



Science Progression of Skills

Cross-curricular links between Science and RSHE



Plants

Nursery	Reception	YEAR 1	YEAR 2
3- 4yr olds Communication and Language Understand 'why' questions, Understanding the World Use all their senses in hands-on exploration of natural materials. 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. Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences.	and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. Understanding the World Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them. ELG Communication and Language -Listening, Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding. Understanding the World- The Natural World	• 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. <u>End of KS1 Expectation</u> <u>Plants</u> Pupils should be taught to: • 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.

Describe events in some detail. Use talk to help work out problems and organise thinking	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.		
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Progression of Vocabulary

Plants

EYFS	YEAR 1	YEAR 2
Plant, tree Name common everyday/seasonal plants	Common wild plants, garden plants, deciduous, evergreen. Parts of a tree – trunk, branches, leaf, root. Parts of a plant – leaf, root, leaves, bud, flowers, blossom, petals, stem Vegetables Bulb Seed	Water, light, suitable temperature, grow, healthy, germination, reproduction.

Animals, including Humans

EYFS	YEAR 1	YEAR 2
<u>Personal, Social and Emotional Development</u> 3-4 years Make healthy choices about food, drink, activity and toothbrushing. Reception Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian ELG Managing Self • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. <u>Communication and Language</u> • 3-4 years Understand 'why' questions, Reception Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. ELG <u>Listening, Attention and Understanding</u>	• 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) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. That each person's body belongs to them, and the differences between appropriate and inappropriate or unsafe contact, including physical contact.	• 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. About safe and unsafe exposure to the sun, and how to reduce the risk of sun damage, including skin cancer. The importance of sufficient good quality sleep for health, the amount of sleep recommended for their age, and practical steps for improving sleep, such as not using screens in the bedroom. The impact of poor sleep on weight, mood and ability to learn. About personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. How and when to seek support including which adults to speak to in school if they are worried about their health. <u>End of KS1 Expectation</u> <u>Animals, including humans</u>

Make comments about what they have heard and ask questions to clarify their understanding. <u>Understanding the World</u> 3-4 years Talk about what they see, using a wide vocabulary. 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. Reception Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. ELG The Natural World 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.		Pupils should be taught to: • 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) • 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.
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Progression of Vocabulary

Animals, including Humans

EYFS	YEAR 1	YEAR 2
Naming lots of animals – farm, arctic, zoo, pets animals. Animal parts - head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth. Fur	Common animals, fish, amphibians, reptiles, birds, mammals, pets, carnivores, herbivores, omnivores.	Offspring (for example: egg-chick-chicken, egg-caterpillar-pupa-butterfly), grow, adults, nutrition, reproduce Survival – water, food, air, exercise, hygiene.

	Animal parts – head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth.	
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Materials and their properties

EYFS	YEAR 1	YEAR 2
3- 4yr olds Communication and Language Understand ‘why’ questions Understanding the World Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Explore how things work. Talk about the differences between materials and changes they notice. Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. Understanding the World Explore the natural world around them. Describe what they see, hear and feel while they are outside. ELG	• 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, plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <u>End of KS1 Expectation</u> <u>Everyday materials</u> Pupils should be taught to: • 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

Communication and Language - Listening, Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding. Understanding the World The Natural World Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.		
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Progression of Vocabulary

Materials and their properties

EYFS	YEAR 1	YEAR 2
Material – wood, plastic, metal.	Material – wood, plastic, glass, metal, water, rock Properties – hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy/not bendy, waterproof/not waterproof, absorbent/not absorbent. Brick, paper, fabrics, elastic, foil.	Material – wood, metal, plastic, glass, brick, rock, paper, cardboard. Squashing, twisting, bending, stretching. Charles Macintosh, John Dunlop.

Seasonal Changes

EYFS	YEAR 1	YEAR 2
3- 4yr olds Communication and Language Understand 'why' questions, Understanding the World Explore how things work. 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	• observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies.	Not taught <u>End of KS1 Expectation</u> <u>Seasonal changes</u> Pupils should be taught to: • observe changes across the 4 seasons

they notice. Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. Understanding the World Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them. ELG Communication and Language Listening, Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding. Understanding the World The Natural World 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.		observe and describe weather associated with the seasons and how day length varies
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Progression of Vocabulary

Seasonal Changes

EYFS	YEAR 1	YEAR 2
Day, night, midnight Seasons – Spring, Summer, Autumn, Winter Weather – wind, rain, snow, fog, sun, hot, warm, cold.	Season – Summer, Winter, Autumn, Spring Day, daytime, night, dark, light, daylight Weather – wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold.	NOT TAUGHT

Living things and their habitats

Nursery	Reception	YEAR 1	YEAR 2
Communication and Language • 3-4 years Understand 'why' questions, Reception Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. ELG Listening, Attention and Understanding	questions to clarify their understanding. Understanding the World 3-4 years Talk about what they see, using a wide vocabulary.. Begin to understand the need to respect and care for the natural environment and all living things. Reception Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. ELG The Natural World Explore the natural world around them, making observations and drawing		• 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 micro-habitats • 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. <u>End of KS1 Expectation</u> <u>Living things and their habitats</u> Pupils should be taught to: • explore and compare the differences between things that are living, dead, and things that have never been alive

Make comments about what they have heard and ask	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.		• 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 animals, using the idea of a simple food chain, and identify and name different sources of food
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Progression of Vocabulary

Living things and their habitats

EYFS	YEAR 1	YEAR 2
Things we can see in immediate environment – for example, worms burrowing and living things outside.	NOT TAUGHT	Living, dead, never alive, habitats, micro-habitats, food, food chain (sun-grass-cow-human), alive, healthy. Shelter, seashore, woodland, ocean, rainforest. Conditions - Hot/warm/cold/dry/damp/wet/bright/shade/dark.

Progression of Scientific Skills

The National Curriculum states that: 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

EYFS	YEAR 1	YEAR 2
Key scientific skills in EYFS are : Play, Observe . Ask , Discover , Explore Communication and Language 3- 4yr olds Understand ‘why’ questions, . Understanding the World Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Explore how things work. Talk about the differences • Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them.	1) asking simple questions and recognising that they can be answered in different ways 2) observing closely, using simple equipment and measurement 3) performing simple tests 4) identifying and classifying 5) using their observations and ideas to suggest answers to questions 6) gathering and recording data to help in answering questions.	1) asking simple questions and recognising that they can be answered in different ways including use of scientific language from the National Curriculum. 2) observing closely, using simple equipment and measurement, including changes over time. 3) performing simple comparative tests 4) identify, group and classify 5) using their observations and ideas to suggest answers to questions, noticing similarities, differences and patterns. 6) gathering, recording and communicating data and findings to help in answering questions. 7) use scientific language and read and spell age-appropriate

Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. Understanding the World • Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them. ELG Communication and Language Listening Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding. Understanding the World The Natural World 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.		scientific vocabulary 8) begin to notice patterns and relationships. <u>End of KS1 Expectation</u> <u>Working scientifically</u> 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
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Progression of Vocabulary Working Scientifically

Nursery	Reception	Y1	Y2
test question equipment	explore choose find	questioning answering observe	identify classify bar chart

answer look at watch	the same different	record group sort chart equipment changes over time.	table data diagram compare contrast patterns relationships findings
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