Science – Working Scientifically: Whole-School Curriculum Progression Map

	EYFS (30 - 50mths to ELGs)	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
OBSERVING	Through provision, focus groups and with adult support, children can… • Discuss what they can see, touch, smell, hear or taste • Use simple equipment to help them make observations	Children can: Discuss what they can see, touch, smell, hear or taste Use simple equipment to help them make observations	Children can: Use <see, touch, smell, hear or taste> to help them answer questions? Use some scientific words to describe what they have seen and measured? Compare several things	Children can: Use different ideas and suggest how to find something out Explain why they need to collect information to answer a question	Children can: Ask their own questions Decide which information needs to be collected and decide which is the best way for collecting it?	Children can:	Children can:
	Exceeding Can find out by watching, listening, tasting, smelling and touching	**Greater Depth** Can find out by watching, listening, tasting, smelling and touching	**Greater Depth** Can suggest ways of finding out through listening, hearing, smelling, touching and tasting	**Greater Depth** Can identify an area that needs to be explored in order to answer a question	**Greater Depth** Can observe and ask questions based on own observations before suggestion an area to test further	**Greater Depth**	**Greater Depth**
TESTING	Through provision, focus groups and with adult support, can children… • Can perform a simple test • Can describe/explain what they have done	Perform a simple test Describe/ explain what they have done	Carry out a simple fair test Explain why it may not be fair to compare two things Say whether things happened as they expected Suggest how to find things out or use prompts to find things out	Make and record a prediction before testing Plan a fair test and explain why it is fair Set up a simple test to make comparisons	Plan and set up a fair test and isolate variables, explaining why it was fair and which variables have been isolated Suggest improvements and predictions	Plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary Make a prediction with reasons Use test results to make predictions to set up comparative and fair tests	Explore different ways to test an idea, choose the best way, and give reasons? Identify the key factors when planning a fair test Vary one factor whilst keeping the others the same in an experiment and explain why they do this Use information to make a prediction and give reasons for it Use test results to make further predictions and set up further comparative tests Explain, in simple terms, a scientific idea and what evidence supports it

	Exceeding Can give reasons for their answers	**Greater Depth** Can give reasons for their answers	**Greater Depth** Say whether things happened as they expected and if not why not Can independently consider controlling variables to make a fair test	**Greater Depth** Can record and present findings using scientific language, labelled diagrams, tables and charts	**Greater Depth** Can plan and carry out an investigation by controlling variables fairly and accurately	**Greater Depth** Can explore different ways to test an idea, choose the best way and give reasons Can vary one factor whilst keeping the others the same in an experiment? Can use information to help make a prediction Can explain, in simple terms, a scientific idea and what evidence supports it	**Greater Depth** Can choose the best way to answer a question and use information from different sources to plan an investigation Can make a prediction which links with other scientific knowledge
Identifying & Classifying	Through provision, focus groups and with adult support, can children… • Can they identify and classify things they observe? • Can they think of some questions to ask? • Can they answer some scientific questions? • Can they give a simple reason for their answer? • Can they explain what they have found out?	Identify and classify things they observe Think of some questions to ask Answer some scientific questions Give a simple reason for their answer Explain what they have found out	Organise things into groups Find simple patterns Identify plants and animals by a specific criterion (i.e. lays eggs or not; has feathers or not)	Can describe what they have found using scientific language Say what they have found out and whether it helps to answer their questions	Can they use their findings to draw a simple conclusion? Explain their findings in different ways (display, presentation, writing)		Explain why they have chosen specific equipment (incl ICT based equipment) Decide which units of measurement they need to use? Make precise measurements Explain why a measurement needs to be repeated Record their measurements in different ways? (incl bar charts, tables and line graphs) Read and record measurements systematically using a range of scientific equipment with increasing accuracy and precision Present a report of their findings through writing, display and presentation?

	Exceeding Can discuss similarities and differences Can explain what they have found out using scientific vocabulary	**Greater Depth** Can discuss similarities and differences Can explain what they have found out using scientific vocabulary	**Greater Depth** Can suggest more than one way of grouping plants and animals and explain their reasons	**Greater Depth** Can suggest areas for further tests based on what they have observed	**Greater Depth** Can use test results to make further predictions and set up further comparative tests	**Greater Depth**	**Greater Depth** Can plan which equipment they will need and use it effectively Can explain qualitative and quantitative data
Recording Findings	Through provision, focus groups and with adult support, can children… • Can they show their work using pictures, labels and captions? • Can they record their findings using standard units? • Can they record some information in a chart or table, or using ICT?	Show their work using pictures, labels and captions Record their findings using standard units Record some information in a chart or table, or using ICT	Use text, diagrams, pictures, charts tables to record their observations Measure using simple equipment	Take accurate measurements using different equipment and units of measure Record findings in different ways (labelled diagrams, charts etc.)	Take measurements using different equipment and units of measure and record what they have found in a range of ways Use a range scientific equipment to take accurate measurements or readings Record data using diagrams, labels, classification keys, tables, scatter graphs, bar graphs and line graphs?	Can take measurements using a range of scientific equipment with increasing accuracy and precision Can take repeat readings when appropriate Can record more complex data and results using scientific diagrams, labels, classification keys, table, scatter graphs, bar and line graphs	Find a pattern from their data and explain what it shows Use a graph to answer scientific questions Link what they have found out to other science Suggest how to improve their work and say why they think this Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models Draw conclusions from their work Report findings from investigations through written explanations and conclusions using appropriate scientific language

	Exceeding Can compare measurements	**Greater Depth** Can they make accurate measurements using non-standard measurements i.e. multilink	**Greater Depth** Can use information from books and inline to find things out	**Greater Depth** Can use findings to draw a simple conclusion Can suggest further improvements and predictions for further tests	**Greater Depth** Can record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models	**Greater Depth** Can record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models	**Greater Depth** Can identify scientific evidence that has been used to support or to refute ideas or arguments and link their conclusions to it Can explain how they could improve their way of working Can 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

Evaluating					Find any patterns in their evidence or measurements Evaluate and communicate their methods and findings Make a prediction based on something they have found out Ask further questions based on their data and observations Evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables? Identify differences, similarities or changes related to simple scientific ideas or processes?	Can find patterns in their evidence or measurements Can evaluate and communicate their methods and findings Can make a prediction based on something they have found out Can ask further questions based on their data and observations Can evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables Can identify differences, similarities or changes related to simple scientific ideas or processes	
				Greater Depth	**Greater Depth** Can report findings from investigations through written explanations and conclusions Can use a graph or diagram to answer further questions	**Greater Depth** Can report findings from investigations through written explanations and conclusions Can use a graph or diagram to answer questions related to their test	**Greater Depth**