able to take accurate measurements when using different scientific equipment. When explaining their findings, children should be able to use the correct scientific language to demonstrate their understanding. For children to develop as scientists, they will be able to identify the dependent and independent variables and understand what these terms means. Finally, they will be able to have the knowledge and ability to record data and results using the appropriate recording tool.

<ul style="list-style-type: none">- Use and develop keys to identify, classify and describe living things and materials.- Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.	<ul style="list-style-type: none">- Raise different types of scientific questions, and hypotheses.- Plan a range of science enquiries, including comparative and fair tests.- Plan and carry out comparative and fair tests, making systematic and careful observations.- Take measurements using a range of scientific equipment with increasing accuracy and precision.- Record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and line graphs and models.- Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.- Use a simple mode of communication to justify their conclusions on a hypothesis.- Begin to recognise how scientific ideas change over time.-	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.	<ul style="list-style-type: none">- Use and develop keys to identify, classify and describe living things and materials.- Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.	<ul style="list-style-type: none">- Use and develop keys to identify, classify and describe living things and materials.- Record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and line graphs and models.- Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.
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