FS to be updated termly- new curriculum being implemented

Working Scientifically	During foundation stage children will ask questions about the environment including the weather outside. They will be able to suggest what they might wear. They will develop an understanding of growth, decay and changes over time and show care and concern for living things and the environment. They will use their senses when walking around and investigating. They will develop questioning and curiosity through play and understand the concept of forces and electricity through twisting, pushing, slotting and magnetic toys and seeing the effects.	
	Nursery	**Reception**
Observing over time	Encouraging scientific enquiry • How does the … change over time? • Find out about the life-cycle of a chick- hatching eggs • How does a plant change as it grows? • What is inside an apple/pumpkin? • Explore using different senses (sight, touch, taste, smell)- apples/pumpkins/mushrooms. • How does the cake mixture change? • Observe the seasons. • How does chocolate change when heated?	Encouraging scientific enquiry • How does the natural world change with the seasons? Do all leaves fall to the ground in autumn? What are the different parts of a leaf? • Explore using different senses and describe using key vocabulary- apple/pumpkins/mushrooms • Observational drawings of natural objects • Use different equipment to observe • How do ingredients combine and change when baking/cooking? • How does chocolate and marshmallows change when heated? Do they look the same? • What happens to wax when we light a candle? • What would happen if we put this leaf in a puddle? (Floating and sinking) • How do pumpkins grow? (pumpkin patch visit) Is it a fruit or vegetable?
Identifying and classifying	**Encouraging scientific enquiry** • Sort using different senses. Which do you like/not like? • Find and identify natural objects to include in the collection. • Sorting leaves by colour. • Sorting objects by hard and soft. • Sorting healthy and unhealthy foods	**Encouraging scientific enquiry** • Sort apples by similarities and differences. • Sort mushrooms by can eat/cannot eat. • Sort objects according to whether they float or sink. • Visit to Longton Park – look for autumn treasure. Sort objects based on textures/appearance. • Sorting leaves by fallen to the ground/not fallen
Pattern seeking		**Encouraging scientific enquiry** • Look for plants in different areas of the school grounds.

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Researching	**Encouraging scientific enquiry** • Find out more about the life cycles of the animals observed. • Match animals and their young. • Look at seed and bulb packets to learn how to plant and care for them	**Encouraging scientific enquiry** • Find out information from visitors (dentist, nurse etc.) • Find out about the weather and seasons. • Find out about nocturnal animals.
Fair/comparative testing	**Encouraging scientific enquiry** • Compare how quickly different seeds/bulbs germinate. • Compare how easy it is to ride a scooter or bike on different surfaces. • Compare the sound produced by shakers made with different materials. • Compare the sound produced by different drums	**Encouraging scientific enquiry** • How are pizza bases different when made with different flours? • How do cupcakes cook if they have different amounts of mixture? • Compare how chocolate and marshmallows melt. • Compare how different objects float and sink. • Compare how cars move down ramps/gutters. • Compare how wheels turn when sand or water is poured through.
Working Scientifically	*During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:* • Asking simple questions and recognising that they can be answered in different ways. • Observing closely, using simple equipment. • Performing simple tests. • Identifying and classifying. • Using their observations and ideas to suggest answers to questions. • Gathering and recording data to help in answering questions.	
	Year 1	**Year 2**
Observing over time	• Measure time (seconds, minutes, hours, days). • Record observations as scientific drawings and labelled features. • Use magnifying glasses to label scientific drawings.	• Use appropriate senses, aided by equipment (magnifying glasses/microscopes), to make observations. • Measure time in seconds, minutes, hours, days and also measure a variety of variables that are observed, such as, temperature, light levels. • Record observations using scientific drawings and tables. • Use microscopes to label scientific drawings.
Identifying and classifying	• Use simple equipment to observe closely. • Make observations and measurements to look for similarities and differences. • Organise into groups and make connections. • Classify using simple prepared tables and sorting rings. • Explore the world around them making careful observations to support identification, comparison and noticing change. • Use magnifying glasses and digital microscope to observe closely.	• Talk about similarities and differences backed up by discussions about observations and measurements. • Use observations and testing to compare objects, materials and living things. Sort and group these things, identifying their own criteria for sorting. • Use simple secondary sources to name living things. Describe the characteristics they used to identify a living thing. • Use digital microscope and microscopes to observe closely.
Pattern seeking	• Describe patterns orally. • Begin to take measurements, initially by comparisons, then using non-standard units.	• Use observations and ideas to suggest answers to questions noticing similarities, differences and patterns. • Begin to describe patterns in written work.

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	• Record observations e.g. using photographs, videos, drawings, labelled diagrams or in writing. • Recognise 'biggest and smallest', 'best and worst' etc. from data. • Use a timer to measure time.	• Take measurements and record using standard units to compare. • Record measurements e.g. using prepared tables, pictograms, tally charts and block graphs. • Discuss cause and effect relationships. • Use a stopwatch to measure time.
Researching	• Ask simple questions and recognise that they can be answered in different ways. • Answer questions developed with the teacher often through a scenario. • Present research findings as a group/class.	• Ask simple questions and recognise that they can be answered in different ways including use of scientific language. • While exploring the world, develop their ability to ask questions (i.e what something is, how things are similar and different, the ways things work, how things change). Where applicable, they answer these questions. • Plan how to use resources provided to answer the questions using different types of enquiry. • Suggest appropriate answers to questions, from experiences. With support relate these to evidence (i.e observations they have made, measurements they have taken or information from secondary sources). • Read for information and note down key facts.
Fair/comparative testing	• Perform simple tests. • Compare different situations. • Measure and collect data.	• Compare different cases/situations. • Measure and collect data. • Use tally charts to record observations.

Year-group(s)	Vocabulary/Statement(s)
Nursery & Reception	look closely, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group
Years 1 & 2	observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources