

Skills Progression

Subject area: Science

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	(KS1 skills)	(KS1 skills)	(Lower KS2 skills)	(Lower KS2 skills)	(Upper KS2 skills)	(Upper KS2 skills)
Working	To use the	To use the	To use the following	To use the following	To use the following	To use the following
Scientifically	following	following practical	practical scientific methods,	practical scientific	practical scientific	practical scientific
	practical scientific	scientific methods,	processes and skills –	methods, processes	methods, processes and	methods, processes and
	methods,	processes and skills		and skills –	skills –	skills –
	processes and	with increasing				
	skills (adult	confidence -				
	support may be					
	needed) –					
Questioning and	Ask simple	Ask questions	Ask some relevant	Ask relevant questions	Begin to plan different	Plan different types of
enquiring	questions about	about the world	questions and use different	and use different types	types of scientific	scientific enquiries to
Planning	the world around	around us.	types of scientific enquiries	of scientific enquiries	enquiries to answer	answer questions,
	us.		to answer them.	to answer them.	questions, including	including recognising and
	Begin to	Recognise that			recognising and	controlling variables where
	recognise that	they can be	Begin to explore everyday	Explore everyday	controlling variables	necessary.
	they can be	answered in	phenomena and the	phenomena and the	where necessary.	
	answered in	different ways	relationships between	relationships between		Explore and talk about
	different ways	(different types of	living things and familiar	living things and	Begin to explore and talk	ideas, ask their own
	(diifferent types	enquiry including -	environments.	familiar environments.	about ideas, ask their own	questions about scientific
	of enquiry	observing changes			questions about scientific	phenomena, analyse
	including -	over time, noticing	Begin to develop their ideas	Begin to develop their	phenomena, analyse	functions, relationships and
	observing	patterns, grouping	about functions,	ideas about functions,	functions, relationships	interactions more
	changes over	and classifying,	relationships and	relationships and	and interactions more	systematically.
	time, noticing	carrying out simple	interactions.	interactions.	systematically.	
	patterns,	comparative tests,				Begin to recognise more
	grouping and	finding things out	Begin to raise their own	Raise their own	Begin to recognise some	abstract ideas and begin to
	classifying,	from secondary	questions about the world	questions about the	more abstract ideas and	recognise how these ideas
	carrying out	sources).	around them.	world around them.	begin to recognise how	help them to understand
	simple	I can ask simple			these ideas help them to	how the world operates.
	comparative	questions about	Begin to make some	Make some decisions	understand how the world	
	tests, finding	the world around	decisions about which	about which types of	operates.	Begin to recognise scientific
	things out from	us.	types of enquiry will be the	enquiry will be the best		ideas change and develop

secondary		best way of answering	way of answering	Begin to recognise	over time.
sources).	I can begin to use	questions including	questions including	scientific ideas change and	over time.
Sourcesj.	different types of	observing changes over	observing changes over	develop over time.	Select the most
I can ask a few	enquiry to answer	time, noticing patterns,	time, noticing patterns,	develop over time.	appropriate ways to
simple questions	questions.	grouping and classifying,	grouping and	Begin to select the most	answer science questions
about the world	questions.	carrying out simple	classifying, carrying out	appropriate ways to	using different types of
around us.		comparative and fair tests ,	simple comparative and	answer science questions	scientific enquiry (including
around us.		finding things out using	fair tests, finding things	using different types of	observing changes over
I can begin to use		secondary sources.	out using secondary	scientific enquiry	different periods of time,
some different		secondary sources.	sources.	(including observing	noticing patterns, grouping
types of enquiry			sources.	changes over different	and classifying, carrying out
to answer		I can ask some relevant	I can ask relevant		comparative and fair tests
questions.		questions about the world	questions about the	periods of time, noticing patterns, grouping and	and finding things out using
questions.		around us.	world around us.	classifying, carrying out	a wide range of secondary
		around us.	world around us.	comparative and fair tests	sources of information.)
		I can use some different	Loon was different truess	·	sources of information.)
			I can use different types	and finding things out	Lancas and and ideas and ad-
		types of scientific enquiry	of scientific enquiry to	using a wide range of	I can explore ideas and ask
		to answer questions.	answer questions.	secondary sources of	my own questions about
		Laure la acioneira de el acida	Laur baningian ta	information.)	scientific phenomena.
		I am beginning to decide	I am beginning to	The section of the second section of	Lancate different Lancate
		which type of enquiry is	decide which type of	I am beginning to explore	I can plan different types
		best to answer my	enquiry is best to	ideas and ask my own	of scientific enquiry to
		question.	answer my question.	questions about scientific	answer questions.
				phenomena.	the state of the state
					I can decide which
				I am beginning to plan	variables to control.
				different types of	
				scientific enquiry to	
				answer questions.	
				I am beginning to decide	
				which variables to control.	

Observing and measuring Pattern seeking	Begin to observe closely, using simple equipment.
	Use simple observations and ideas to suggest answers to questions.
	To observe simple changes over time and, with guidance, begin to notice patterns and relationships.
	To say what I am looking for and what I am measuring. To know how to use simple equipment safely.
	Use simple measurements and equipment with support (eg hand lenses and egg timers)
	Begin to progress from non- standard units, reading cm, m, cl, l, °C

egin to observe	Observe closely,
losely, using	using simple
imple	equipment.
quipment.	
	Use observations
lse simple	and ideas to
bservations and	suggest answers to
deas to suggest	questions.

rs to
ons.
To observe changes
over time and, with
guidance, begin to
notice patterns and
relationships.

To say what I am looking for and what I am measuring.
To know how to use simple equipment safely.

Use simple measurements and equipment with increasing independence (eg hand lenses and egg timers)

Begin to progress from non-standard units, reading mm, cm, m, ml, l, °C

I can observe changes over time.

I can begin to

observe changes

I can say what I am

Begin to make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.

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.

Learn to use some new equipment 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 Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.

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.

Learn to use new equipment appropriately (eg data loggers).

Can see a pattern in my results.

Can choose from a selection of equipment.

Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.

Begin to identify patterns that might be found in the natural environment.

Begin to make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately.

Begin to interpret 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

I can make accurate and

Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.

Identify patterns that might be found in the natural environment.

Make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately.

Can interpret data and find patterns.
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)

	I can use some simple equipment eg hand lenses, egg timers. I am beginning to notice patterns.	I am beginning to notice patterns.	I can decide which equipment to use and can use new equipment eg. data loggers. I can look for patterns and relationships.	measurements using standard units eg. mm, cm, m, ml, l, ºC, seconds, minutes, I can decide which equipment to use and can use new equipment eg. data loggers. I can look for patterns and	my own and can explain how to use it accurately.	I can select equipment on my own and can explain how to use it accurately.
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.	relationships. 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.	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.

	I can begin to perform simple tests. I can begin to discuss my ideas. I can begin to say what happened in an investigation.	I can perform simple tests. I can discuss my ideas. I can say what happened in an investigation.	I can set up some simple practical enquiries. Including comparative and fair tests. I am beginning to help decide which variables to keep the same and which to change.	I can set up simple practical enquiries. Including comparative and fair tests. I can help decide which variables to keep the same and which to change.	Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test. I can sometimes set up a range of comparative and fair tests. I am beginning to explain which variables need to be controlled and why. I am beginning to suggest improvements to my test, giving reasons.	Suggest improvements to my method and give reasons. Decide when it is appropriate to do a fair test. I can set up a range of comparative and fair tests. I can explain which variables need to be controlled and why. I can suggest improvements to my test, giving reasons.
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. Can show my	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	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	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	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	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.

	results in a simple table that my teacher has provided. I can begin to collect simple data. I can begin to record data in a table my teacher has provided. I can begin to communicate my findings in a variety of ways.	results in a table that my teacher has provided. I can collect simple data. I can record data in a table my teacher has provided. I can communicate my findings in a variety of ways.	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. Begin to record results in tables and bar charts. I am beginning to collect data in a variety of ways, including labelled diagrams, bar charts and tables. I am beginning to help decide how to record data. I am beginning to communicate findings using simple scientific language.	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. I can collect data in a variety of ways, including labelled diagrams, bar charts and tables. I can help decide how to record data. I can communicate findings using simple scientific language	approaches. Begin to choose how best to present data. I am beginning to record data and results of increasing complexity using — scientific diagrams and labels, classification keys, tables, bar graphs, line graphs I am beginning to choose how best to present data. I am beginning to communicate findings using detailed scientific language.	Can choose how best to present data. I can record data and results of increasing complexity using — scientific diagrams and labels classification keys tables bar graphs line graphs I can choose how best to present data. I can communicate findings using detailed scientific language.
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	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	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,	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	Begin to use and develop keys and other information records to identify, classify and describe living things and materials. I am beginning to use keys and other information records to classify and describe living things, materials and other scientific phenomena.	Use and develop keys and other information records to identify, classify and describe living things and materials. I can use keys and other information records to classify and describe living things, materials and other scientific phenomena. I can develop my own keys and other information

	how to sort and group them. I can begin to identify a variety of objects, materials and living things. I can begin to compare, sort and group a range of objects, materials and living things.	I can identify a variety of objects, materials and living things. I can compare, sort and group a range of objects, materials and living things	l am beginning to talk about and identify differences and similarities in the properties or behaviour of living things, materials and other scientific phenomena. I am beginning to identify simple changes related to simple scientific phenomena. I am beginning to discuss criteria for grouping and sorting and can classify using simple keys.	or properties, based on testing. I can talk about and identify differences and similarities in the properties or behaviour of living things, materials and other scientific phenomena. I can identify simple changes related to simple scientific phenomena. I can discuss criteria for grouping and sorting and can classify using simple keys.	I am beginning to develop my own keys and other information records to classify and describe. I am beginning to identify changes related to scientific phenomena.	records to classify and describe. I can identify changes related to scientific phenomena.
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. I can begin to find information to help me from books, computers and other familiar sources.	Use simple secondary sources to find answers. Can find information to help me from books and computers with help. I can find information to help me from books, computers and other familiar	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations. I can begin to decide when research will help in my enquiry. I am beginning to carry out simple research on my own.	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations. I can begin to decide when research will help in my enquiry. I can carry out simple research on my own.	Begin to recognise which secondary sources will be most useful to research their ideas. I am beginning to recognise which secondary source will be most useful to my research. I can begin to carry out research independently.	Recognise which secondary sources will be most useful to research their ideas. I can recognise which secondary source will be most useful to my research. I can carry out research independently.

		sources.				
Conclusions	Begin to talk	Talk about what		Using results to draw	Am beginning to report	Reporting and presenting
	about what they	they have found	I am beginning to use	simple conclusions,	and present findings from	findings from enquiries ,
	have found out	out and how they	results to draw simple	make predictions for	enquiries , including	including conclusions,
	and how they	found it out.	conclusions , make	new values, suggest	conclusions, causal	causal relationships and
	found it out.	T.	predictions for new values,	improvements and	relationships and	explanations of and degree
	To begin to say	To say what happened in my	suggest improvements and raise further questions.	raise further questions.	explanations of and degree of trust in results,	of trust in results, in oral and written forms such as
	what happened in	investigation.	raise further questions.		in oral and written forms	displays and other
	my investigation.	To say whether I	Am beginning to use	Use straightforward	such as displays and other	presentations.
	To begin to say	was surprised at	straightforward scientific	scientific evidence to	presentations.	presentations.
	whether I was	the results or not.	evidence to answer	answer questions or to	procession and the second	
	surprised at the	To say what I	questions or to support	support their findings.		
	results or not.	would change	their findings.		Begin to identify scientific	Identify scientific evidence
	To begin to say	about my			evidence that has been	that has been used to
	what I would	investigation.			used to support or refute	support or refute ideas or
	change about my		With help, am beginning to	With help, look for	ideas or arguments.	arguments.
	investigation.		look for changes, patterns,	changes, patterns,	Desire to the control of the con-	B
			similarities and differences in their data in order to	similarities and differences in their data	Begin to draw conclusions based on their data and	Draw conclusions based on their data and
	I can begin to talk	I can talk about	draw simple conclusions	in order to draw simple	observations, use	observations, use evidence
	about what I have	what I have found	and answer questions. With	conclusions and answer	evidence to justify their	to justify their ideas, use
	found out.	out.	support, am beginning to	questions. With	ideas, use scientific	scientific knowledge and
			identify new questions	support, identify new	knowledge and	understanding to explain
	I can begin to	I can explain how I	arising from the data, make	questions arising from	understanding to explain	their findings.
	explain how I	carried out my	new predictions and find	the data, make new	their findings.	
	carried out my	enquiry.	ways of improving what	predictions and find		
	enquiry.		they have already done.	ways of improving what	Begin to use test results to	Use test results to make
	t and brade to	I can suggest	And be a simulated to the second	they have already done.	make predictions to set up	predictions to set up
	I can begin to	simple changes to	Am beginning to see a pattern in my results.	Can see a pattern in my	further comparatives and fair tests.	further comparatives and fair tests.
	suggest simple changes to my	my enquiry.	Am beginning to say what I	results.	Tall tests.	Tall tests.
	enquiry.		found out, linking cause	Can say what I found	Begin to look for different	Look for different causal
	11. /		and effect.	out, linking cause and	causal relationships in	relationships in their data
				effect.	their data and identify	and identify evidence that
			Am beginning to say how I		evidence that refutes or	refutes or supports their
			could make it better.	Can say how I could	supports their ideas.	ideas.
			Am beginning to answer	make it better.	Use their results to	Use their results to identify
			questions from what I have		identify when further tests	when further tests and

	found out.	Can answer questions	and observations are	observations are needed.
		from what I have found	needed.	
	I am beginning to draw	out.		Separate opinion from fact.
	simple conclusions based		Begin to separate opinion	
	on the results of my	I can draw simple	from fact.	Can draw conclusions and
	enquiry.	conclusions based on		identify scientific evidence.
		the results of my	Begin to draw conclusions	Can use simple models.
	I am beginning to answer	enquiry.	and identify scientific	Know which evidence
	my questions using the		evidence.	proves a scientific point.
	results of my enquiry.	I can answer my	Can use simple models.	
		questions using the	Know which evidence	Use test results to make
	I am beginning to use my	results of my enquiry.	proves a scientific point.	predictions to set up
	findings to make new			further comparative and
	predictions, suggest	I can use my findings to	Begin to use test results to	fair tests.
	improvements and think of	make new predictions,	make predictions to set up	
	new questions.	suggest improvements	further comparative and	
		and think of new	fair tests.	I can draw scientific, causal
	I am beginning sometimes	questions.		conclusions using the
	to think of cause and effect	1 1	I am beginning to draw	results of an enquiry to
	in my explanations.	I can begin to think of	scientific, causal	justify my ideas
		cause and effect in my	conclusions using the	
		explanations.	results of an enquiry to	I can explain my conclusion using scientific knowledge
			justify my ideas	and understanding.
			I am beginning to explain	and understanding.
			my conclusion using	I can distinguish opinion
			scientific knowledge and	and facts.
			understanding.	and racts.
			anderstanding.	I can use my findings to
			I am beginning to	make predictions and set
			distinguish opinion and	up further enquiries
			facts.	ap rarener enquiries
				I can begin to use abstract
			I am beginning to use my	models to explain my ideas.
			findings to make	, , , , , , , , , , , , , , , , , , , ,
			predictions and set up	
			further enquiries.	
			,	
			I can begin to use abstract	
			models to explain my	
			ideas.	

Vocabulary	Use some simple scientific language Begin to use some science words. Use comparative language with support. I can begin to use simple scientific language. I can begin to describe what I see eg something is long. I can begin to compare eg something is longer or shorter.	Use simple scientific language and some science words. Use comparative language — bigger, faster etc I can use simple scientific language. I can describe what I see. I can compare eg something is longer or shorter.	Begin to use some scientific language to talk and, later, write about what they have found out. Begin to use relevant scientific language. Begin to use comparative and superlative language. I am beginning to use some scientific language in my work. I am beginning to describe my observations and my findings I am beginning to use comparative and superlative descriptions eg longer / shorter than, longest / shortest. I can begin to describe cause and effect.	Use some scientific language to talk and, later, write about what they have found out. Use relevant scientific language. Use comparative and superlative language I can use some scientific language in my work. I can describe my observations and my findings I can use comparative and superlative descriptions eg longer / shorter than, longest / shortest. I can begin to describe cause and effect.	Am beginning to read, spell and pronounce scientific vocabulary correctly. Am beginning to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas. Am beginning to confidently use a range of scientific vocabulary. Am beginning to use conventions such as trend, rogue result, support prediction and -er word generalisation. Am beginning to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary I am beginning to read, spell and pronounce scientific vocabulary correctly. I am beginning to confidently use the correct scientific language when appropriate.	Read, spell and pronounce scientific vocabulary correctly. Use relevant scientific language. And illustrations to discuss, communicate and justify scientific ideas. Can confidently use a range of scientific vocabulary. Can use conventions such as trend, rogue result, support prediction and -er word generalisation. Can use scientific ideas when describing simple processes. Can use the correct science vocabulary I can read, spell and pronounce scientific vocabulary correctly. I can confidently use the correct scientific language when appropriate. I can explain my ideas with scientific reasons. I can use scientific

Year 7 –for information						Year 7 / Level 5
	science can sometimes be dangerous. I can say how science helps us in our daily lives. I can say how science can be dangerous eg electricity can give you a shock.	I can say how science helps us in our daily lives. I can say how science can be dangerous eg electricity can give you a shock.	have made our lives better eg computers in schools, hospitals etc I can begin to understand risk in science	made our lives better eg computers in schools, hospitals etc I understand there is some risk in science	Am beginning to say which parts of our lives rely on science. I am beginning to see how science is useful in lots of different ways. I am beginning to say which parts of our lives rely on science. I am beginning to explain the positive and negative effects of scientific developments.	Can say which parts of our lives rely on science. I can see how science is useful in lots of different ways. I can say which parts of our lives rely on science. I can explain the positive and negative effects of scientific developments
	in our daily lives eg. torches and lights help us see hen it is dark. Am beginning to understand	torches and lights help us see hen it is dark. Am beginning to understand science can sometimes be	Can begin to understand risk in science. I am beginning to know which things in science	Can understand there is some risk in science. I know some things in science which have	Am beginning to explain the positive and negative effects of scientific development. Am beginning to see how science is useful in everyday life.	Can explain the positive and negative effects of scientific development. Can see how science is useful in everyday life.
Understanding	Can begin to talk about how science helps us	Can talk about how science helps us in our daily lives eg.	Begin to know which things in science have made our lives better.	Knows which things in science have made our lives better.	I am beginning to explain my ideas with scientific reasons. I am beginning to use scientific conventions eg trends, rogue result, support prediction. Am beginning to talk about how scientific ideas have changed over time.	conventions eg trends, rogue result, support prediction. Can talk about how scientific ideas have changed over time.

			Can interpret data from a
			variety of formats and
			recognise inconsistencies.
			Can give explanations for
			differences in repeated
			results.
			Can draw valid conclusions
			that use more than one
			piece of supporting
			evidence.
			I can evaluate my work
			and make suggestions for
			improvement.
			Can identify several
			variables and select the
			best one/s to investigate.
			best one, s to investigate.
			Can say why equipment is
			appropriate to the task.
			appropriate to the task.
			Can make suggestions to
			control risk.
			CONTROLLISK.
			Can decide which format is
			best to present data.
			Con was salautifi-
			Can use scientific
			conventions to explain
			abstract ideas.
			Know the difference
			between scientific
			evidence and opinion.
			Understand that people
			have different ideas about
			science.

			Can say how science affects me and other people in different ways. Understands that science can be used in a positive
			and ways. Can use more than one step to describe a process.
			Can explain scientific ideas in a clear and detailed way.
			Can identify strengths and weaknesses in science models and thoughts.