



| | | Early Years | Year One | Year Two |
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| Knowledge progression | Plants | Plants <ul style="list-style-type: none"> - Plant seeds and care for growing plants. - Observe plants and recognise different plants and seeds - Observe the key features of a life cycle of a plant and the changes that happen - Begin to understand how to care for the natural environment. | Plants <ul style="list-style-type: none"> - 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 | Plants <ul style="list-style-type: none"> - observe and describe how seeds and bulbs grow into mature plants - find out about and describe how plants need water, light and a sustainable temperature to grow and stay healthy. |
| | Animals including humans | Animals, including humans <ul style="list-style-type: none"> - Begin to name basic body parts – sing songs, games in PE - Begin to compare themselves to others. - Explore some senses – touch, taste, smell – snack time - Talk about how to keep healthy - hygiene - Begin to observe changes in the human life cycle. | Animals, including humans <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, reptiles, birds and mammals, including pets) - identify, name, draw and label the basic parts of the human body - say which part of the body is associated with each sense | Animals, including humans <ul style="list-style-type: none"> - 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. |
| | Forces | Forces <ul style="list-style-type: none"> - Begin to think about what a push and pull are – apply and explore in play - Begin to think about what makes things move faster/further. | | |

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| | Materials | | Everyday Materials <ul style="list-style-type: none"> - Distinguish between an object and the material from which it is made. - Identify and name a variety of materials, eg. wood, plastic, metal, rock. - Describe simple physical properties of everyday materials. - Compare and group together materials based on simple physical properties. | Use of Everyday Materials <ul style="list-style-type: none"> - Identify and compare the suitability of a variety of everyday materials, inc. wood, rock, metal, plastic, glass, brick, rock, paper, cardboard for particular uses. - Know how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. |
| | Living things and their habitats | Living things and their habitats <ul style="list-style-type: none"> - Begin to explore habitats of common animals – insects/pets/wild animals - Understand that some animals hibernate and what they do to prepare and why – stories | - | Living things and their habitats <ul style="list-style-type: none"> - Explore and compare things that are living, dead or have never been alive. - Explore that most living things live in habitats to which they are suited and describe how habitats provide for the basic needs of animals and plants and how they depend upon 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 sources of food. |
| | Seasons | Seasons <ul style="list-style-type: none"> - Name the four seasons - Discuss related weather/activities with each season - Discuss clothes we wear in different seasons - Link to snow/ice/water – changing state – experiment - Use vocabulary associated with freezing and melting | Seasonal Changes <ul style="list-style-type: none"> - Observe changes across four seasons. - Observe and describe weather associated with the seasons. | |

KEY STAGE 2

| | | Year Three | Year Four | Year Five | Year Six |
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| Knowledge Progression | Plants | <p>Plants “How Plants Grow”</p> <ul style="list-style-type: none"> - Identify and describe the functions of different parts of flowering plants – roots, stem, leaves, flowers. - Know what plants need to live and how this varies from plant to plant – air, light, water, nutrients, space. - Know how water is transported within plants. - Know the part flowers play in the life cycle of plants, including pollination, seed formation and dispersal. | | | |
| | Animals, inc humans | <p>Animals, inc. humans “Health and Movement”</p> <ul style="list-style-type: none"> - Know that animals, inc. humans need the right type and amount of nutrition, and that they cannot make their own food, they get nutrition from what they eat. - Know that humans and some other animals have skeletons and muscles for | <p>Animals, inc. humans “Eating and Digestion”</p> <ul style="list-style-type: none"> - Describe the basic function of the basic parts of the digestive system in humans. - Identify the different type of teeth in humans and their simple function. - Construct and interpret a variety of food chains, identifying producers, predators and prey. | <p>Animals, inc. humans “Change and Reproduction”</p> <ul style="list-style-type: none"> - Describe the changes as humans develop to old age. | <p>Animals, inc humans “Healthy Bodies”</p> <ul style="list-style-type: none"> - Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood and blood vessels. - Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. |

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| | support, protection and movement. | | | <ul style="list-style-type: none"> - Describe the ways in which nutrients and water are transported within animals, including humans. |
| Living Things and Their Habitats | | Living Things and Their Habitats “Living In Enviroments” <ul style="list-style-type: none"> - Recognise that living things can be grouped in a variety of ways. - Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. - Recognise that environments can change and that this can sometimes pose dangers to living things. | Living Things and Their Habitats “Life Cycles” <ul style="list-style-type: none"> - Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. - Describe the life process of reproductions in some animals and plants. | Living Things and Their Habitats “Classifying Organisms” <ul style="list-style-type: none"> - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. - Give reasons for classifying plants and animals based on specific characteristics. |
| Forces | Forces and Magnets “Forces and Magnets” <ul style="list-style-type: none"> - Compare how things move of different surfaces. - Notice that some forces need contact between two objects, but magnetic forces can act at a distance. - Observes how magnets attract or repel each other and attract some materials and not others. | | Forces “Forces In Action” <ul style="list-style-type: none"> - Explain that unsupported objects fall towards Earth because of the force of gravity acting between the Earth and the falling object. - Identify the effects of air resistance and friction, that act between moving surfaces. | |

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| | | <ul style="list-style-type: none"> - Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and id some magnetic materials. - Know that magnets have two poles. - Predict whether two magnets will attract or repel each other, depending on which poles are facing. | | <ul style="list-style-type: none"> - Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect. | |
| Light | Light | <p>“Light and Shadow”</p> <ul style="list-style-type: none"> - Know that they need light in order to see things and that dark is the absence of light. - Know that light is reflected from surfaces. - Know that light from the sun can be dangerous and that there are ways to protect eyes. - Know that shadows are formed when light from a light source is blocked by an opaque object. - Know that there are and demonstrate the patterns in the way that the size of shadows change. | | | <p>Light</p> <p>“Seeing Light”</p> <ul style="list-style-type: none"> - Recognise that light appears to travel in straight lines. - Use the idea that line travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. - Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. |

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| | Sound | | Sound “Changing Sound” <ul style="list-style-type: none"> - Identify how sounds are made. - Know that vibrations from sounds travel through a medium to the ear. - Find patterns between the pitch of a sound and features of the object that produced it. - Find patterns between the volume of a sound and features of the object that produced it. - Recognise that sounds get fainter as distance from the source increases. | | |
| | Rocks | Rocks “Rocks, Fossils and Soils” <ul style="list-style-type: none"> - Know how to compare and group together different kinds of rocks based on appearance and simple physical properties. - Describe in simple terms how fossils are formed when living things are trapped within rock. - Know that soils are made from rocks and organic matter. | | | |

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| | States of Matter | | States of Matter “States of Matter” <ul style="list-style-type: none"> - Compare and group materials together, according to whether they are solids, liquid or gas. - Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius. - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. | | |
| | Materials | | | Properties and Changes of Materials “Properties and Changes of Materials” <ul style="list-style-type: none"> - Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. - Know that some materials will dissolve in liquid to form a solution, and describe how | |

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| | | | | <p>to recover a substance from a solution.</p> <ul style="list-style-type: none"> - Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. - Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. - Demonstrate that dissolving, mixing and changes of state are reversible changes. - Explain that some changes result in the formation of new materials, and this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. | |
| | Electricity | | <p>Electricity “Circuits and Conductors”</p> <ul style="list-style-type: none"> - Identify common appliances that run on electricity. - Construct a simple series electrical circuit, identifying and naming its basic parts, | | <p>Electricity “Changing Circuits”</p> <ul style="list-style-type: none"> - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in a circuit. |

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| | | | <p>including cells, wires, bulbs, switches and buzzers.</p> <ul style="list-style-type: none"> - 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. - Recognise some common conductors and insulators, and associate metals with being good conductors. | | <ul style="list-style-type: none"> - Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. - Use recognised symbols when representing a simple circuit in a diagram. |
| | Earth and Space | | | <p>Earth and Space “Earth and Space”</p> <ul style="list-style-type: none"> - 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 apparent movement of the sun across the sky. | |

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| | Evolution and Inheritance | | | | Evolution and Inheritance “Evolution and Inheritance” <ul style="list-style-type: none">- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. |
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| Working Scientifically Progression | | | | |
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| | EYFS | KS1 | Lower KS2 | Upper KS2 |
| PLAN | <ul style="list-style-type: none"> ➤ Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate; | <ul style="list-style-type: none"> ➤ Ask simple questions and recognising that they can be answered in different ways | <ul style="list-style-type: none"> ➤ Ask relevant questions and using different types of scientific enquiries to answer them ➤ Set up simple practical enquiries, comparative and fair tests | <ul style="list-style-type: none"> ➤ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary |
| DO | <ul style="list-style-type: none"> ➤ Explore the natural world around them, making observations and drawing pictures of animals and plants; ➤ Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; ➤ Make observations of animals and plants ➤ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; | <ul style="list-style-type: none"> ➤ Observe closely, using simple equipment. ➤ Perform simple tests ➤ Identify and classify | <ul style="list-style-type: none"> ➤ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including thermometers and data loggers | <ul style="list-style-type: none"> ➤ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate |
| RECORD | <ul style="list-style-type: none"> ➤ Begin to show accuracy and care when drawing. | <ul style="list-style-type: none"> ➤ Gather and record data to help in answering questions | <ul style="list-style-type: none"> ➤ Gather, record, classify and present data in a variety of ways to help in answering questions ➤ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables | <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys , tables, scatter graphs, bar and line graphs</p> |
| REVIEW | <ul style="list-style-type: none"> ➤ Offer explanations for why things might happen, making use of recently introduced vocabulary | <ul style="list-style-type: none"> ➤ Use their observations and ideas to suggest answers to questions | <ul style="list-style-type: none"> ➤ Report on findings from enquiries, including oral and written explanations, displays or | <ul style="list-style-type: none"> ➤ Use test results to make predictions to set up further comparative and fair tests |

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| | <ul style="list-style-type: none"> ➤ Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps; ➤ 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. <p>*Updated in line with new EYFS Framework</p> | | <p>presentations of results and conclusions</p> <ul style="list-style-type: none"> ➤ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ➤ Identify differences, similarities or changes related to simple scientific ideas and processes ➤ Use straightforward scientific evidence to answer questions or to support their findings | <ul style="list-style-type: none"> ➤ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written form such as displays and other presentations ➤ Identify specific evidence that has been used to support or refute ideas or arguments |
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