















EYFS - Working Scientifically skills matched to enquiry skills








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	PLAN		DO			REVIEW				
	To ask scientific questions	To plan an enquiry	To observe closely	To take measurements	To gather/record results	To present results	To interpret results	To draw conclusions - KS2 only	To make a prediction - KS2 only	To evaluate an enquiry - KS2 only
										
Identify and classify	Ask questions to find out more	Ask Why questions Choose the right resources to carry out their own plan	Use new vocabulary Talk about what they see using a wide vocabulary			Write short sentences with words with known sound letter correspondence				
Comparative/ Fair Tests			Compare quantities using language 'more than, fewer than'	Develop their small motor skills so that they can use a range of tools competently, safely and confidently	Make comparisons between objects relating to size, length, weight and capacity	Begin to describe a sequence of events, real or fictional using words such as first	Articulate their ideas and thoughts in well – formed sentences			
Observation over time	Talk about what they see using a wide vocabulary					Draw information from a single map				
Pattern seeking										
Research										

KS1 - Working Scientifically skills matched to enquiry skills








	PLAN		DO			REVIEW				
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	To ask scientific questions 	To plan an enquiry 	To observe closely 	To take measurements 	To gather/record results 	To present results 	To interpret results 	To draw conclusions - KS2 only	To make a prediction - KS2 only	To evaluate an enquiry - KS2 only	
Identify and classify	Be able to ask a yes / no questions to aid sorting	Identify the headings for the two groups e.g. it is ... it is not...	Be able to compare objects based on obvious observable features e.g. size			Sort objects and living things into two groups using a basic Venn diagram or table	Talk about a number of objects in each group and which has less etc.				
Comparative Tests	Identify the question to investigate from a scenario or choose a question from a range provided	Choose equipment to use and decide what to do or what to observe or measure in order to answer the question	Make observations linked to answering the questions	When appropriate measure using standard units where all the numbers are on a marked scale.	Record data in simple prepared tables pictorially or photos	Present what they have learnt verbally, using pictures or block diagrams	Answer their question in simple sentences using their observations or measurements.				
Observation over	Ask a question about what might happen in the future based on an observation										Present what they have learnt verbally, using pictures
Pattern seeking	Ask a question that is looking for a pattern based on an observation				Record data in simple prepared tables and tally charts						Present what they have learnt verbally
Research	Ask one or two simple questions linked to a topic					Present what they have learnt verbally, using pictures	Be able to answer their questions using simple sentences				

LKS2 - Working Scientifically skills matched to enquiry skills

	PLAN		DO			REVIEW				
	To ask scientific questions 	To plan an enquiry 	To observe closely 	To take measurements 	To gather/record results 	To present results 	To interpret results 		To make a prediction	To evaluate an enquiry
Identify and classify	Be able to ask a yes / no questions to aid sorting	Be able to put appropriate headings onto intersecting Venn and Carroll Diagrams	Be able to compare objects based on more sophisticated observable features.			Sort objects and living things into groups using intersecting Venn and Carroll Diagrams	Spot patterns in the data particularly two criteria with no examples E.g. There are no living things with no wings and no legs	Draw conclusions when appropriate		Suggest improvement e.g. looking at a wider range of objects. Suggest a new question which has arisen from the investigation
Comparative Tests	Ask a range of questions linked to the topic	Decide what to change and what to measure or observe	AS for KS1	Measure using standard units where not all numbers are marked on the scale and take repeat readings where necessary	Prepare own tables to record data	Present data in bar charts	Refer directly to their evidence when answering a question	Where appropriate provide oral or written explanations for their findings.	Use results from an investigation to make a prediction about a further result	Suggest improvements e.g. to method of taking measurements Suggest a new question which has arisen from the investigation
Observation over time		Decide what to change and what to measure or observe. Decide how often to take the measurement	Make a range of relevant observations	Measure using standard units where not all numbers are marked on the scale. Use data loggers to measure over time		Present data in time charts				
Pattern seeking		Decide what to measure or observe	AS for KS1	Measure using standard units where not all numbers are marked on the scale		Use ICT package to present data as a scatter gram				
Research		Choose a source from a range provided								

UKS2 - Working Scientifically skills matched to enquiry skills

UKS2 - Working Scientifically skills matched to enquiry skills											
	PLAN		DO			REVIEW					
	To ask scientific questions 	To plan an enquiry 	To observe closely 	To take measurements 	To gather/record results 	To present results 	To interpret results 	To draw conclusions - KS2 only	To make a prediction - KS2 only	To evaluate an enquiry - KS2 only	
Identify and classify	Be able to ask a range of yes/no questions to air sorting and decide which ways of sorting will give useful information	Identify specific clear questions that will sort without ambiguity	Be able to compare not only based on physical properties but also using knowledge gained from previous enquiry			Create branching tree diagrams and keys to enable others to name living things and objects	Be able to talk about the features that objects and living things share and do not share based on information in the key	Be able to use data to show that living things and materials that are grouped together have more things in common that with things in other groups.		Be able to explain using evidence that the branching database or classification key will only work for the living things or materials it was created for.	
Comparative Tests	Ask a range of questions and identify the type of enquiry that will help to answer the questions	Recognise and control variables	As for KS1	Measure using standard units using equipment that has scales involving decimals	Prepare own tables to record data including columns for taking repeat readings.	Choose an appropriate form of presentation	Be able to answer their questions describing casual relationships	Provide oral or written explanations for their findings	Use test results to make further predictions for future investigations	Explain their degree of trust in their results. E.g. precision in taking measurements, variables that may not have been controlled and accuracy of results.	
Observation over time					AS for KS1	Choose an appropriate form of presentation					Be able to answer their questions describing changes over time
Pattern seeking						As for LKS2					Be able to answer their question identifying patterns
Research	Ask a range of questions recognising that some can be answered through	Choose suitable sources				Present what they learnt in a range of ways	Be able to answer their questions using scientific evidence gained from a range of sources			Be able to talk about their degree of trust in the sources they	

