



Burbage C of E Infant School Science Progression Ladder

Statement of Intent

The principle of science is to enable pupils to experience and observe looking more closely at the natural and humanly-constructed world around them. We want children to develop their natural curiosity for things around them, to provide opportunities for them to be inquisitive and to investigate. They should be encouraged to be curious and ask questions about what they notice. Children should begin to use simple scientific language to talk about what they have found out and communicate their ideas. Children will develop their knowledge and understanding of the world by observing, describing and experimenting. We want to provide children with vibrant experiences to make learning real, to open their minds to wider worlds beyond their own.

Development Matters- Children in Reception (non-statutory curriculum guidance for EYFS)	KS1 National Curriculum Programme of Study
<p>Understanding the World</p> <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 to the one in which they live.• Understand the effect of changing seasons on the natural world around them.• 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.• 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.	<p>Year 1</p> <ul style="list-style-type: none">• Plants• Animals including Humans• Everyday Materials• Seasonal Changes• Working Scientifically <p>Year 2</p> <ul style="list-style-type: none">• Living Things & Their Habitats• Plants• Animals including Humans• Uses of Everyday Materials• Working Scientifically



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Science		
Reception	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can explore the natural world around. Children can make observations and record these through drawing pictures. Children can talk about the similarities and differences between natural world around them and contrasting environments. Children can find out about the changes in the natural world including the seasons. Children can identify the differences between materials. Children can identify changes in materials from one state to another. Children can investigate a range of objects to see how they work. Children can plant seeds, observe growth and identify ways to care for living things. 	<ul style="list-style-type: none"> Children can ask simple questions to show curiosity about things around them. Children can observe closely, using simple equipment. Children can perform simple tests to carry out investigations. Children can identify, sort and group materials, animals & plants according to their properties & features. Children can describe how they have sorted objects. Children can use observations to explain what has happened and why has this happened. Children can use scientific language to explain what they have observed. Children can use results gathered to answer simple questions. 	<ul style="list-style-type: none"> Children can ask questions and recognise that they can be answered in different ways. Children can observe closely, using a range of simple equipment. Children can perform simple tests to carry out investigations. Children identify and classify materials, animals & plants according to their properties & features. Children can describe why they have sorted objects the way they have. Children can use their observations and ideas to suggest answers to questions. Children can gather and record data to help in answering questions.
Substantive Knowledge		
<ul style="list-style-type: none"> Children know the appropriate vocabulary to describe what they see, hear and feel whilst outside. Children know the names of a range of animals and plants. Children know some similarities and differences between the natural world around them and contrasting environments. Children know that there are different seasons. Children know some important processes and changes in the natural world around them. Children know and describe some forces they can see and feel. Children know some key features of life cycles 	<p><i>Plants:</i></p> <ul style="list-style-type: none"> Children know the name of a variety of common wild and garden plants, including deciduous and evergreen trees and how to identify them. Children know the basic structure of a variety of common flowering plants, including trees and how to identify them. Children know how to compare and contrast plants. <p><i>Animals (Including Humans):</i></p> <ul style="list-style-type: none"> Children know how to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Children know how to identify and name a variety of common animals that are 	<p><i>Plants:</i></p> <ul style="list-style-type: none"> Children know how to observe and can describe how seeds and bulbs grow into mature plants. Children know plants need water, light and a suitable temperature to grow and stay healthy and know how to find this out. <p><i>Animals (Including Humans):</i></p> <ul style="list-style-type: none"> Children know that animals, including humans have offspring which grow into adults. Children know the basic needs of animals, including humans, for survival (water, food and air) and how to find this out. Children know and can describe the importance for humans of exercise, eating the



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	<p>carnivores, herbivores and omnivores.</p> <ul style="list-style-type: none">• Children know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).• Children know the name, can draw and label the basic parts of the human body and say which part of the body is associated with each sense and can identify these. <p><i>Materials:</i></p> <ul style="list-style-type: none">• Children know how to distinguish between an object and the material from which it is made• Children know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.• Children know how to describe the simple physical properties of a variety of everyday materials.• Children know how to compare and group together a variety of everyday materials on the basis of their simple physical properties. <p><i>Seasonal Changes:</i></p> <ul style="list-style-type: none">• Children know how to observe changes across the four seasons.• Children know how to observe the weather associated with the seasons and how day length varies.	<p>right amount of different types of food, and hygiene.</p> <p><i>Materials:</i></p> <ul style="list-style-type: none">• Children know how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses. <p>Children know that the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching and know how to find this out.</p> <p><i>Living Things and Habitats:</i></p> <ul style="list-style-type: none">• Children know how to explore and can compare the difference between things that are living, dead and things that have never been alive.• Children know 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.• Children know how to identify and name a variety of plants and animals in their habitats, including microhabitats.• Children know that 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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Vocabulary		
<p>Animal, plant, grow, live, life cycle, evergreen, tree, bare, leaves, branches, conker, acorn, same/different, changes, Spring, summer, autumn, winter, weather, wind, ice, snow, frost, cold, hot, night, day, nocturnal, sun, moon</p>	<p><i>Plants:</i> Wild plants, garden plants, weed, deciduous, evergreen, roots, trunk, branches, stem, flowers, blossom, leaves, petals, fruit, seed, bulbs <i>Animals (Including Humans):</i> Fish, mammal, amphibian, reptile, bird, pet, carnivore, omnivore, herbivore, arm, leg, body, neck, head, fingers, feet, toes, knee, ankle, elbow, shoulder, back, eye, ear, nose, mouth, hair, face, teeth, see, hear, touch, smell, taste <i>Materials:</i> Objects, material, wood, plastic, glass, metal, water, rock, hard/soft, stretchy/stiff, shiny/ dull, rough/ smooth, bendy/not bendy, waterproof/ not waterproof, absorbent/ not absorbent, transparent/ opaque <i>Seasonal Changes:</i> Seasons, autumn, spring, summer, winter, weather, daylight, sun, rain, cloudy, foggy,</p>	<p><i>Plants:</i> Seeds, bulbs, water, sunlight, temperature, healthy, environment, germination, growth, survival, reproduction, shoot, seed dispersal, nutrition <i>Animals (Including Humans):</i> Animals, human, offspring, adult, develop, life cycle, young, toddler, adolescent, diet, disease, energy, exercise, germs, heart rate, hygiene, nutrition, pulse <i>Materials:</i> Materials, solid, liquid, suitability, properties, wood, plastic, paper, fabric, glass, metal, cardboard, rock, bending, squashing, twisting, stretching <i>Living Things and Habitats:</i> Life process, living, dead, never been alive, food chain, food sources, habitat, microhabitat, survive, depend, shelter</p>