

Riverbridge Primary School

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA		
Asking questions and recognising that they can be answered in different ways							
Ask simple questions and	 The children 	Ask relevant questions and using	 They recognise 	Plan different types of scientific	• They choose a		
recognising that they can be	are involved in	different types of scientific	when secondary	enquiries to answer questions,	type of enquiry		
answered in different ways.	planning how to	enquiries to answer them.	sources can be	including recognising and controlling	to carry out and		
	use resources		used to answer	variables.	justify their		
While exploring the world, the	provided to	The children consider their	questions that		choice.		
children develop their ability to ask	answer the	prior knowledge when asking	cannot be	Children independently ask	• They		
questions (such as what something	questions using	questions. They independently	answered through	scientific questions. This may be	recognise how		
is, how things are similar and	different types	use a range of question stems.	practical work.	stimulated by a scientific experience	secondary		
different, the ways things work,	of enquiry,	Where appropriate, they answer	 They identify the 	or involve asking further questions	sources can be		
which alternative is better, how	recognising that	these questions.	type of enquiry	based on their developed	used to answer		
things change and how they	there are	The children answer questions	that they have	understanding following an enquiry.	questions that		
happen). Where appropriate, they	different ways in	posed by the teacher.	chosen to answer	Given a wide range of resources	cannot be		
answer these questions.	which questions	 Given a range of resources, 	their question.	the children decide for themselves	answered		
 Answer questions developed 	can be	the children decide how to		how to gather evidence to answer a	through		
with the teacher through a	answered.	gather evidence to answer the		scientific question.	practical work.		
scenario.		question.					

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA		
Making observations and taking measurements							
Observe closely, using simple	• They	Make systematic and careful	 They use a 	Take measurements, using a	• During an enquiry, they		
equipment.	begin to	observations. Take accurate	range of	range of scientific equipment,	make decisions e.g. whether		
	take	measurements using standard	equipment for	with increasing accuracy and	they need to: take repeat		
Children explore the world around	measureme	units, using a range of	measuring	precision, taking repeat	readings (fair testing);		
them. They make careful	nts, initially	equipment, including	length, time,	readings when appropriate.	increase the sample size		
observations to support identification,	by	thermometers and data	temperature		(pattern seeking); adjust the		
comparison and noticing change.	comparison	loggers.	and capacity.	The children select	observation period and		
They use appropriate senses, aided	s, then		They use	measuring equipment to give	frequency (observing over		
by equipment such as magnifying	using non-	The children make	standard units	the most precise results e.g.	time); or check further		
glasses or digital microscopes, to	standard	systematic and careful	for their	ruler, tape measure or trundle	secondary sources		
make their observations.	units.	observations.	measurements.	wheel, force meter with a	(researching); in order to get		
				suitable scale.	accurate data.		

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA		
Engaging in practical enquiry to answer questions							
Perform simple tests.	Perform simple tests. • They describe Set up simple practical • They follow Plan different types of scientific • They decide						
	the	enquiries, comparative and	their plan to carry	enquiries to answer questions,	what observations		
• The children use practical resources	characteristics	fair tests.	out: observations	including recognising and	or measurements		
provided to gather evidence to	they used to		and tests to	controlling variables where	to make over time		
answer questions generated by	identify a living	The children select from	classify;	necessary.	and for how long.		
themselves or the teacher. They carry	thing.	a range of practical	comparative and		 They look for 		
out: tests to classify; comparative tests;	• They use	resources to gather	simple fair tests;	The children select from a range	patterns and		
pattern seeking enquiries; and make	simple	evidence to answer	observations over	of practical resources to gather	relationships using a		
observations over time. Identifying and	secondary	questions generated by	time; and pattern	evidence to answer their questions.	suitable sample.		
classifying.	sources (such as	themselves or the teacher.	seeking.	They carry out fair tests, recognising			
Children use their observations and	identification			and controlling variables.			
testing to compare objects, materials	sheets) to name						
and living things. They sort and group	living things.						
these things, identifying their own							
criteria for sorting.							

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA			
	Recording and Presenting Evidence							
Gather and record data to help in answering questions.	 They record their measurements 	Gather, record, classify and present data in a variety of ways to help in answering questions.	They record their measurements	Recording data and results of increasing complexity using scientific diagrams and labels,	They record measurements e.g. using tables, tally			
 The children record their observations e.g. using photographs, videos, drawings, 	e.g. using prepared tables,	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar	e.g. using tables, tally charts and bar charts (given	classification keys, tables, scatter graphs, bar and line graphs.	charts, bar charts, line graphs and scatter graphs.			
 labelled diagrams or in writing. They classify using simple prepared tables and sorting rings. 	pictograms, tally charts and block graphs.	 charts, and tables. The children sometimes decide how to record and present evidence. They record their observation e.g. using 	templates, if required, to which they can add headings). • They record classifications.	The children decide how to record and present evidence. They record observations e.g. using annotated photographs, videos, labelled diagrams, observational drawings, labelled scientific	• They record classifications e.g. using tables, Venn diagrams, Carroll diagrams and classification keys.			
		photographs, videos, pictures, labelled diagrams or writing.		diagrams or writing.				

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	Engaging in practical enquiry to answer questions						
Perform simple tests.	Carry out: tests to	Set up simple practical enquiries,	Children	Plan different types of scientific	 They decide 		
	classify; comparative	comparative and fair tests.	present the	enquiries to answer questions,	what observations		
The children use practical	tests; pattern seeking		same data	including recognising and controlling	or measurements		
resources provided to gather	enquiries; and make	The children select from a	in different	variables where necessary.	to make over time		
evidence to answer questions	observations over	range of practical resources to	ways in		and for how long.		
generated by themselves or the	time.	gather evidence to answer	order to	The children select from a range	 They look for 		
teacher.		questions generated by	help with	of practical resources to gather	patterns and		
	 Use simple 	themselves or the teacher.	answering	evidence to answer their questions.	relationships using		
Identify and classify.	secondary sources to	They follow their plan to carry	the	They carry out fair tests, recognising	a suitable sample.		
	name living things.	out: observations and tests to	question.	and controlling variables.			
 Children use their observations 	Describe the	classify; comparative and		Children present the same data in			
and testing to compare objects,	characteristics used	simple fair tests; observations		different ways in order to help with			
materials and living things. They sort	to identify a living	over time; and pattern seeking.		answering the question.			
and group these things, identifying	thing.	e.g. using tables, Venn					
their own criteria for sorting.		diagrams, Carroll diagrams.					

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA			
	Recording and presenting evidence							
Gather and record data	 They record 	Gather, record, classify and present data in a	Children	Record data and results of increasing complexity	• They			
to help in answering	their	variety of ways to help in answering questions.	present the	using scientific diagrams and labels,	record			
questions.	measuremen		same data	classification keys, tables, scatter graphs, bar	classifications			
	ts e.g. using	Record findings using simple scientific	in different	and line graphs.	e.g. using			
 The children record 	prepared	language, drawings, labelled diagrams, keys,	ways in		tables, Venn			
their observations e.g.	tables,	bar charts, and tables.	order to	The children decide how to record and	diagrams,			
using photographs,	pictograms,		help with	present evidence. They record observations e.g.	Carroll			
videos, drawings,	tally charts	The children decide how to record and	answering	using annotated photographs, videos, labelled	diagrams			
labelled diagrams or in	and block	present evidence. They record their	the	diagrams, observational drawings, labelled	and			
writing.	graphs.	observation e.g. using photographs, videos,	question.	scientific diagrams or writing. They record	classification			
 They classify using 		pictures, labelled diagrams or writing.		measurements e.g. using tables, tally charts, bar	keys.			
simple prepared tables		> They record their measurements e.g. using		charts, line graphs and scatter graphs.				
and sorting rings.		tables, tally charts and bar charts. They		Children present the same data in different				
		record classifications e.g. using tables, Venn		ways in order to help with answering the				
		diagrams, Carroll diagrams.		question.				

Year 1 and 2	MA	Year 3 and 4	MA	Year 5 and 6	MA		
Answering questions and conclude							
Use their observations and ideas to	Relate their	Use straightforward scientific	 The answers 	Identify scientific evidence that has	 They talk about 		
suggest answers to questions.	own	evidence to answer questions or to	given are	been used to support or refute ideas	how their scientific		
	experiences to	support their findings.	consistent with	or arguments.	ideas change due		
Children use their experiences	evidence e.g.		the evidence.		to new evidence		
of the world around them to	observations	Children answer their own and		Children answer their own and	that they have		
suggest appropriate answers to	they have	others' questions based on		others' questions based on	gathered.		
questions.	made,	observations they have made,		observations they have made,	 They talk about 		
	measurements	measurements they have taken or		measurements they have taken or	how new		
	they have taken	information they have gained		information they have gained from	discoveries change		
	or information	from secondary sources.		secondary sources. When doing	scientific		
	they have			this, they discuss whether other	understanding.		
	gained from			evidence e.g. from other groups,			
	secondary			secondary sources and their			
	sources.			scientific understanding, supports or			
				refutes their answer.			
Use their observations and ideas to	 The children 	Identify differences, similarities or	 They begin to 	Report and present findings from	 Identify results 		
suggest answers to questions.	draw	changes related to simple	identify naturally	enquiries, including conclusions,	that do not fit the		
	comparisons	scientific ideas and processes.	occurring	causal relationships and	overall pattern;		
> The children recognise 'biggest	between the		patterns and	explanations of and degree of trust	and explain their		
and smallest', 'best and worst'	results in their	 Children interpret their data to 	causal	in results, in oral and written forms	findings using their		
etc. from their data.	data.	generate simple comparative	relationships.	such as displays and other	subject knowledge.		
		statements.		presentations.			
		Use results to draw simple		➤In their conclusions, children:			
		conclusions, make predictions for		identify causal relationships and			
		new values, suggest improvements		patterns in the natural world from			
		and raise further questions.		their evidence.			
		They draw conclusions based					
		on their evidence and current					
		subject knowledge.					

Year 3 and 4	MA	Year 5 and 6	MA						
	Evaluating and raising further questions and predictions								
Use results to draw simple conclusions; make predictions for new values, suggest improvements and raise further questions.	Following a scientific experience, the children ask further questions which can be answered by	Report and present findings from enquiries, including conclusions, causal relationships in oral and written forms such as displays and other presentations.	• They identify any limitations that reduce the trust they have in their data.						
They identify ways in which they adapted their method as they progressed or how they would do it differently if they repeated the enquiry.	extending the same enquiry.	They evaluate the choice of method used, the control of variables, the precision and accuracy of measurements and the credibility of secondary sources used.							
Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.		Use test results to make predictions to set up further comparative and fair tests.							
Children use their evidence to suggest values for different items tested using the same method e.g. the distance travelled by a car on an additional surface.		Children use the scientific knowledge gained from enquiry work to make predictions they can investigate using comparative and fair tests.							

Year 3 and 4	МА	Year 5 and 6	MA		
Communicating their findings					
Report on findings from enquiries, including oral and	• Use appropriate scientific	Report and present findings from enquiries, including	Use relevant scientific		
written explanations, displays or presentations of	vocabulary confidently	conclusions, causal relationships and explanations of	language and illustrations.		
results and conclusions.	and accurately.	and degree of trust in results, in oral and written forms			
		such as displays and other presentations.			
> They communicate their findings to an audience					
both orally and in writing.		> They communicate their findings to an audience.			