



Year 1 and 2
Science Curriculum
Unit Overviews

<p>Questions to Develop Children's Spirituality in Science:</p>	<p>Do you believe there is creator of the earth? Do you believe in evolution, that humans came from monkeys and we all developed from fish? Does the theory of evolution mean you are just a monkey? Are you just a pile of atoms? In what ways are you like your parents (made in their image)? What is it like to be made in the image of God? Why is it that no two people on the earth are exactly the same- not even twins? Is your behaviour learnt or inbuilt- are we naturally selfish? When you look around at the wonders of the natural world do you think these things were created by accident or by design?</p>
<p>Development of the child:</p>	<p>Questioning, wonder, critical mind, reasoning and awe.</p>

<p>Topic: Animals (Y1/2) Subject: Science- Animals</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • The features of some different animals. • How to care for animals. • What animals need to live and grow. • Know simple vocabulary linked to animals and living things.
<p>National Curriculum Objectives</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). • Explore and compare the differences between things that are living, dead, and things that have never been alive. 	<p>Key Knowledge and Vocabulary</p> <p>Know what all living things have in common- breathe, grow, move, sense, reproduce, excrete, feed. Know the groups of animals: mammals, reptiles, amphibians, birds and fish. Know the differences between the five main groups of animals. Know that mammals have hair or fur; give birth to live young; feed their young milk and are warm-blooded. Know that reptiles have dry scaly skin; that they live in and near water; they lay hard, leathery eggs on land; their young look like miniature versions of the adults and they are cold-blooded. Know that amphibians have wet smooth skin; they live in and near water; they lay soft, jelly-like eggs in water; their young do not look like the adults when they hatch but change over time and they are cold-blooded. Know that birds have feathers, wings and beaks; know that some birds are flightless; know that birds nest; they are warm blooded; they feed their young until they are ready to leave the nest. Know that fish live in water; they cannot breath out of water; they have gills; they lay soft jelly-like eggs in water. Know that animals all have senses. Know the five senses are: sight, taste, touch, hearing and smell. Know what the different animals eat and use the terms omnivore, carnivore and herbivore.</p>

<p>Topic: Growth and Green Fingers (Y1/2)</p> <p>Subject: Science- Plants</p>	<p>Prior Knowledge/Links:</p> <p>ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know the changes that occur across the four seasons. • Know that there are many types of plants. • Know some plant parts. • Know that trees are plants. • Know that there are plants which we can eat.
<p>National Curriculum Objectives</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. • 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. • Observe changes across the four seasons. 	<p>Key Knowledge and Vocabulary</p> <p>Know the difference between fruit and vegetables.</p> <p>Know that a fruit is the seed bearing part of the plant.</p> <p>Know that vegetables are the roots, stalks and leaves of a plant.</p> <p>Know that the flowering part of a plant produces the seeds.</p> <p>Know the life cycle of some common plants e.g. broad bean, sunflower, strawberries, daffodil.</p> <p>Know that plants grow from seeds or bulbs.</p> <p>Know how a plant is structured.</p> <p>Know and be able to label the roots, stalk/stem, leaves, flowers, seeds and fruits.</p> <p>Know what the purpose of the different parts of a plant are.</p> <p>Know what plants need to grow healthily.</p> <p>Know the names of and be able to identify some common plants and trees found in our locality e.g. sycamore, oak, beech, horse chestnut, strawberries, crocuses, snowdrops, bluebells, daffodils, dandelions, daisies etc.</p> <p>Know how the seasons affect the trees and plants in our locality.</p> <p>Know and use the terms deciduous and evergreen.</p> <p>Know what happens to the plants and trees in our locality through the four seasons.</p> <p>Know the names of the four seasons- Autumn, Winter, Spring and Summer.</p>

- Observe and describe weather associated with the seasons and how day length varies.

<p>Topic: The Great Outdoors (Y1/2) Subject: Science- Everyday Materials</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know some simple vocabulary to describe materials e.g. shiny, dull, fluffy, soft, hard, rough, bumpy, slimy, dry, wet, bendy etc. • Know that materials are used for different purposes. • Know the similarities and differences between some materials.
<p>National Curriculum Objectives</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. • Identify and compare the suitability of a variety of everyday materials, including wood, metal, 	<p>Key Knowledge and Vocabulary</p> <p>Know the difference between the name of an object and the material from which it is made.</p> <p>Know and be able to name a variety of everyday materials, including wood, plastic, glass, metal, water, rock, brick, paper and cardboard.</p> <p>Know the simple physical properties of a variety of everyday materials. E.g. soft, hard, rough, smooth, flexible, stiff, transparent and opaque.</p> <p>Know what are appropriate materials for different purposes? E.g. waterproof materials are needed for rain jackets, wellies or umbrellas. Absorbent materials are needed for towels.</p> <p>Know the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, water, rock, paper and cardboard for particular uses.</p> <p>Know how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (applying a force).</p> <p>Know that some materials can be found naturally whilst others have to be made.</p>

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- Find out how the shapes of solid
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<p>Topic: Robots (Y1/2) Subject: Science- Animals Humans</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know the features on our faces. • Know that every human is different. • Know features linked to senses. • Know the names of body parts.
<p>National Curriculum Objectives</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. • Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<p>Key Knowledge and Vocabulary</p> <p>Know the main parts of the body and label correctly. Head, arms, legs, hands, feet, toes, arms, eyes, ears, nose, mouth. Know the names of the five senses: sight, touch, taste, hearing and smell. Know the parts of the body related to each of the five senses. Know how the human body moves and be able to compare with mechanical objects like robots. Know that humans are mammals. Know that animals need water, food and air to survive. Know that humans have offspring just like other animals. Know that as mammals we give birth to live young and feed our young milk. Know that human offspring are a smaller version of an adult. Know that animals produce offspring in different ways e.g. birds lay hard eggs in nests, reptiles lay leathery eggs on land, amphibians lay soft eggs in water and fish lay soft eggs in water. Know that birds, reptiles and fish offspring all start off as miniature versions of an adult. Know that amphibian offspring change as they grow e.g. tadpole, froglet, frog. Know why exercise is important to humans and the immediate effects that exercise has on the body e.g. heart rate, out of breath, hot etc. Know the main food groups and what a healthy plate looks like. E.g. protein, carbohydrates, oils and spreads, dairy, and fruit and vegetables.</p>

	<p>Know what different foods provide the body with.</p>
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Know why **hand washing** is important.

Know how to wash hands correctly.

Know why we should **wash our bodies and brush our teeth regularly**.

<p>Topic: Fighting Fit (Y1/2) Subject: Science- Animals Humans</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know the features on our faces. • Know that every human is different. • Know features linked to senses. • Know the names of body parts.
<p>National Curriculum Objectives</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. • Notice that animals, including humans, have offspring which grow into adults. • Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<p>Key Knowledge and Vocabulary</p> <p>Know the main parts of the body and label correctly. Head, arms, legs, hands, feet, toes, arms, eyes, ears, nose, mouth.</p> <p>Know the parts of the body related to each of the five senses.</p> <p>Know how the human body moves and be able to compare with mechanical objects like robots.</p> <p>Know that humans are mammals.</p> <p>Know that animals need water, food and air to survive.</p> <p>Know that humans have offspring just like other animals.</p> <p>Know that as mammals we give birth to live young and feed our young milk.</p> <p>Know that human offspring are a smaller version of an adult.</p> <p>Know that animals produce offspring in different ways e.g. birds lay hard eggs in nests, reptiles lay leathery eggs on land, amphibians lay soft eggs in water and fish lay soft eggs in water.</p> <p>Know that birds, reptiles and fish offspring all start off as miniature versions of an adult.</p> <p>Know that amphibian offspring change as they grow e.g. tadpole, froglet, frog.</p> <p>Know why exercise is important to humans and the immediate effects that exercise has on the body e.g. heart rate, out of breath, hot etc.</p> <p>Know the main food groups and what a healthy plate looks like. E.g. protein, carbohydrates, oils and spreads, dairy, and fruit and vegetables.</p> <p>Know what different foods provide the body with.</p> <p>Know why hand washing is important.</p>

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<p>Topic: The Farm Shop (Y1/2) Subject: Science- Plants</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know the changes that occur across the four seasons. • Know that there are many types of plants. • Know some plant parts. • Know that trees are plants. • Know that there are plants which we can eat.
<p>National Curriculum Objectives</p>	<p>Key Knowledge and Vocabulary</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. • 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. • Observe changes across the four seasons. 	<p>Know the difference between fruit and vegetables. Know that a fruit is the seed bearing part of the plant. Know that vegetables are the roots, stalks and leaves of a plant. Know that the flowering part of a plant produces the seeds. Know the life cycle of some common plants e.g. broad bean, sunflower, strawberries, daffodil. Know that plants grow from seeds or bulbs. Know how a plant is structured. Know and be able to label the roots, stalk/stem, leaves, flowers, seeds and fruits. Know what the purpose of the different parts of a plant are. Know what plants need to grow healthily. Know the names of and be able to identify some common plants and trees found in our locality e.g. sycamore, oak, beech, horse chestnut, strawberries, crocuses, snowdrops, bluebells, daffodils, dandelions, daisies etc. Know how the seasons affect the trees and plants in our locality. Know and use the terms deciduous and evergreen. Know what happens to the plants and trees in our locality through the four seasons. Know the names of the four seasons- Autumn, Winter, Spring and Summer.</p>

- Observe and describe weather associated with the seasons and how day length varies.

<p>Topic: Wind in the Willows (Y1/2) Subject: Science- Living Things and Their Habitats</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know how to handle, care and respect minibeasts. • Know what minibeasts look like. • Know some common minibeasts e.g. spider, ant, worm, slug, snail, beetle, bee, woodlouse. • Know where minibeasts can be found. • Know how minibeasts move e.g. crawl, slither, fly, walk etc.
<p>National Curriculum Objectives</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 that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. • Identify and name a variety of plants and animals in their habitats, including microhabitats. • Describe how animals obtain their food from plants and other 	<p>Key Knowledge and Vocabulary</p> <ul style="list-style-type: none"> • Know the differences between things that are living, dead, and things that have never been alive. • Know that all living things move, reproduce, sense, eat food, excrete, grow/change and breathe. • Know that most living things live in habitats to which they are suited. • Know how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. • Know the names of a variety of plants and animals and their habitats, including micro-habitats. • Know how animals obtain their food from plants and other animals, using the idea of a simple food chain. • Know and use the terms prey and predator. • Know and identify and the name of different sources of food. • Know that different kinds of plants and animals live in different kinds of places. • Know that there are different kinds of habitat near school which need to be cared for. • Know that habitats provide the preferred conditions for the animals/plants that live there. • Know what happens to living things in their habitats during different seasonal changes.

animals, using the idea of a simple food chain, and identify and name different sources of food.

<p>Topic: Buckets and Spades (Y1/2) Subject: Science- Materials</p>	<p>Prior Knowledge/Links: ELG - Understanding the World – The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals • 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>Children should already know:</p> <ul style="list-style-type: none"> • Know some simple vocabulary to describe materials e.g. shiny, dull, fluffy, soft, hard, rough, bumpy, slimy, dry, wet, bendy etc. • Know that materials are used for different purposes. • Know the similarities and differences between some materials.
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