




Curriculum Subject:

Subject Leader:

Curriculum Overview and Statement of Intent, Implementation and Impact.

	<p align="center"><u>Vision</u></p> <p align="center">'We aspire to ensure that our inclusive, welcoming and loving church school gives children and adults the opportunity to reach their full potential, so that through God's love they can make a difference to the world around them.'</p>	<p align="center"><u>Values</u></p> <p align="center">Compassion</p> <p align="center">Courage</p> <p align="center">Community</p>
<p align="center"><u>Motto</u></p> <p align="center">Learning to make a difference through God's love. <i>Jesus said, 'Love one another as I have loved you' John 13:34</i></p>		
<p align="center"><u>Mission</u></p> <ul style="list-style-type: none"> • Ensure that children are safe and demonstrate compassion for others. • The school and its community work together to promote mental health and wellbeing and ensure that everyone feels respected. • Unify the school family enabling it to flourish through collective worship, inclusive extra curricular provision and a broad, balanced curriculum. • Encourage inclusively high expectations enabling children to personally and academically thrive. • Deliver an inspirational, creative curriculum to meet the needs of our aspirational children. • Ensure that children and adults acquire and apply knowledge that gives them the courage to fulfil their aspirations. <ul style="list-style-type: none"> • Create an environment that builds confidence for the school family to grow resilience. • Enable children to persevere on a journey of social, moral, cultural and spiritual growth. 		



Intent
 Our Science curriculum provides a broad and balanced offering following the National Curriculum guidelines. It picks up on topics taught in key stage one and also dovetails into the work the children will complete in secondary school. The children follow a scheme of work that revisits topics, building on previous knowledge. Learning should be balanced with a weighting on experimenting and finding out but also giving the children an opportunity to transfer skills learnt in other curriculum areas to Science.

Implementation
 The children will be provided with the opportunity to access science on a weekly basis. Children will be taught science which is sometimes cross-curricular linked to the specific topics the children are focusing on. Newpart Junior School also offers the children opportunities to enjoy science when taking part in whole school events, such as Science week. Children will be encouraged to explore their own ideas with the aim of fostering a love of the topic and also giving them opportunity to deciding to further study science once they have moved on from the Junior School.

Impact
 Studying Science will allow the children to make sense of the world around them. It will give them the opportunity to think about and explain how our world has developed.

Report CE Junior School: Curriculum Progress Map for Science 2019/2020

	Year 3	Year 4	Year 5	Year 6
Autumn 1	Unit Title: Electricity	Unit Title: Light	Unit Title: Forces	Unit Title: Heart and Lungs 9 animals including humans)
	Vocabulary: Electrical, circuit, bulb, battery, crocodile clip, buzzer Motor, conduct/ conductor, insulate, insulator, switch, break, power, bright, brightness, dim, batteries	Vocabulary: Dark, shadow, opaque, direction, light travels, transparent, Translucent, shortest, longest, highest, object, material, light source, sun, night, day	Vocabulary: gravity, acceleration, newtons, air-resistance , up thrust, friction, axle, pulley, gear, fulcrum, lever, ratio, ramp	Vocabulary: Heart, circulation, pulse, muscle, blood vessel, lung, breathe activity
	Key Knowledge: To understand the dangers of electricity To understand how to make a circuit and know what happens if you break the circuit	Key Knowledge: To learn about different light sources, to understand how light travels, translucent, transparent and opaque materials. Shadow formation	Key Knowledge: To understand what gravity is and the effect it has. To understand what air and water resistance and friction are. To understand how levers, pulleys and gears use force.	Key Knowledge: To identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood To recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function To describe the ways in which nutrients and water are transported within animals, including humans.
	Key Skills: To use the materials needed for a circuit in order to construct one that lights a bulb.	Key Skills: To use knowledge of light and find, natural and man made sources. Use torches understand how it travels and what blocks it.	Key Skills: To experiment with different objects to understand the force that they exert or have exerted on them.	Key Skills: To research and understand how the heart and lungs work within our bodies.
Autumn 2	Unit Title: Animals and skeletons	Unit Title: Sound	Unit Title: Electricity	Unit Title: Classification
	Vocabulary: Skeleton, bone, ribs, spine, skull, vertebrate, contract, Relax, contraction, joint, move, muscle	Vocabulary: Sound, pitch, loudness, vibrate, vibration, vibrating, tuning, muffle, Quiet, soft, loud, high, low, noise, source	Vocabulary: circuit, conductor, insulator, symbol, circuit diagram, component, voltage, brightness	Vocabulary: mammals, plants, animals, vertebrates, invertebrates, reptiles, amphibians, fish, birds, species, environment, habitat, extinct, virus, bacteria, microorganism, algae, fungi, decay, microbe
	Key Knowledge: To learn skeletons, the bones contained within it and understand why animals need one. Knowledge of different food groups	Key Knowledge: To learn what makes sound, that sound travels through vibrations and that it has different pitch. Recognise that sound gets fainter the further away you get	Key Knowledge: To understand that using different amounts of cells will have an effect on at he brightness of light or sound of the buzzer. To understand how to represent their ideas using symbols.	Key Knowledge: To know that plants and animals are classified according to their characteristics. To understand the work of Carl Linneas.
	Key Skills: To understand what a diet is(human and animals and plants)To know what happens to the foods we eat. To understand that we have a skeleton and know why we have one. Recognise other animal skeletons.	Key Skills: To make sounds altering the pitch, understanding that sound travels through vibrations. Know what blocks sound.	Key Skills: To know how to represent a circuit using symbols and how to change the brightness/ loudness by varying the amount of cells	Key Skills: To draw keys to separate species according to their characteristics. To research the work of Carl Linneas.
Spring 1	Unit Title Classification	Unit Title: Forces and Magnets	Unit Title: Earth and Space	
	Vocabulary: Classify, group, animal, plant, characteristics, similar, different	Vocabulary: Friction, force meter, newton, resistance, magnet, spring Metal, iron, copper, aluminium, steel, brass, attract, repel, attraction, repulsion	Vocabulary: earth, sun, moon, sphere, revolve, orbit, spin, rotate axis, sunrise / sunset, north, south, east, west	
	Key Knowledge: To be able to identify the features of animals and plants	Key Knowledge: To understand what a force is, how magnets exert different forces, to know what they are attracted to. To understand friction and the role of a force meter. Know that different surfaces will exert different amounts of friction	Key Knowledge: To understand the movement and rotation of different planets and how this creates night and day and the apparent movement of the sun across the sky.	



Report CE Junior School: Curriculum Progress Map for Science 2019/2020

	Year 3	Year 4	Year 5	Year 6
Spring 2	Unit Title: Digestion	Unit Title: States of Matter	Unit Title: Properties and Changes of materials	
	Vocabulary: Digest, absorb, move, mouth, oesophagus, stomach, small intestine, excrete, molar, premolar, canine, incisor	Vocabulary: material, solid, liquid, gas, melt, freeze, dissolve, solution oxygen, carbon dioxide, air, evaporation, condensation	Vocabulary: mixture, dissolve, solvent, solution, solute, soluble, Insoluble, filtration, evaporation, condensation, solid, liquid, gas, solidify, freezing, melting, state thermal, insulate	
	Key Knowledge: To understand the parts of the digestive system and how they act together to process food. To understand the different teeth that humans and other animals have and what function they perform.	Key Knowledge: To understand the differences between solids, liquids and gases, what happens when materials are heated and cooled, understand the water cycle and evaporation and condensation within it.	Key Knowledge: To understand how we compare and group different materials according to their properties. To understand dissolving filtering evaporation and separation of materials. Understand what changes are reversible and irreversible.	
	Key Skills: To understand how food breaks down and how it is absorbed. To know the role of the teeth.	Key Skills: To develop understanding of solids, liquids and gases and what happens to them if they change state. Know how water is recycled in the water cycle.	Key Skills: To know the properties of materials and know how different processes will affect them.	
Summer 1	Unit Title: Plants	Unit Title: Rocks and Soils	Unit Title: Living things and their habitats. Animals including humans	Unit Title: Light
	Vocabulary: Seed, seedling, water, warmth, compost, soil, light, Fruit, stem, leaf / leaves, shoot, root, seed, grow, growth	Vocabulary: slate, granite, chalk, sandstone, soil, clay, limestone, sand marble, absorbent, characteristic, surface	Vocabulary: Reproduce/ reproduction, stamen, stigma, sepal, petal, ovary, pollen, Style, Germinate/ germination, Fertilise/ fertilisation, pollination, Disperse / dispersal, life cycle, babyhood, childhood, adolescence, adulthood	Vocabulary: Light, beam, reflect / reflection, opaque, mirror, source, reflected, Travel, block, shiny surface
	Key Knowledge: To know what a plant needs to grow and understand what happens if those requirements are not present	Key Knowledge: To understand the characteristics of different rocks and their properties. To know how different rocks are formed and how fossils are formed within them.	Key Knowledge: To learn and 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 enter old age	Key Knowledge: To 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 .To 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 To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
	Key Skills: To grow plants and understand what they need, understand how water is carried and know the life cycle of flowering plants.	Key Skills: To experiment with rocks to learn their properties. To understand how fossils are formed.	Key Skills: To research and develop an understanding of reproduction and the changes in animals including old age.	Key Skills: To explore the ways that light travels and how shadows form
Summer 2	Unit Title: Animal Homes	Unit Title: Respecting the environment		Unit Title: Evolution
	Vocabulary: Nutrition, keys, condition, consumer, producer, organism Predator, prey, food chain, similar, different	Vocabulary: Environment, rivers, water, pollution, clean, protect, issues,		Vocabulary: natural selection, survival, variation, inherited, adaption, hypothesis, DNA, mutation, survival of the fittest, camouflage, predator / prey, organism, fossil, characteristic
	Key Knowledge: To understand why animals choose particular homes and know why they choose that environment	Key Knowledge: To understand how humans have an impact on the quality of water in our rivers to know other pollutants to understand how		Key Knowledge: To understand how animals and plants adapt and change over time and how animals produce offspring in their own likeness