Moorsway Federation

Science Skills Progression

EYFS, KS1 & KS2

EYFS	Key Stage 1	KS1 NC WS reference		
- show curiosity about objects, events and people (Playing & Exploring) - questions why things happen (Speaking: 30-50 months)	explore the world around them and raise their own simple questions	asking simple questions and recognising that they can be answered in different ways	**PLANNING**	**PLAN**
-engage in open-ended activity (Playing & Exploring)	experience different types of science enquiries, including practical activities			
-take a risk, engage in new experiences and learn by trial and error (Playing & Exploring)	begin to recognise different ways in which they might answer scientific questions			
-find ways to solve problems / find new ways to do things / test their ideas (Creating & Thinking Critically)	carry out simple tests	performing simple tests	**OBSERVING**	**DO**
-develop ideas of grouping, sequences, cause and effect (Creating &Thinking Critically) -know about similarities and differences in relation to places, objects, materials and living things (ELG: The World)	use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying)	identifying and classifying		
-comments and asks questions about aspects of their familiar world such as the place where they live or the natural world (The World: 30-50 months)	ask people questions and use simple secondary sources to find answers			
-closely observes what animals, people and vehicles do (The World 8-20 months) -use senses to explore the world around them (Playing & Exploring)	observe closely using simple equipment with help, observe changes over time	observing closely, using simple equipment		
-choose the resources they need for their chosen activities (ELG: Self Confidence & Self Awareness) -handle equipment and tools effectively (ELG: Moving & Handling)	use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data			

-make links and notice patterns in their experience (Creating & Thinking Critically)	with guidance, they should begin to notice patterns and relationships	gathering and recording data to help in answering questions	**RECORDING**	
-create simple representations of events, people and objects (Being Imaginative: 40-60+ months)	record simple data			
-develop their own narratives and explanations by connecting ideas or events (ELG: Speaking) -builds up vocabulary that reflects the breadth of their experience (Understanding: 30-50 months)	with help, they should record and communicate their findings in a range of ways and begin to use simple scientific language			
-answer how and why questions about their experiences (ELG: Understanding) -make observations of animals and plants and explain why some things occur, and talk about changes (EL:G: The World)	use their observations and ideas to suggest answers to questions talk about what they have found out and how they found it out	using their observations and ideas to suggest answers to questions	**CONCLUDING**	**REVIEW**

Lower Key Stage 2 NC WS references	**Lower Key Stage 2**	**Upper Key Stage 2**	**Upper Key Stage 2 NC WS references**		
asking relevant questions and using different types of scientific enquiries to answer them	Raise their own relevant questions about the world around them	Use their science experiences to explore ideas and raise different kinds of questions	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	**PLANNING**	**PLAN**
	Should be given a range of scientific experiences including different types of science enquiries to answer questions	Talk about how scientific ideas have developed over time			
	Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions	Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions			

	Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations	Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact			
• setting up simple practical enquiries, comparative and fair tests	Set up simple practical enquiries, comparative and fair tests Recognise when a simple fair test is necessary and help to decide how to set it up	Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why			
	Talk about criteria for grouping, sorting and classifying; and use simple keys	Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment		**OBSERVING**	**DO**
• making systematic and careful observations and where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Make systematic and careful observations.Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used	Make their own decisions about what observations to make, what measurements to use and how long to make them for	• taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate		
	Take accurate measurements using standard units learn how to use a range of (new) equipment, such as data loggers/ thermometers appropriately	Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.			
• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled	Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data	Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	• recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	**RECORDING**	

diagrams, keys, bar charts, and tables					
	Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them	Look for different causal relationships in their data and identify evidence that refutes or supports their ideas		**C O N C L U D I N G**	**R E V I E W**
• identifying differences, similarities or changes related to simple scientific ideas and processes • Using straightforward scientific evidence to answer questions or to support their findings	With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions	Identify scientific evidence that has been used to support or refute ideas or arguments	• identifying scientific evidence that has been used to support or refute ideas or arguments		
• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results	• reporting and presenting 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.		
•using results to draw simple conclusions, make	With support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have	Use their results to make predictions and identify when further observations, comparative and fair tests might be needed	• using test results to make predictions to set up further		

predictions for new values, suggest improvements and raise further questions.	collected and finding ways of improving what they have already done.		comparative and fai tests.		