



Science / Understanding the World Framework EYFS to Year 2 (Intent)

Science	
In EYFS	<p>Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.</p>
It is typical in Nursery to...	<ul style="list-style-type: none"> • use all their senses in hands-on exploration of natural materials • explore collections of materials with similar or different properties • talk about what they see, using a wide vocabulary • explore how things work • plant seeds and care for growing plants • understand the key features of the life cycle of a plant and an animal • begin to understand the need to respect and care for the natural environment and all living things • explore and talk about different forces they can feel • talk about the differences between materials and changes they notice
It is typical in Reception to...	<ul style="list-style-type: none"> • explore the natural world around them • describe what they see, hear and feel whilst outside • recognise some environments that are different from the one in which they live • understand the effect of changing seasons on the natural world around them
Understanding the World ELG: The Natural World	<p>The Natural World ELG 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.

SEND Guidance specific to Science:

Create opportunities to practice, consolidate, maintain and generalise skills and concepts. Introduce new skills, knowledge and understanding and increase the breadth of the curriculum content. Introduce opportunities to apply skills, knowledge and understanding in new settings and environments. Include more age-appropriate activities and resources and a wider range of people and environments. Increase engagement and participation by providing pupils with a variety of support equipment that provides them with the opportunity to take control of their environment, to increase mobility and to develop and use different ways of communicating. Introduce a range of teaching methods and styles. Provide opportunities for pupils to move away from adult support and towards autonomy in using a new skill.

Working Scientifically					
Statutory requirements 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: ♣ 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.					
KS1 National Curriculum (Statutory Requirements / strands)	Plants	Animals, including Humans	Everyday Materials	Seasonal Changes	Living things and their habitats
Year 1	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.	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	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	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day	N/A

		<p>the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>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>	<p>materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	length varies.	
Year 2	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Notice that animals, including humans, have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	N/A	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</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>Identify and name a variety of plants and animals in their habitats, including microhabitats.</p> <p>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>

NC Attainment Targets

KS1 Pupils should be taught to:

- Develop their scientific knowledge and conceptual understanding through the disciplines of biology, chemistry, and physics.
- Develop an understanding of the nature, processes, and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- Are equipped with the scientific knowledge required to understand the uses and implications of science today and for the future.



Science Key Vocabulary

	Plants	Animals, including Humans	Everyday Materials	Seasonal Changes	Living things and their habitats
Year 1	<ul style="list-style-type: none"> • <u>Names of common plants:</u> wild plant, garden plant, evergreen tree, deciduous tree, common flowering plant, weed, grass. • <u>Name some features of plants:</u> e.g. flower, vegetable, fruit, berry, leaf/leaves, blossom, petal, stem, trunk, branch, root, seed, bulb, soil. • <u>Name some common types of plant</u> e.g. sunflower, daffodil. 	<ul style="list-style-type: none"> • <u>Names of animal groups:</u> fish, amphibians, reptiles, birds, mammals. • <u>Animal diets:</u> carnivore, herbivore, omnivore. • <u>Human and animal body parts:</u> e.g. body, head, neck, arms, elbows, legs, knees, face, ears, eyes, nose, hair, mouth, teeth, hands, feet, tail, wings, feathers, fur, beak, fins, gills. • <u>Human senses:</u> sight, hearing, touch, smell, taste. • <u>Exploring senses:</u> loud, quiet, soft, rough. • <u>Other:</u> human, animal, pet. 	<ul style="list-style-type: none"> • <u>Names of materials:</u> wood, plastic, glass, metal, water, rock, paper, cardboard, rubber, fabric. • <u>Properties of materials:</u> hard, soft, shiny, dull, stretchy, rough, smooth, bendy, not bendy, transparent, opaque, waterproof, not waterproof, absorbent, not absorbent, sharp, stiff. • <u>Other:</u> object. 	<ul style="list-style-type: none"> • <u>Seasons:</u> spring, summer, autumn, winter, seasonal change. • <u>Weather:</u> e.g. sun, rain, snow, sleet, frost, ice, fog, cloud, hot/warm, cold, storm, wind, thunder, weather forecast. • <u>Measuring weather:</u> temperature, rainfall, wind direction, thermometer, rain gauge. • <u>Day length:</u> night, day, daylight. 	N/A

Year 2	<ul style="list-style-type: none"> • <u>Growth of plants:</u> germination, shoot, seed dispersal, grow, food store, life cycle, die, wilt, seedling, sapling. • <u>Needs of plants:</u> sunlight, nutrition, light, healthy, space, air. • <u>Name different types of plant:</u> e.g. bean plant, cactus. • <u>Names of different habitats:</u> e.g. rainforest, desert. <p>Previously introduced vocabulary: water, temperature, warm, hot, cold, habitat.</p>	<ul style="list-style-type: none"> • <u>Being born and growing:</u> Young, offspring, live young, grow, develop, change, hatch, lay, fly, crawl, talk. • <u>Young and adult names:</u> e.g. lamb and sheep, kitten and cat, duckling and duck. • <u>Life cycle stages:</u> e.g. baby, toddler, child, teenager, adult; frogspawn, tadpole, froglet, frog. • <u>Survival and staying healthy:</u> basic needs, survive, food, air, exercise, diet, nutrition, healthy, balanced diet, hygiene, germs. • <u>Food groups:</u> fruit and vegetables, proteins, dairy and alternatives, carbohydrates, oil and spreads, fat, salt, sugar. <p>Previously introduced vocabulary: water.</p>	<ul style="list-style-type: none"> • <u>Changing shape:</u> squash, bend, twist, stretch. • <u>Properties of materials:</u> e.g. strong, flexible, light, hard-wearing, elastic. • <u>Other:</u> suitability, recycle, pollution. 	N/A	<ul style="list-style-type: none"> • <u>Living or dead:</u> living, dead, never living, not living, alive, never been alive, healthy. • <u>Habitats including microhabitats:</u> depend, shelter, safety, survive, suited, space, minibeast, air. • <u>Life processes:</u> movement, sensitivity, growth, reproduction, nutrition, excretion, respiration. • <u>Food chains:</u> food sources, food, producer, consumer, predator, prey. • <u>Names of habitats and microhabitats:</u> e.g. under leaves, woodland, rainforest, sea shore, ocean, urban, local habitat. <p>Previously introduced vocabulary: senses, carnivore, herbivore, omnivore, seed, water, names of materials.</p>

Spiritual, Moral, Social and Cultural Development: Science

Pupils at Great Moor Infant School will analyse, engage with and question their own and others work, identify how values and meanings are expressed and shared. Pupils are encouraged to explore the world around them and express their ideas, which is supported by strong research into the wider world around them.

Spiritual Development	Moral Development	Social Development	Cultural Development	British Values
<p>Pupils' spiritual development is shown by their:</p> <ul style="list-style-type: none"> • Ability to be reflective about their own beliefs, religious or otherwise, that inform their perspective on 	<p>Pupils' moral development is shown by their:</p> <ul style="list-style-type: none"> • Ability to recognise the difference between right and wrong readily apply this understanding in their 	<p>Pupils' social development is shown by their:</p> <ul style="list-style-type: none"> • Use a range of social skills in different contexts, including working and socialising with pupils from 	<p>Pupils' cultural development is shown by their:</p> <ul style="list-style-type: none"> • Understanding and appreciation of the wide range of cultural influences that have shaped their own 	

<p>life and their interest in and respect for different people's faiths, feelings and values.</p> <ul style="list-style-type: none"> • Sense of enjoyment and fascination in learning about themselves, others and the world around them. • Use of imagination and creativity in their learning. • Willingness to reflect on their experiences 	<p>own lives and, in so doing, respect the civil and criminal law of England</p> <ul style="list-style-type: none"> • Understanding of the consequences of their behaviour and actions. • Interest in investigating and offering reasoned views about moral and ethical issues, and being able to understand and appreciate the viewpoints of others on these issues. 	<p>different religious, ethnic and socioeconomic backgrounds.</p> <ul style="list-style-type: none"> • Willingness to participate in a variety of communities and social settings, including by volunteering, cooperating well with others and being able to resolve conflicts effectively. • Acceptance and engagement with the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs; the pupils develop and demonstrate skills and attitudes that will allow them to participate fully in and contribute positively to life in modern Britain. 	<p>heritage and that of others.</p> <ul style="list-style-type: none"> • Understanding and appreciation of the range of different cultures within school and further afield as an essential element of their preparation for life in modern Britain. • Knowledge of Britain's democratic parliamentary system and its central role in shaping our history and values, and in continuing to develop Britain. • Willingness to participate in and respond positively to artistic, sporting and cultural opportunities. • Interest in exploring, improving understanding of and showing respect for different faiths and cultural diversity, and the extent to which they understand, accept, respect and 	
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			celebrate diversity, as shown by their tolerance and attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities.	
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