

Year Group	Autumn Term	Spring Term	Summer Term
EYFS	Working scientifically: - Comment and ask question about aspects of the familiar world - Identify similarities and differences - Identify patterns and change - Explore and carry out simple investigations in play		
	Everyday materials (C) - Describe properties of materials using language: rough, smooth, hard, soft. - Explore the properties of different materials. - Sort different materials based on properties Seasonal changes (P) - Make observations about the weather. - Name the seasons summer and winter - Know the that it is colder in winter than summer - Make comparisons between daily weather patterns	Animals including Humans (B) - Understand babies grow and change as they get older - Name and sort animals and their young - Know that animals have different types of homes - Shows care and concern for living things. Seasonal changes (P) - Make observations about the weather. - Name the seasons summer and winter - Make comparisons between daily weather patterns	Everyday materials (C) Scientific Concepts - Describe properties of materials using language: rough, smooth, hard, soft. - Explore the properties of different materials. - Explore materials which float and materials which sink Plants (B) - Observe and comment on changes in plants as they grow. - Know that seeds grow into plants Seasonal changes (P) - Make observations about the weather. - Name the seasons summer and winter - Know that it is warmer in summer than winter - Make comparisons between daily weather patterns

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Year One	Working Scientifically • Ask simple questions about ways of testing an ideas • Can say what they think will happen in a test (predict). • Perform tests, using simple equipment. • Can make and record observation (using non- standard units i.e. pieces of sting, egg timers,) • Can say what the results of a test show. • Begin to use simple scientific vocabulary to identify and classify features		
	Everyday materials (C) • Distinguish between an object and the material it is made from and name the materials that an object is made from • Name wood, plastic, glass, metal, water and rock and describe the properties of everyday materials • Group objects based on the materials they are made from Seasonal changes (P) • Observe and comment on changes in the seasons • Name the seasons and suggest the type of weather in each season	Animals, including humans (B) • Name and sort a variety of animals including fish, amphibians, reptiles birds and mammals • Classify and name animals by what they eat (carnivore, herbivore and omnivore) • Sort living and non-living things • Name the parts of the human body that can be seen and associated senses. Seasonal changes (P) • Observe and comment on changes in the seasons • Name the seasons and suggest the type of weather in each season	Seasonal changes (P) • Observe and comment on changes in the season • Name the seasons and suggest the type of weather in each season Plants (B) • Identify and name a variety of common wild and garden plants • Name the petals, stem, leaf, root, branch of a plant/tree

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Year Two	Working Scientifically: • Use simple questions as the basis for an investigation. • Suggest different ways of testing a question. • Can say what they think will happen in a test and begin to state why (predict). • Discuss how to conduct a test • Perform tests, using range of equipment • Can make relevant observations and take measurements using a range of equipment (using non-standard units) • Gather and record findings in a range of ways • Use simple scientific language when explaining the results of a test • Use observations to suggest answers to the identified questions.		
	Uses of everyday materials (C) • Identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard • Suggest why a material might or might not be used for a specific job • Explore how shapes made by certain materials can be changed by squashing, bending, twisting and stretching	Plants (B) • Describe how seeds and bulbs grow into plants • Describe what plants need in order to grow and stay healthy (water, light & suitable temperature) • Animals, including humans (B) • Explain the basic stages in a life cycle for animals, including humans and what they need to survive • Describe why exercise, a balanced diet and good hygiene are important for humans	Living things and their habitats (B) • Identify things that are living, dead and never lived • Describe how a specific habitat provides for the basic needs of things living there (plants and animals) • Identify and name plants and animals in a range of habitats • Match living things to their habitat • Describe how animals find their food • Name some different sources of food for animals • Explain a simple food chain.

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Year Three	Working Scientifically: - Recognise the six main lines of scientific enquiry (identifying, classifying and grouping, pattern seeking, observe over time, research and comparative and fair test) - Begin to generate own questions related to a specific line of enquiry. - Identify a relevant question to form the focus on an investigation. - Can predict the results of an investigation and state why. - Set up simple tests and identify what is changed, measured and kept the same. - Make careful observations and take accurate measurements (using standard units). - Gather and record data in a variety of ways to help answer questions. - Record observations, comparisons and measurements using, scientific language, bar and t charts and text. - Report observations and give reasons for them using scientific evidence, identify any patterns in observations. - Draw conclusions based on the line of enquiry.		
	Rocks & Soils (C) - Compare and group rocks based on their appearance and physical properties, giving a reason - Know about sedimentary and igneous rocks and describe and explain the differences - Know and describe how fossils are formed and how soil is made	Plants (B) - Describe the function of different parts of flowering plants and trees and how water is transported within them - Explore and describe the needs of different plants for survival - Describe the plant life cycle, especially the importance of flowers Animals, including humans (B) - Explain the importance of a nutritious, balanced diet - Describe and explain the skeletal and muscular system of a human and the purpose of these	Light (P) - Describe what dark is (the absence of light) - Explain that light is needed in order to see and that it has to be reflected from a surface - Explain and demonstrate how a shadow is formed and how its size can change - Explain the danger of direct sunlight and describe how to keep protected. Forces and magnets (P) - Explore and describe how objects move on different surfaces - Explain how some forces require contact and some do not, giving examples - Describe how magnets work including how they can attract and repel - Predict whether objects will be magnetic and carry out an enquiry to test this out - Predict whether magnets will attract or repel and give a reason

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Year Four	Working Scientifically: • Generate own question to form the focus on an investigation, identifying the specific lines of enquiry (identifying, classifying and grouping, pattern seeking, observe over time, research and comparative and fair test) • Can predict the results of an investigation and state why drawing on previous experiences. • Set up simple tests and identify what is changed, measured and kept the same. • Make systematic and careful observations and take accurate measurements (using standard units). • Identify the scientific equipment needed to carry out an investigation. • Gather, record, classify and present data in a variety of ways to help answer questions. • Record observations, comparisons and measurements using, scientific language, bar, line, t charts, text and labelled diagrams • Report observations and give reasons for them, using scientific evidence, identify any patterns in observations and similarities or differences to simple scientific ideas. • Can recognised when and why observations and measurements need repeating to avoid unreliable evidence. • Draw conclusions based on the line of enquiry and suggest further questions and new predictions to improve on their line of enquiry.		
	Electricity (P) • Identify and name appliances that require electricity to function • Construct a series circuit; Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) • Draw a circuit diagram • Predict and test whether a lamp will light within a circuit • Describe the function of a switch in a circuit • Describe the difference between a conductor and insulators; giving examples of each. States of matter (C) • Group materials based on their state of matter (solid, liquid, gas) • Explore and describe how some materials can change state and the temperature at which they do so • Describe the water cycle, explaining the part played by evaporation and condensation	Animals, including humans (B) • Identify, name and describe function of the organs within the human digestive system • Identify and describe the different types of teeth and their function in humans • Use and construct food chains to identify producers, predators and prey Living things and their habitats (B) • Group living things in different ways • Use classification keys to group, identify and name living things • Create classification keys to group, identify and name living things (for others to use) • Describe how changes to an environment could endanger living things.	Sound (P) • Describe how sound is made and how sound waves travel from a source to our ears. • Explain the place of vibration in hearing • Explore the correlation between pitch and the object producing a sound • Explore the correlation between the volume of a sound and the strength of the vibrations that produced it • Describe what happens to a sound as it travels away from its source.

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Year Five	Working Scientifically: - Introduce the language of control variable, independent variable and dependent variable and identify these through investigations - Plan different types of scientific enquires to answer own questions. - Predict the results of an investigation and state why using appropriate scientific knowledge and vocabulary. - Take measurements, using a range of scientific equipment, with increasing accuracy and precision - Identify anomalies in results and how this may indicate the need to repeat a test - Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs - Draw conclusions which explain the science behind results and whether a degree of trust is needed in results. - Begin to refer to a relationship between the variables (de der de der de der der) - Use scientific evident to support findings.		
	Properties and changes of material (C) - Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets) - Give evidenced reasons why materials should be used for specific purposes. - Describe how a material dissolves to form a solution, explaining the process of dissolving - Describe how some materials can be separated and demonstrate this (e.g through filtering, sieving and evaporating)	Properties and changes of material (C) - Describe and show how to recover a substance from a solution - Know and can demonstrate that some changes are reversible and some are not - Discuss reversible and irreversible changes - Explain how some changes result in the formation of a new material and that this is usually irreversible Animals, including humans (B) - Create a timeline to indicate stages of growth in humans All living things and their habitats (B) - Describe the life cycle of different living things, e.g. mammal, amphibian, insect bird - Describe the differences between different life cycles - Describe the process of reproduction in plants and animals	Earth and space (P) - Describe and explain the movement of the Earth and other planets relative to the Sun, and the movement of the moon in relation to the Earth - Explain and demonstrate how night and day are created - Describe the Sun, Earth and Moon (using the term spherical). Forces (P) - Explain what gravity is and its impact on our lives - Be able to identify and explain the effect of air resistance and water resistance - Identify and explain the effect of friction - Explain how levers, pulleys and gears allow a smaller force to have a greater effect

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Year Six	Working Scientifically: - Plan different types of scientific enquires to answer own question - Identify the independent, dependent and control variable (where necessary) - Can predict the results of an investigation and state why using scientific knowledge and vocabulary. - Take measurements, using a range of scientific equipment, with increasing accuracy and precision, understand when taking repeat readings is necessary. - Record data and results of increasing complexity and choose the most appropriate method of recording (scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs). - Use test results to make predictions to set up further comparative and fair tests - Draw conclusions which explain the science behind results, the relationship between the variables and whether a degree of trust is needed in results (In oral and written forms such as displays and other presentations) - Use scientific evidence to support findings or refute ideas or arguments.		
	Electricity (P) - Explain how the number & voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer - Compare and give reasons for why components work and do not work in a circuit - Draw circuit diagrams using correct symbols. Light (P) - Explain how light travels - Explain and demonstrate how we see objects - Explain why shadows have the same shape as the object that casts them - Explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.	Animals, including humans (B) - Identify and name the main parts of the human circulatory system - Describe the function of the heart, blood vessels and blood - Discuss the impact of diet, exercise, drugs and life style on health - Describe the ways in which nutrients and water are transported in animals, including humans. Living things and their habitats (B) - Classify living things into broad groups according to observable characteristics and based on similarities & differences - Describe how living things have been classified - Give reasons for classifying plants and animals in a specific way.	Evolution & Inheritance (B & C) - Describe how the earth and living things have changed over time - Explain how fossils can be used to find out about the past - Explain about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) - Explain how animals and plants are adapted to suit their environment - Link adaptation over time to evolution - Explain evolution.

All year groups will also include 'working scientifically' in every term

Key: C = Chemistry, B = Biology, P = Physics