## Working Scientifically Progression

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul> <li>Ask simple questions about the world around us.</li> <li>Begin to recognise that they can be answered in different ways (different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources).</li> <li>I can ask a few simple questions about the world around us.</li> <li>I can begin to use some different types of enquiry.</li> </ul>	<ul> <li>Ask questions about the world around us.</li> <li>Recognise that they can be answered in different ways ( different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources).</li> <li><i>I can ask simple questions about the world around us.</i></li> <li><i>I can begin to use different types of enquiry to answer questions.</i></li> </ul>	<ul> <li>Ask some relevant questions and use different types of scientific enquiries to answer them.</li> <li>Begin to explore everyday phenomena and the relationships between living things and familiar environments.</li> <li>Begin to develop their ideas about functions, relationships and interactions.</li> <li>Begin to raise their own questions about the world around them.</li> <li>Begin to make some decisions about which types of enquiry will be the best way of answering questions including observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests, finding things out using secondary sources.</li> <li><i>I can ask some relevant</i> questions about the world around us.</li> <li><i>I can use some different types</i> of scientific enquiry to answer questions.</li> <li><i>I am beginning to decide</i> which type of enquiry is best to answer my question.</li> </ul>	<ul> <li>Ask relevant questions and use different types of scientific enquiries to answer them.</li> <li>Explore everyday phenomena and the relationships between living things and familiar environments.</li> <li>Begin to develop their ideas about functions, relationships and interactions.</li> <li>Raise their own questions about the world around them.</li> <li>Make some decisions about which types of enquiry will be the best way of answering questions including observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests, finding things out using secondary sources.</li> <li><i>I can ask relevant questions about the world around us.</i></li> <li><i>I can use different types of scientific enquiry to answer questions.</i></li> <li><i>I am beginning to decide which type of enquiry is best to answer my question.</i></li> </ul>	<ul> <li>Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.</li> <li>Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.</li> <li>Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changesover different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)</li> <li>I am beginning to explore ideas and ask my own questions about scientific phenomena.</li> <li>I am beginning to plan different types of scientific phenomena.</li> </ul>	<ul> <li>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.</li> <li>Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.</li> <li>Begin to recognise scientific ideas change and develop over time.</li> <li>Select the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)</li> <li>I can explore ideas and ask my own questions about scientific phenomena.</li> <li>I can decide which variables to control.</li> </ul>

	<ul> <li>Observe closely, using simple equipment.</li> <li>Use observations and ideas to suggest answers to questions.</li> <li>To observe changes over time and, with guidance,</li> </ul>	<ul> <li>Begin to make systematic and careful</li> <li>observations and, where appropriate,</li> <li>take accurate measurements using standard units, using a range of equipment,</li> </ul>	<ul> <li>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data</li> </ul>	<ul> <li>Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>Begin to identify patterns</li> </ul>	<ul> <li>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>Identify patterns that might be found in the natural</li> </ul>
Observing and measuring /Pattern seeking					
		<ul> <li>I can decide which equipment to use and can use new equipment eg. data loggers.</li> <li>I can look for patterns and relationships.</li> </ul>		own and can explain how to use it accurately.	own and can explain how to use it accurately.

Investigating	<ul> <li>Perform simple tests with support.</li> <li>To begin to discuss my ideas about how to find things out.</li> <li>To begin to say what happened in my investigation.</li> <li>I can begin to perform simple tests.</li> <li>I can begin to discuss my ideas.</li> <li>I can begin to say what happened in an investigation.</li> <li>I can begin to say what happened in an</li> <li>investigation.</li> </ul>	<ul> <li>Set up some simple practical enquiries, comparative and fair tests.</li> <li>Begin to recognise when a simple fair test is necessary and help to decide how to set it up.</li> <li>Begin to think of more than one variable factor.</li> <li><i>I can set up some simple practical enquiries. Including comparative and fair tests.</i></li> <li><i>I am beginning to help decide which variables to keep the same and which to change.</i></li> </ul>	<ul> <li>Set up simple practical enquiries, comparative and fair tests.</li> <li>Recognise when a simple fair test is necessary and help to decide how to set it up.</li> <li>Can think of more than one variable factor.</li> <li>I can set up simple practical enquiries. Including comparative and fair tests.</li> <li>I can help decide which variables to keep the same and which to change.</li> </ul>	<ul> <li>Begin to use test results to make predictions to set up further comparative and fair tests.</li> <li>Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.</li> <li>Begin to suggest improvements to my method and give reasons.</li> <li>Begin to decide when it is appropriate to do a fair test.</li> <li>I can sometimes set up a range of comparative and fair tests.</li> <li>I am beginning to explain which variables need to be controlled and why.</li> </ul>	<ul> <li>Use test results to make predictions to set up further comparative and fair tests.</li> <li>Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.</li> <li>Suggest improvements to my method and give reasons.</li> <li>Decide when it is appropriate to do a fair test.</li> <li><i>I can set up a range of comparative and fair tests.</i></li> <li><i>I can explain which variables need to be controlled and why.</i></li> <li><i>I can suggest improvements to my methol and give reasons.</i></li> <li><i>I can set up a range of comparative and fair tests.</i></li> <li><i>I can set up a range of comparative and fair tests.</i></li> <li><i>I can suggest improvements to my my test, giving reasons.</i></li> </ul>
Recording and reporting findings	<ul> <li>Gather and record data with some adult support, to help in answering questions. Begin to record simple data.</li> <li>Begin to record and communicate their</li> <li>findings in a range of ways.</li> <li>Can show my results in a simple table that my teacher has provided.</li> <li>I can begin to collect simple data.</li> <li>I can begin to record data in a table my teacher has provided.</li> <li>I can begin to record data in a table my teacher has provided.</li> <li>I can begin to communicate my findings in a variety of ways.</li> <li>I can begin to communicate my findings in a variety of ways.</li> </ul>	<ul> <li>Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.</li> <li>Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> <li>Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data.</li> <li>Begin to record results in tables and bar charts.</li> <li>I am beginning to collect data in a variety of ways, including labelled diagrams, bar charts and tables.</li> <li>I am beginning to help decide how to record data.</li> <li>I am beginning to help decide how to record data.</li> </ul>	<ul> <li>Gather, record, classify and present data in a variety of ways to help in answering questions.</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>Use notes, simple tables and standard units and help to decide how to record and analyse their data.</li> <li>Can record results in tables and bar charts.</li> <li><i>I can collect data in a variety of ways, including labelled diagrams, bar charts and tables.</i></li> <li><i>I can help decide how to record data</i>.</li> <li><i>I can communicate findings using simple scientific language</i></li> </ul>	<ul> <li>Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</li> <li>Begin to report and present findings from enquiries.</li> <li>Begin to decide how to record data from a choice of familiar approaches.</li> <li>Begin to choose how best to present data.</li> <li><i>I am beginning to record data and results of increasing complexity using – scientific diagrams and labels, classification keys , tables , bar graphs, line graphs</i></li> <li><i>I am beginning to choose how best to present data.</i></li> <li><i>I am beginning to choose how best to present data.</i></li> <li><i>I am beginning to choose how best to present data.</i></li> <li><i>I am beginning to choose how best to present data.</i></li> <li><i>I am beginning to choose how best to present data.</i></li> <li><i>I am beginning to choose how best to present data.</i></li> </ul>	<ul> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</li> <li>Report and present findings from enquiries.</li> <li>Decide how to record data from a choice of familiar approaches.</li> <li>Can choose how best to present data</li> <li>I can record data and results of increasing complexity using – scientific diagrams and labels classification keys tables bar graphs line graphs</li> <li>I can communicate findings using detailed scientific language.</li> </ul>

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

- Begin to talk about what they have found out and how they found it out.
- To begin to say what happened in my investigation.
- To begin to say whether I was surprised at the results or not.
- To begin to say what I would change about my investigation.
- I can begin to talk about what I have found out.
- I can begin to explain how I carried out my enquiry.
- I can begin to suggest simple changes to my enquiry.

- Talk about what they have found out and how they found it out.
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- I can talk about what I have found out.
- I can explain how I carried out my enquiry.
- I can suggest simple changes to my enquiry.

- I am beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- Am beginning to use straightforward scientific evidence to answer questions or to support their findings.
- With help, am beginning to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.
- With support, am beginning to identify new questions arising from the data, make new predictions and find ways of improving what they have already done.
- Am beginning to see a pattern in my results.
- Am beginning to say what I found out, linking cause and effect.
- Am beginning to say how I could make it better.
   Am beginning to answer
- Am beginning to answer questions from what I have found out.
- I am beginning to draw simple conclusions based on the results of my enquiry.
- I am beginning to answer my questions using the results of my enquiry.
- I am beginning to use my findings to make new predictions, suggest improvements and think of new questions.
- I am beginning sometimes to think of cause and effect in my explanations.

- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
   Use straightforward scientific
- Use straightforward scientific evidence to answer questions or to support their findings.
- With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.
- With support, identify new questions arising from the data, make new predictions and find ways of improving what they have already done.
- Can see a pattern in my results.
- Can say what I found out, linking cause and effect.
- Can say how I could make it better.
- Can answer questions from what I have found out.
- I can draw simple conclusions based on the results of my enquiry.
- I can answer my questions using the results of my enquiry.
- I can use my findings to make new predictions, suggest improvements and think of new questions.
- I can begin to think of cause and effect in my explanations.

Am beginning to rapresent findings fr enquiries, includin conclusions, causa relationships and explanations of an trust in results, in written forms such displays and other presentations.

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- Begin to identify s evidence that has to support or refu arguments.
- Begin to draw con based on their dat observations, use justify their ideas, scientific knowled understanding to their findings.
- Begin to use test make predictions further comparat tests.
- Begin to look for o causal relationshi data and identify that refutes or su ideas.
- Use their results t when further test observations are
   Begin to separate
- Begin to separate from fact.
  Begin to draw cor
- and identify scier evidence.
- Can use simple m
- Know which evide a scientific point.
- Begin to use test in make predictions further comparating tests.
- I am beginning to scientific, causal a using the results a enquiry to justify
- I am beginning to conclusion using knowledge and understanding.
- I am beginning to opinion and facts
- I am beginning to findings to make and set up furthe

• I can begin to use abstract models to explain my ideas.

report and	•	Reporting and presenting
from		findings from enquiries,
ding		including conclusions, causal
sal		relationships and
b		explanations of and degree of
and degree of		trust in results, in oral and
n oral and		written forms such as
ch as		displays and other
er		presentations.
	•	Identify scientific evidence
scientific		that has been used to
s been used		support or refute ideas or
ute ideas or		arguments.
	•	Draw conclusions based on
onclusions		their data and observations,
ata and		use evidence to justify their
e evidence to		ideas, use scientific
s, use		knowledge and
dge and		understanding to explain
o explain		their findings.
	-	Use test results to make
rocultate	•	
results to		predictions to set up further
s to set up		comparatives and fair tests.
tives and fair	•	Look for different causal
		relationships in their data
different		and identify evidence that
nips in their		refutes or supports their
/ evidence		ideas.
upports their	•	Use their results to identify
		when further tests and
to identify		observations are needed.
sts and	•	Separate opinion from fact.
needed.	٠	Can draw conclusions and
e opinion		identify scientific evidence.
	•	Can use simple models.
onclusions	•	Know which evidence proves
ntific		a scientific point.
	•	Use test results to make
nodels.		predictions to set up further
lence proves		comparative and fair tests.
	•	I can draw scientific, causal
results to	-	conclusions using the results
s to set up		of an enquiry to justify my
tive and fair		ideas.
	-	I can explain my conclusion
o draw	•	using scientific knowledge
conclusions		
of an	_	and understanding.
oj un my ideas.	•	I can distinguish opinion and
-		facts.
o explain my	•	I can use my findings to make
scientific		predictions and set up further
		enquiries
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o distinguish		models to explain my ideas.
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n my ideas.		

Vocabulary	<ul> <li>Use some simple scientific language</li> <li>Begin to use some science words.</li> <li>Use comparative language with support.</li> <li>I can begin to use simple scientific language.</li> <li>I can begin to describe what I see eg something is long.</li> <li>I can begin to compare eg something is longer or shorter.</li> </ul>	<ul> <li>Begin to use some scientific language to talk and, later, write about what they have found out.</li> <li>Begin to use relevant scientific language.</li> <li>Begin to use comparative and superlative language.</li> <li>I am beginning to use some scientific language in my work.</li> <li>I am beginning to describe my observations and my findings.</li> <li>I am beginning to use comparative and superlative descriptions eg longer /shorter than, longest / shortest.</li> <li>I can begin to describe cause and effect.</li> </ul>	<ul> <li>Use some scientific language to talk and, later, write about what they have found out.</li> <li>Use relevant scientific language.</li> <li>Use comparative and superlative language</li> <li><i>I can use some scientific language in my work.</i></li> <li><i>I can describe my observations and my findings.</i></li> <li><i>I can use comparative and superlative descriptions eg longer / shorter than, longest /shortest.</i></li> <li><i>I can begin to describe cause and effect.</i></li> </ul>	<ul> <li>Am beginning to read, spell and pronounce scientific vocabulary correctly.</li> <li>Am beginning to use relevant scientific language and illustration to discuss, communicate and justify scientific ideas.</li> <li>Am beginning to confidently use a range of scientific vocabulary.</li> <li>Am beginning to use conventions such as trend, rogue result, support</li> <li>prediction and -er word generalisation.</li> <li>Am beginning to use scientific ideas when describing simple processes.</li> <li>Am beginning to use the correct science vocabulary</li> <li><i>I am beginning to read, spell and pronounce scientific vocabulary correctly.</i></li> <li><i>I am beginning to confidently use the correct scientific language when appropriate.</i></li> <li><i>I am beginning to explain my ideas with scientific reasons.</i></li> <li><i>I am beginning to use scientific conventions eg trends, rogue result, support prediction</i></li> </ul>	<ul> <li>Read, spell and pronounce scientific vocabulary correctly.</li> <li>Use relevant scientific language. And illustrations to discuss, communicate and justify scientific ideas.</li> <li>Can confidently use a range of scientific vocabulary.</li> <li>Can use conventions such as trend, rogue result, support prediction and - er word generalisation</li> <li>Can use scientific ideas when describing simple processes. Can use the correct science vocabulary</li> <li><i>I can read, spell and pronounce scientific vocabulary correctly.</i></li> <li><i>I can confidently use the correct science when appropriate.</i></li> <li><i>I can explain my ideas with scientific reasons.</i></li> <li><i>I can use scientific language when appropriate.</i></li> <li><i>I can use scientific language when appropriate.</i></li> <li><i>I can use scientific reasons.</i></li> <li><i>I can use scientific reasons.</i></li> <li><i>I can use scientific reasons.</i></li> </ul>
Understanding	<ul> <li>Can begin to talk about how science helps us in</li> <li>our daily lives eg. torches and lights help us see when it is dark.</li> <li>Am beginning to understand science can sometimes be dangerous.</li> <li>I can say how science helps us in our daily lives.</li> <li>I can say how science can be dangerous eg electricity can give you a shock.</li> <li>Can talk about how science helps us in our daily lives eg. torches and lights help us see when it is dark.</li> <li>Am beginning to understand science can sometimes be dangerous.</li> <li>I can say how science can be dangerous eg electricity can give you a shock.</li> </ul>	<ul> <li>Begin to know which things in science have made our lives better.</li> <li>Can begin to understand risk in science.</li> <li>I am beginning to know which things in science have made our lives better eg computers in schools, hospitals etc</li> <li>I can begin to understand risk in science.</li> </ul>	<ul> <li>Knows which things in science have made our lives better.</li> <li>Can understand there is some risk in science.</li> <li>I know some things in science which have made our lives better eg computers in schools, hospitals etc</li> <li>I understand there is some risk in science.</li> </ul>	<ul> <li>Am beginning to talk about how scientific ideas have changed over time.</li> <li>Am beginning to explain the positive and negative effects of scientific development.</li> <li>Am beginning to see how science is useful in everyday life.</li> <li>Am beginning to say which parts of our lives rely on science.</li> <li>I am beginning to see how science is useful in lots of different ways.</li> <li>I am beginning to say which parts of our lives rely on science.</li> <li>I am beginning to say which parts of our lives rely on science.</li> <li>I am beginning to explain the positive and negative effects of scientific developments.</li> </ul>	<ul> <li>Can talk about how scientific ideas have changed over time.</li> <li>Can explain the positive and negative effects of scientific development.</li> <li>Can see how science is useful in everyday life.</li> <li>Can say which parts of our lives rely on science.</li> <li>I can see how science is useful in lots of different ways.</li> <li>I can say which parts of our lives rely on science.</li> <li>I can say which parts of our lives rely on science.</li> <li>I can say which parts of our lives rely on science.</li> <li>I can explain the positive and negative effects of scientific developments</li> </ul>