## **Willoughby Whole School Science Progression**

	Skills						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Questioning and enquiry planning	Ask simple questions about the world around us.  Begin to recognise that they can be answered in different ways	Ask questions about the world around us.  Recognise that they can be answered in different ways.	Ask some relevant questions and use different types of scientific enquiries to answer them.  Begin to explore everyday phenomena and the relationships between living things and familiar environments.  Begin to develop their ideas about functions, relationships and interactions.  Begin to raise their own questions about the world around them.  Begin to make some decisions about which types of enquiry will be the best way of	Ask relevant questions and use different types of scientific enquiries to answer them.  Explore everyday phenomena and the relationships between living things and familiar environments.  Begin to develop their ideas about functions, relationships and interactions.  Raise their own questions about the world around them.  Make some decisions about which types of enquiry will be the best way of answering questions.	Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.  Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.  Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.  Begin to recognise scientific ideas change and develop	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.  Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.  Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.  Begin to recognise scientific ideas change and develop over time.	

					Begin to select the	Select the most
					most appropriate	appropriate ways to
					ways to answer	answer science
					science questions	questions using
					using different types	different types of
					of scientific enquiry	scientific enquiry.
	Begin to observe	Observe closely,	Begin to make	Make systematic and	Begin to take	Take measurements,
Observing +	closely, using simple	using simple	systematic and	careful observations	measurements, using	using a range of
	equipment.	equipment. Use	careful observations	and, where	a range of scientific	scientific equipment,
measuring		observations and	and, where	appropriate, take	equipment, with	with increasing
Pattern seeking	Use simple	ideas to suggest	appropriate, take	accurate	increasing accuracy	accuracy and
	observations and	answers to	accurate	measurements using	and precision, taking	precision, taking
	ideas to suggest	questions.	measurements using	standard units, using	repeat readings	repeat readings
	answers to		standard units, using	a range of	where appropriate.	where appropriate.
	questions.	To observe changes	a range of	equipment, including		
		over time and, with	equipment, including	thermometers and	Begin to identify	Identify patterns that
	To observe simple	guidance, begin to	thermometers and	data loggers.	patterns that might	might be found in
	changes over time	notice patterns and	data loggers.	Begin to look for	be found in the	the natural
	and, with guidance,	relationships.		naturally occurring	natural environment.	environment.
	begin to notice		Begin to look for	patterns and		
	patterns and	To say what I am	naturally occurring	relationships and	Begin to make their	Make their own
	relationships.	looking for and what	patterns and	decide what data to	own decisions about	decisions about what
		I am measuring.	relationships and	collect to identify	what observations to	observations to
	To say what I am		decide what data to	them.	make, what	make, what
	looking for and what	To know how to use	collect to identify	Help to make	measurements to	measurements to
	I am measuring. To	simple equipment	them.	decisions about what	use and how long to	use and how long to
	know how to use	safely.		observations to	make them for and	make them for and
	simple equipment		Help to make	make, how long to	whether to repeat	whether to repeat
	safely.	Use simple	decisions about what	make them for and	them.	them.
		measurements and	observations to	the type of simple		
	Use simple	equipment with	make, how long to	equipment that	Choose the most	Choose the most
	measurements and	increasing	make them for and	might be used.	appropriate	appropriate
	equipment with	independence (eg	the type of simple	Learn to use new	equipment and	equipment and
	support (eg hand	hand lenses and egg	equipment that	equipment	explain how to use it	explain how to use it
	lenses and egg	timers)	might be used.	appropriately (eg	accurately.	accurately.
	timers)	Pogin to progress	Loarn to use some	data loggers).	Pogin to interpret	Can interpret data
		Begin to progress	Learn to use some	Can see a pattern in	Begin to interpret	Can interpret data
		from non-standard	new equipment	my results. Can		and find patterns.

	Begin to progress from non-standard units, reading cm, m, cl, l, °C	units, reading mm, cm, m, ml, l, °C	appropriately (eg data loggers).  Begin to see a pattern in my results. Begin to choose from a selection of equipment. Begin to observe and measure accurately using standard units including time in minutes and seconds.	choose from a selection of equipment. Can observe and measure accurately using standard units including time in minutes and seconds.	data and find patterns.  Select equipment on my own.  Can make a set of observations and say what the interval and range are.  Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec Graphs – pie, line	Select equipment on my own.  Can make a set of observations and say what the interval and range are.  Accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec Graphs – pie, line, bar (Year 6)
Investigating	Perform simple tests with support.  To begin to discuss my ideas about how to find things out. To begin to say what happened in my investigation	Perform simple tests. To discuss my ideas about how to find things out.  To say what happened in my investigation.	Set up some simple practical enquiries, comparative and fair tests.  Begin to recognise when a simple fair test is necessary and help to decide how to set it up.  Begin to think of more than one variable factor	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.  Can think of more than one variable factor.	Begin to use test results to make predictions to set up further comparative and fair tests.  Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.  Begin to suggest improvements to my method and give reasons.	Use test results to make predictions to set up further comparative and fair tests.  Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.  Suggest improvements to my method and give reasons.

					Begin to decide when it is appropriate to do a fair test	Decide when it is appropriate to do a fair test.
Recording and reporting findings	Gather and record data with some adult support, to help in answering questions.  Begin to record simple data.  Begin to record and communicate their findings in a range of ways.	Gather and record data to help in answering questions.  Record simple data.  Record and communicate their findings in a range of ways.  Can show my results in a table that my teacher has provided.	Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.  Begin to record findings using simple scientific language, drawings, labelled diagrams, keys bar charts and tables.  Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data.	Gather, record, classify and present data in a variety of ways to help in answering questions.  Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.  Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  Use notes, simple tables and standard units and help to decide how to record and analyse their data.  Can record results in tables and bar charts.	Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.  Begin to report and present findings from enquiries.  Begin to decide how to record data from a choice of familiar approaches.  Begin to choose how best to present data.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.  Report and present findings from enquiries.  Decide how to record data from a choice of familiar approaches.  Can choose how best to present data

			Begin to record results in tables and bar charts.			
Identifying, grouping and classifying	Identify and classify with some support.  To begin to observe and identify, compare and describe.  To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	Identify and classify.  Observe and identify, compare and describe.  Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	Begin to identify differences, similarities or changes related to simple scientific ideas and processes.  Begin to talk about criteria for grouping, sorting and classifying and use simple keys.  Begin to compare and group according to behaviour or properties, based on testing.	Identify differences, similarities or changes related to simple scientific ideas and processes.  Talk about criteria for grouping, sorting and classifying and use simple keys.  Compare and group according to behaviour or properties, based on testing.	Begin to use and develop keys and other information records to identify, classify and describe living things and materials.	Use and develop keys and other information records to identify, classify and describe living things and materials.
Research	To begin to use simple secondary sources to find answers.  To begin to find information to help me from books and computers with help.	Use simple secondary sources to find answers.  Can find information to help me from books and computers with help	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations	Begin to recognise which secondary sources will be most useful to research their ideas	Recognise which secondary sources will be most useful to research their ideas.
Conclusions	Begin to talk about what they have found out and how they found it out.  To begin to say what happened in my investigation.	Talk about what they have found out and how they found it out.  To say what happened in my investigation.	I am beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Am beginning to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in	Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in

To begin to say	To say whether I was	Am beginning to use	Use straightforward	results, in oral and	results, in oral and
whether I was	surprised at the	straightforward	scientific evidence to	written forms such as	written forms such as
surprised at the	results or not.	scientific evidence to	answer questions or	displays and other	displays and other
results or not.	results of flot.	answer questions or	to support their	presentations.	presentations.
results of flot.	To say what I would	to support their	findings.	presentations.	presentations.
To begin to say wh	•	findings.	mangs.	Begin to identify	Identify scientific
I would change ab		midnigs.	With help, look for	scientific evidence	evidence that has
my investigation.	out investigation.	With help, am	changes, patterns,	that has been used	been used to support
my mvestigation.		beginning to look for	similarities and	to support or refute	or refute ideas or
		changes, patterns,	differences in their	ideas or arguments.	arguments.
		similarities and	data in order to draw	lacas or arguments.	argaments:
		differences in their	simple conclusions	Begin to draw	Draw conclusions
		data in order to draw	and answer	conclusions based on	based on their data
		simple conclusions	questions.	their data and	and observations,
		and answer	'	observations, use	use evidence to
		questions.	With support,	evidence to justify	justify their ideas,
			identify new	their ideas, use	use scientific
		With support, am	questions arising	scientific knowledge	knowledge and
		beginning to identify	from the data, make	and understanding to	understanding to
		new questions	new predictions and	explain their findings.	explain their findings.
		arising from the data,	find ways of		
		make new	improving what they	Begin to use test	Use test results to
		predictions and find	have already done.	results to make	make predictions to
		ways of improving		predictions to set up	set up further
		what they have	Can see a pattern in	further comparatives	comparatives and
		already done.	my results.	and fair tests.	fair tests.
		Am beginning to see	Can say what I found	Begin to look for	Look for different
		a pattern in my	out, linking cause	different causal	causal relationships
		results.	and effect.	relationships in their	in their data and
				data and identify	identify evidence
		Am beginning to say	Can say how I could	evidence that refutes	that refutes or
		what I found out,	make it better.	or supports their	supports their ideas.
		linking cause and		ideas.	
		effect.	Can answer		Use their results to
			questions from what	Use their results to	identify when further
			I have found out	identify when further	tests and
				tests and	

			Am beginning to say how I could make it better.		observations are needed.	observations are needed.
			Am beginning to answer questions		Begin to separate opinion from fact. Begin to draw	Separate opinion from fact.
			from what I have found out.		conclusions and identify scientific evidence.	Can draw conclusions and identify scientific evidence.
					Can use simple models. Know which evidence proves a scientific point.	Can use simple models. Know which evidence proves a scientific point.
					Begin to use test results to make predictions to set up further comparative and fair tests.	Use test results to make predictions to set up further comparative and fair tests.
Vocabulary	Use some simple scientific language	Use simple scientific language and some	Begin to use some scientific language to	Use some scientific language to talk and,	Am beginning to read, spell and	Read, spell and pronounce scientific
	Begin to use some science words.	science words.  Use comparative	talk and, later, write about what they have found out.	later, write about what they have found out.	pronounce scientific vocabulary correctly.	vocabulary correctly.  Use relevant
	Use comparative language with support.	language – bigger, faster etc	Begin to use relevant scientific language.	Use relevant scientific language.	Am beginning to use relevant scientific language and illustrations to	scientific language and illustrations to discuss, communicate and
			Begin to use comparative and superlative language.	Use comparative and superlative language.	discuss, communicate and justify scientific	justify scientific ideas.
					ideas.	Can confidently use a range of scientific
					Am beginning to confidently use a range of scientific	vocabulary.  Can use conventions
					vocabulary.	such as trend, rogue

		Am beginning to use conventions such as trend, rogue result, support prediction and - e r word generalisation.  Am beginning to use scientific ideas when describing simple processes.	result, support prediction and - e r word generalisation.  Can use scientific ideas when describing simple processes.  Can use the correct science vocabulary.
		Am beginning to use the correct science vocabulary	