'Let your light shine as you grow'

Subject Leader Skills Progression	
Subject: Science	**Subject Leader: Caroline Jeewan**

A Reception Scientist - The Natural World

- I can explore the natural world around me.
- I can make observations and draw pictures of animals and plants.
- I know some similarities and differences between the natural world around me and some contrasting environments.
- I can draw on my experiences and what has been learnt in class.
- I understand some important processes and changes in the natural world around me, including the seasons and changing states of matter.

A Year 1 Scientist	A Year 2 Scientist	A Year 3 Scientist
• I can ask simple questions and recognise that they can be answered in different ways (Year 1 focus) • I can use simple equipment to observe closely (Year 1 focus) • Perform simple tests (Year 1 focus) • Identify and classify (Year 1 focus) • I can use my observations and ideas to suggest answers to questions (Year 1 focus) • Gather and record data to help in answering questions (Year 1 focus) • 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 • Group animals according to what they eat • 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	• I can ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum (Year 2 focus) • Use simple equipment to observe closely including changes over time (Year 2 focus) • Communicate his/her ideas, what he/she does and what he/she finds out in a variety of ways • Perform simple comparative tests (Year 2 focus) • Identify, group and classify (Year 2 focus) • Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns (Year 2 focus) • Gather and record data to help in answering questions including from secondary sources of information (Year 2 focus) • 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	• Ask relevant questions and use different types of scientific enquiries to answer them (Year 3 focus) • Set up simple practical enquiries, comparative and fair tests (Year 3 focus) • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 3 focus) • Gather, record, classify and present data in a variety of ways to help in answering questions (Year 3 focus) • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (Year 3 focus) • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 3 focus) • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 3 focus) • Identify differences, similarities or changes related to simple scientific ideas and processes (Year 3 focus) • Use straightforward scientific evidence to answer questions or to support his/her findings (Year 3 focus)

• 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 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 changes across the four seasons • Observe and describe weather associated with the seasons	• 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 • 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 • Observe and describe how seeds and bulbs grow into mature plants • Describe how plants need water, light and a suitable temperature to grow and stay healthy, and describe the impact of changing these	• Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • Identify that humans and some other animals have skeletons and muscles for support, protection and movement • Compare how things move on different surfaces • Notice that some forces need contact between two objects, but magnetic forces can act at a distance • Observe how magnets attract or repel each other and attract some materials and not others • Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • Describe magnets as having two poles • Predict whether two magnets will attract or repel each other, depending on which poles are facing • Recognise that he/she needs light in order to see things and that dark is the absence of light • Notice that light is reflected from surfaces • Recognise that light from the sun can be dangerous and that there are ways to protect eyes • Recognise that shadows are formed when the light from a light source is blocked by a solid object • Find patterns in the way that the size of shadows change • Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • Explore and describe the requirements of plants for life
A Year 4 Scientist	**A Year 5 Scientist**	**A Year 6 Scientist**
• Ask relevant questions and use different types of scientific enquiries to answer them (Year 4 focus) • Set up simple practical enquiries, comparative and fair tests (Year 4 focus) • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 4 focus)	• Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (Year 5 focus) • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Year 5 focus)	• Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary (Year 6 focus) • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Year 6 focus)

• Gather, record, classify and present data in a variety of ways to help in answering questions (Year 4 focus) • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (Year 4 focus) • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 4 focus) • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 4 focus) • Identify differences, similarities or changes related to simple scientific ideas and processes (Year 4 focus) • Use straightforward scientific evidence to answer questions or to support his/her findings (Year 4 focus) • Describe the simple functions of the basic parts of the digestive system in humans • Identify the different types of teeth in humans and their simple functions • Construct and interpret a variety of food chains, identifying producers, predators and prey • Identify common appliances that run on electricity • Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers • Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit	• Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 5 focus) • Use test results to make predictions to set up further comparative and fair tests (Year 5 focus) • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations (Year 5 focus) • Identify scientific evidence that has been used to support or refute ideas or arguments (Year 5 focus) • Describe the changes as humans develop to old age • Describe the movement of the Earth, and other planets, relative to the Sun in the solar system • Describe the movement of the Moon relative to the Earth • Describe the Sun, Earth and Moon as approximately spherical bodies • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	• Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 6 focus) • Use test results to make predictions to set up further comparative and fair tests (Year 6 focus) • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations (Year 6 focus) • Identify scientific evidence that has been used to support or refute ideas or arguments (Year 6 focus) • Describe and evaluate their own and other people's scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources • Group and classify things and recognise patterns • Find things out using a wide range of secondary sources of information • Use appropriate scientific language and ideas from the national curriculum to explain, evaluate and communicate his/her methods and findings • Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Describe the ways in which nutrients and water are transported within animals, including humans