

Curriculum Plan

Science

'Spirituality is the bitter-sweet yearning for beauty, truth, love and wonder beyond ourselves. It is a longing we pursue together and a treasure we glimpse in ourselves and one another and seek beyond us into eternity. It is life in all its fullness.'

Nebula Spirituality Statement



**ST FAITHS'
PRIMARY SCHOOL**



EYFS Statutory Programme	Statutory National Curriculum		
EYFS	Key Stage One	Lower Key Stage Two	Upper Key Stage 2
<p><u>EYFS</u></p> <ul style="list-style-type: none"> Understanding the World The Natural World ELG 	<p><u>Year 1</u></p> <ul style="list-style-type: none"> Plants Y1 Animals, including Humans Y1 Everyday Materials Y1 Seasonal Changes Y1 <p><u>Year 2</u></p> <ul style="list-style-type: none"> Plants Y2 Animals, including Humans Y2 Living Things and Their Habitats Y2 Uses of Everyday Materials Y2 <p>Year 1 and 2 Working Scientifically – Covered in the skills map</p>	<p><u>Year 3</u></p> <ul style="list-style-type: none"> Plants Y3 Animals, Including Humans Y3 Rocks Y3 Light Y3 Forces and Magnets Y3 <p><u>Year 4</u></p> <ul style="list-style-type: none"> Animals, Including Humans Y4 Living Things and Their Habitats Y4 Sound Y4 Electricity Y4 States of Matter Y4 <p>Year 3 and 4 Working Scientifically – Covered in skills map</p>	<p><u>Year 5</u></p> <ul style="list-style-type: none"> Living Things and Their Habitats Y5 Animals, including Humans Y5 Properties and Changes in Materials Y5 Earth and Space Y5 Forces Y5 <p><u>Year 6</u></p> <ul style="list-style-type: none"> Living Things and Their Habitats Y6 Animals, including Humans Y6 Light Y6 Electricity Y6 Evolution and Inheritance Y6 <p>Year 5 and 6 Working scientifically – Covered in skills map</p>

Curriculum Coverage by Class

<p>Elm Class Year R and Year 1</p>	<p>Chestnut Class Year 2 and Year 3</p>	<p>Oak Class Year 4 and 5</p>	<p>Willow Class Year 6</p>
<p><u>EYFS</u></p> <ul style="list-style-type: none"> Understanding the World The Natural World ELG <p><u>Year 1</u></p> <ul style="list-style-type: none"> Plants Y1 Animals, including Humans Y1 Everyday Materials Y1 Seasonal Changes Y1 	<p><u>Year 2</u></p> <ul style="list-style-type: none"> Plants Y2 Animals, including Humans Y2 Living Things and Their Habitats Y2 Uses of Everyday Materials Y2 <p><u>Year 3</u></p> <ul style="list-style-type: none"> Plants Y3 Animals, Including Humans Y3 Rocks Y3 Light Y3 Forces and Magnets Y3 <p>Year 1 and 2 Working Scientifically – Covered in skills map</p> <p>Year 3 and 4 Working Scientifically – Covered in skills map</p>	<p><u>Year 4</u></p> <ul style="list-style-type: none"> Animals, Including Humans Y4 Living Things and Their Habitats Y4 Sound Y4 Electricity Y4 States of Matter Y4 <p><u>Year 5</u></p> <ul style="list-style-type: none"> Living Things and Their Habitats Y5 Animals, including Humans Y5 Properties and Changes in Materials Y5 Earth and Space Y5 Forces Y5 <p>Year 3 and 4 Working Scientifically – Covered in skills map</p> <p>Year 5 and 6 Working scientifically – Covered in skills map</p>	<p><u>Year 6</u></p> <ul style="list-style-type: none"> Living Things and Their Habitats Y6 Animals, including Humans Y6 Light Y6 Electricity Y6 Evolution and Inheritance Y6 <p>Year 5 and 6 Working scientifically – Covered in skills map</p>

Elm Class
Year R and Year 1

2022/23	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 Science National Curriculum	<p>Animals including humans (humans)</p> <ul style="list-style-type: none"> identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<p>Seasonal changes (Autumn and Winter)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies. 	<p>Animals including humans (animals)</p> <ul style="list-style-type: none"> identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) 	<p>Plants</p> <ul style="list-style-type: none"> identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Seasonal changes (Spring)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies 	<p>Everyday Materials</p> <ul style="list-style-type: none"> distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>Seasonal changes (Summer)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies.
EYFS Understanding the World	<ul style="list-style-type: none"> Name and describe people who are familiar to them. Talk about members of their immediate family and community. Describe what they see, hear and feel whilst outside. 	<ul style="list-style-type: none"> Explore the natural world around them. Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them. 	<ul style="list-style-type: none"> Recognise some environments that are different to the one they live in. Consider environments further afield and begin to make comparisons. Know some similarities and differences 	<ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of plants Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them. 	<ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them. 	<ul style="list-style-type: none"> Describe what they see, hear and feel whilst outside. Explore the natural world around them.

<p>EYFS ELG: The Natural World (Skills Map)</p>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants; • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.
<p>Year 1: Working Scientifically (Skills Map)</p>	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking simple questions 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 • gathering and recording data to help in answering questions.

Chestnut Class
Year 2 and Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year A 2022 – 2023	<p>Animals including Humans (3)</p> <ul style="list-style-type: none"> identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<p>Living Things and their Habitats (2)</p> <ul style="list-style-type: none"> explore and compare the differences between things that are living, dead, and things that have never been alive identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food 	<p>The Environment</p> <p>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</p>	<p>Plants (2)</p> <ul style="list-style-type: none"> observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 	<p>Light (3)</p> <ul style="list-style-type: none"> recognise that they need light in order 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 an opaque object find patterns in the way that the size of shadows change 	<p>Scientists and Inventors</p> <p>Find out about people who have developed useful new materials for example, John Dunlop, Charles Macintosh or John McAdam.</p>
Year B 2023 – 2024	<p>Animals including Humans (2)</p> <ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) 	<p>Rocks (3)</p> <ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things 	<p>Plants (3)</p> <ul style="list-style-type: none"> identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers explore the requirements of plants for life and growth (air, light, 	<p>Materials (2)</p> <ul style="list-style-type: none"> identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and 	<p>Forces and Magnets (3)</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between 2 objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract 	<p>Animals including Humans (2)</p> <ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise,

	<ul style="list-style-type: none"> describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene 	<p>that have lived are trapped within rock</p> <ul style="list-style-type: none"> recognise that soils are made from rocks and organic matter 	<p>water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <ul style="list-style-type: none"> investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal 	<p>cardboard for particular uses</p> <ul style="list-style-type: none"> find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<p>some materials and not others</p> <ul style="list-style-type: none"> compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	<p>eating the right amounts of different types of food, and hygiene</p>
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Year 2: Working Scientifically	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> asking simple questions 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 gathering and recording data to help in answering questions.
Year 3 and 4: Working Scientifically	<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them 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 data loggers 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 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings.

Oak Class
Year 4 and Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year A 2022 – 2023	<p>Sound (4)</p> <ul style="list-style-type: none"> identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases 	<p>States of Matter (4)</p> <ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	<p>Living Things and their Habitats (5)</p> <ul style="list-style-type: none"> 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 	<p>Animals including Humans (4)</p> <ul style="list-style-type: none"> 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 	<p>Earth and Space (5)</p> <ul style="list-style-type: none"> describe the movement of the Earth and other planets relative to the sun in the solar system describe the movement of the moon relative to the Earth describe the sun, Earth and moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 	<p>Forces (5)</p> <ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
Year B 2023 – 2024	<p>Living Things and their Habitats (4)</p> <ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to 	<p>Electricity (4)</p> <ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic 	<p>Scientists and Inventors Find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall</p>	<p>Changes in Materials (5)</p> <ul style="list-style-type: none"> compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity 	<p>Animals including Humans (5)</p> <ul style="list-style-type: none"> describe the changes as humans develop to old age 	<p>Scientists and Inventors Describe Alexander Graham Bell and his inventions. Describe Garrett Morgan and his invention. Build a</p>

	<p>help group, identify and name a variety of living things in their local and wider environment</p> <ul style="list-style-type: none"> recognise that environments can change and that this can sometimes pose dangers to living things 	<p>parts, including cells, wires, bulbs, switches and buzzers</p> <ul style="list-style-type: none"> identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit recognise some common conductors and insulators, and associate metals with being good conductors 		<p>(electrical and thermal), and response to magnets</p> <ul style="list-style-type: none"> know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 		<p>traffic light using a series circuit</p>
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<p>Year 3 and 4: Working Scientifically</p>	<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • 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 data loggers • 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 • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.
<p>Year 5 and 6: Working Scientifically</p>	<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • 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.

Willow Class
Year 6

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Light (6)</p> <ul style="list-style-type: none"> 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 	<p>Evolution and Inheritance (6)</p> <ul style="list-style-type: none"> recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution 	<p>Living Things and their Habitats (6)</p> <ul style="list-style-type: none"> 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 	<p>Electricity (6)</p> <ul style="list-style-type: none"> 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 	<p>Animals including Humans (6)</p> <ul style="list-style-type: none"> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function describe the ways in which nutrients and water are transported within animals, including humans 	<p>Scientists and Inventors</p> <p>Explore the work of scientists, for example Marie Maynard Daly and scientific research about the relationship between diet, exercise, lifestyle and health.</p>

<p>Year 5 and 6: Working Scientifically</p>	<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> 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.
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