



Filey C E Nursery & Infants Academy

'Inspiring Confident Learners, Reflecting Christian Values'

We endeavour to uphold Christian teaching to:

"Shine as lights in the world and love as Jesus loves us" (Philippians 2:15, John 13.34)

Our school is a Church of England School rooted in 'Compassion, Community and Friendship'.

Science Progression Document

Animals Including Humans			
Nursery	Reception	Year 1	Year 2
Substantive Knowledge			
<ul style="list-style-type: none">• Explore the natural world around them, talking about different animals.• Compare adult animals to their babies.• Observe how baby animals change over time.• Understand the key features of the life cycle of a plant and an animal.	<ul style="list-style-type: none">• Make observations of animals and draw pictures of them.• Understand the need to respect and care for the natural environment and all living things.• Know some ways to care for an animal or pet.• Explore life cycles of animals, understanding that changes occur over time.	<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,	<ul style="list-style-type: none">• Understand that animals, including humans, have offspring which grow into adults• 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

<ul style="list-style-type: none"> • Begin to understand the need to respect and care for the natural environment and all living things. • Eats a range of healthy foodstuffs and understands need for variety in food. • Learn about how to take care of themselves. 	<ul style="list-style-type: none"> • Understand the importance of healthy food choices. • Describe people who are familiar to them. 	reptiles, birds and mammals, including pets) <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 	
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Vocabulary

head, eyes, nose, mouth, ears, hands, fingers, feet, toes, arm, leg, face, hair, animal, insect	human, knee, elbow, back, shoulder, feathers, fur, skin, scales, fish, birds	see, hear, taste, smell, touch, fish, amphibian, reptile, bird, mammal herbivore, carnivore, omnivore	offspring, adult, baby, parents
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Living Things and Their Habitats

Nursery	Reception	Year 1	Year 2
Substantive Knowledge			
<ul style="list-style-type: none"> • Explore the natural world including looking at insects and birds in the outdoor area and exploring natural objects. 	<ul style="list-style-type: none"> • Explore the natural world around them and comment on what they see. • Know some similarities and differences between the natural world around them and contrasting environments. 	<ul style="list-style-type: none"> • 	<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

			<p>needs of different kinds of animals and plants, and how they depend on each other</p> <ul style="list-style-type: none"> 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.
Vocabulary			
insect, bird, animal	environment, nature,		<p>dead, alive, never alive</p> <p>habitat- desert, arctic, rainforest, ocean, food chain, predator, prey, diet</p>

Plants			
Nursery	Reception	Year 1	Year 2
Substantive Knowledge			
<ul style="list-style-type: none"> Explore the natural world around them, talking about different plants and trees they have seen. 	<ul style="list-style-type: none"> Explore life cycles of plants, understanding that changes occur over time. 	<ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees 	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants

<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Explore the natural world around them, making observations of plants and drawing pictures of them. Understand the need to respect and care for the natural environment and all living things. Describe what they see, hear and feel while outside. 	<ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees 	<ul style="list-style-type: none"> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Vocabulary			
tree, leaf, flower, stem, seed	tree, petals, trunk, fruit, branch, roots, leaves, bulb, flowers, seed, stem	deciduous, evergreen, plant, tree, leaf, stem, flower, petals, roots	seed, bulb, germination, temperature, sunlight, water, healthy, root, shoot

Seasonal Changes			
Nursery	Reception	Year 1	Year 2
Substantive Knowledge			
<ul style="list-style-type: none"> Explore the natural world around them and talk about changes as they occur throughout the year. Play and explore outside in all seasons and different weathers. 	<ul style="list-style-type: none"> Comment on what they notice about the environment where they live and understand the effect of the changing seasons on the natural world around them. 	<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 	<ul style="list-style-type: none">

	<ul style="list-style-type: none"> Describe what they see, hear and feel outside. 		
Vocabulary			
Season, Summer, Spring, Autumn, Winter, day, dark, light, night, moon, sun, weather,	Season, Summer, Spring, Autumn, Winter, day, dark, light, night, moon, sun, weather, sunny, raining, windy, snowing, sleet, hail thunder, lightning	autumn, winter, spring, summer, rain, snow, frost, wind, sun, fog, mist, clouds, temperature (warm/cold/freezing)	

Materials			
Nursery	Reception	Year 1	Year 2
Substantive Knowledge			
<ul style="list-style-type: none"> Make simple observations of different materials during exploratory play. Explore a range of different materials. Shape and join materials. Combine and mix ingredients. Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. 	<ul style="list-style-type: none"> Explore different materials, talk about and begin to describe them. Understand simple changing states of matter in the world around them. Make objects from different materials, including natural materials. Observe how materials change when they are heated and cooled. 	<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 	<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 cardboard for particular uses Describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

<ul style="list-style-type: none"> Talk about the differences between materials and changes they notice. 		the basis of their simple physical properties	
Vocabulary			
material, wood, glass, paper, hard, soft	material, metal, wood, rock, plastic, hard, glass, soft, paper, fabric, material, smooth, shiny, rough	object, material, wood, plastic, metal, water, rock, fabric property- everyday language e.g <i>hard/soft, stretchy, rough, bendy, see-through, strong etc</i> sort, waterproof	squash, bend, twist, stretch

Working Scientifically Skills			
Nursery	Reception	Year 1	Year 2
Disciplinary Knowledge			
<ul style="list-style-type: none"> Show curiosity and ask questions about their immediate environment. Make comments about what they have heard or seen and ask questions to clarify their understanding. Offer simple explanations for why 	<ul style="list-style-type: none"> Show curiosity about objects, events and people ELG: Understanding the World: The Natural World Questions and offers explanations for why things happen ELG: Speaking <ul style="list-style-type: none"> Engage in open-ended activity Playing & Exploring Take a risk, engage in new experiences and learn by trial and error Playing & Exploring 	<ul style="list-style-type: none"> Begin to ask simple questions that begin with why, what if, how or when. Make suggestions about how to do things when we plan a simple test. With help, use simple equipment and non-standard units to find things out. 	<ul style="list-style-type: none"> Explore the world around them and raise their own simple questions. Participate in different types of science enquiries, including practical activities. Begin to recognise different ways in which they might answer scientific questions. Carry out simple tests.

<p>things might happen.</p> <ul style="list-style-type: none"> • Begin to use their own ideas to suggest answers to questions • Make simple observations using their senses and simple equipment. • Making direct comparisons. • Record their observations by drawing, taking photographs, using sorting hoops or boxes. • Use their observations to help them to answer their questions. • Talk about what they are doing and what they have found out. • Make simple identifications, sort and group. 	<ul style="list-style-type: none"> • Find ways to solve problems / find new ways to do things / test their ideas Creating & Thinking Critically • Develop ideas of grouping, sequences, cause and effect Creating & Thinking Critically • Know about similarities and differences in relation to places, objects, materials and living things ELG: Understanding the World: The Natural World • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world ELG: Understanding the World: The Natural World, People and Communities • Closely observes what animals, people and vehicles do ELG: Understanding the World: The Natural World • Use senses to explore the world around them Playing & Exploring • Make links and notice patterns in their experience Creating & Thinking Critically • Choose the resources they need for their chosen activities ELG: Managing Self • Handle equipment and tools effectively ELG: Moving & Handling: Fine motor skills • Create simple representations of events, people and objects Being Imaginative & Expressive • Answer how and why questions about their experiences ELG: Listening, Attention & Understanding, Speaking 	<ul style="list-style-type: none"> • Observe using their senses. • With help, gather and record data to help them to answer questions. • Talk about what happened and what they saw. • Talk about what they did. 	<ul style="list-style-type: none"> • Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying) • Ask questions and use simple secondary sources to find answers. • Observe closely, using simple equipment. • Observe changes over time. • Start to notice patterns and relationships. • Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data. • Record simple data in a table or tally chart • Use my observations and ideas to suggest answers to questions. • Talk about what they have found out and how they found it out. • Record and communicate their findings in a range of ways including words, drawings and tables and begin to use simple scientific language. • Answer questions using data that they have gathered and recorded.
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	<ul style="list-style-type: none">• Make observations of animals and plants and explain why some things occur, and talk about changes ELG: The Natural World• Offer explanations for why things might happen, making use of recently introduced vocabulary. ELG: Speaking• Builds up vocabulary that reflects the breadth of their experience Listening, Attention & Understanding, Speaking		<ul style="list-style-type: none">• Decide what to find out, observe or measure.
Vocabulary			
question, find out, sort, weather	float, sink, measure, magnifying glass, investigate, weigh, heavy, light, seasons, temperature,	test, equipment, observe, record	research, thermometer, tally chart, bar graph, fair test, enquire