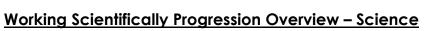


## <u>Shortlanesend</u>





Working Scientifically Skills:	Asking Questions	Planning and setting up different types of enquiries	Performing tests (Enquiries)	Using equipment	Observing and measuring	Identifying and classifying (Enquiries)	Gathering and recording data	Reporting, presenting and communicating data/findings
EYFS	Playing & Exploring: Show curiosity about objects, events and people Questions why things happen	Playing & Exploring: Take a risk, engage in new experiences and learn by trial and error. The World Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world Creating & Thinking Critically: Make links and notice patterns in their experience	Playing & Exploring: Engaging in open-ended activity. Creating & Thinking Critically: Find ways to solve problems / find new ways to do things / test their ideas	ELG-Self Confidence & Self Awareness: Choose the resources they need for their chosen activities. ELG-Moving & Handling: Handle equipment and tools effectively.	The World losely observes what animals, people and vehicles do. Playing & Exploring: Use senses to explore the world around them	Creating & Thinking Critically: Develop ideas of grouping, sequences, cause and effect. ELG-The World: Know about similarities and differences in relation to places, objects, materials and living things	Being Imaginative- Create simple representations of events, people and objects. ELG-Speaking: Develop their own narratives and explanations by connecting ideas or events. Understanding Builds up vocabulary that reflects the breadth of their experience.	ELG- Understanding: Answer how and why questions about their experiences. ELG-The World: Make observations of animals and plants and explain why some things occur, and talk about changes
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KS1	Explore the world around them and raise their own simple questions.	Begin to recognise different ways in which they might answer scientific questions.  Ask people questions and use simple secondary sources to find answers  With guidance, they should begin to notice patterns and relationships.	Experience different types of science enquiries, including practical activities.  Carry out simple tests.	Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data.	Observe closely using simple equipment.  With help, observe changes over time.	Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying).	Record simple data.  With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.	Use their observations and ideas to suggest answers to questions.  Talk about what they have found out and how they found it out.
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UK\$2	Use their science experiences to explore ideas and raise different kinds of questions.	Select and plan the most appropriate type of scientific enquiry to use and answer scientific questions.  Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact.  Look for different causal relationships in their data and identify evidence that refutes or supports their ideas.	Talk about how scientific ideas have developed over time.  Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.	Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately.  Take repeat measurements where appropriate.	Make their own decisions about what observations to make, what measurements to use and how long to make them for.	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.	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.  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.	Identify scientific evidence that has been used to support or refute ideas or arguments.  Use their results to make predictions and identify when further observations, comparative and fair tests might be needed.
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			1	1	1	1		
	Ask questions	Select, plan and	Understand that	Use appropriate	Understand and		Make and record	Apply
	and develop a	carry out the	scientific	techniques,	use SI units and		observations and	mathematical
	line of enquiry	most	methods and	apparatus, and	IUPAC		measurements using	concepts and
	based on	appropriate	theories	materials during	(International		a range of methods	calculate results.
	observations of	types of	develop as	fieldwork and	Union of Pure		for different	
	the real world,	scientific	earlier .	laboratory work,	and Applied		Investigations.	Use and derive
	alongside	enquiries to test	explanations	paying attention	Chemistry)		3 3 3 3 3	simple equations
	Prior knowledge	predictions,	are modified	to health and	chemical		Present observations	and carry out
	and	including	to take account	safety.	nomenclature.		and data using	appropriate
	experience.	identifying	of new	301017.	Tiomoratoro.		appropriate	calculations.
	expendition.	independent,	evidence and	Evaluate the			methods, including	Carotranons.
		dependent and	ideas, together	reliability of			tables and graphs	Undertake basic
		control	with the	methods and				data analysis
		variables, where	importance of	suggest possible				including simple
		appropriate.	publishing results	improvements.				statistical
		арргорпате.	and peer	improvements.				techniques.
		Make	review.	Evaluate risks.				recririques.
KS3		predictions using	review.	Evaluate fisks.				Present reasoned
KSS		scientific		Day attention to				
				Pay attention to				explanations,
		knowledge and		objectivity and				including
		understanding.		concern for				explaining data
		1.1		accuracy,				in relation to
		Interpret		precision,				predictions and
		observations		repeatability				hypotheses.
		and data,		and				
		Identify		reproducibility.				Evaluate data,
		patterns and						showing
		using		Apply sampling				awareness of
		observations,		techniques.				potential sources
		measurements.						of random and
		and data to						systematic error.
		draw						
		conclusions						Identify further
								questions arising
								from their results.