

St. Luke's C of E (Aided) Primary School



Science Information 2021-2022

SEPTEMBER 2021

Skills Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning and enquiry	<p>Children should be able to ask simple questions about the world around them.</p> <p>Begin to recognise that questions can be answered in different ways.</p>	<p>Children should be able to develop their questioning when asking questions about the world around them.</p> <p>Recognise that questions can be answered in different ways.</p>	<p>Children should be able to ask some relevant questions and use different types of scientific enquiry to answer them.</p> <p>Begin to explore the relationships between living things and familiar environments.</p> <p>Begin to develop their ideas about the functions, relationships and interactions.</p>	<p>Children should be able to ask relevant questions and use different types of scientific enquiry to answer them.</p> <p>Explore the relationships between living things and familiar environments.</p> <p>Begin to develop their ideas about the functions, relationships and interactions.</p>	<p>Children to begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Begin to explore and talk about their ideas, ask their own scientific questions, analyse functions, relationships and</p>	<p>Children to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Explore and talk about their ideas, ask their own scientific questions, analyse functions, relationships and</p>

			<p>Begin to ask questions about the world around them.</p> <p>Begin to make decisions about which type of enquiry will be the best way of answering the questions raised.</p>	<p>Raise and challenge questions about the world around them.</p> <p>Make decisions about which types of enquiry will be best in answering questions.</p>	<p>interactions more systematically.</p> <p>Begin to recognise some abstract ideas and start to recognise how these ideas enable them to understand how the world operates.</p> <p>Begin to recognise scientific ideas and how they change and develop over time.</p> <p>Begin to select the ways appropriate to answer scientific questions using</p>	<p>interactions more systematically.</p> <p>Begin to recognise more abstract ideas and start to recognise how these ideas enable them to understand how the world operates.</p> <p>Begin to recognise scientific ideas and how they change and develop over time.</p> <p>Begin to select the ways appropriate to answer scientific questions using</p>
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					different types of scientific enquiry.	different types of scientific enquiry.
Observing and measuring Pattern seeking	Children to start making observations 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. Children to say what they are looking for and what they are measuring.	Children to start closely observe 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. Children to say what they are looking for and what they are measuring.	Children to begin to make systematic and careful observations and 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. Children to decide what data to collect to identify them.	Children to make systematic and careful observations and 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. Children to decide what data to collect to identify them.	Begin to make 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 decisions about what observations to make, what measurements to use and how	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

	<p>Children understand how to use simple equipment safely.</p> <p>Use simple measurements and equipment with support.</p> <p>Begin to make progress from non-standard units, to reading cm, m, cl, l.</p>	<p>Children understand how to use simple equipment safely.</p> <p>Use simple measurements and equipment with increasing confidence.</p> <p>Begin to make progress from non-standard units, to reading cm, m, cl, l.</p>	<p>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.</p> <p>Learn to use some new equipment correctly.</p> <p>Begin to see a pattern in the results.</p> <p>Begin to choose from a selection of equipment.</p> <p>Begin to observe and measure accurately using</p>	<p>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.</p> <p>Learn to use some new equipment correctly.</p> <p>Children can identify a pattern in their results.</p> <p>Independently choose from a selection of equipment.</p> <p>Can observe and measure</p>	<p>long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and explain how to use it accurately.</p> <p>Begin to interpret data and find patterns.</p> <p>Children can select equipment on their own.</p> <p>Children can make a set of observations and say what the interval and range are.</p>	<p>long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and explain how to use it accurately.</p> <p>Can interpret data and find patterns.</p> <p>Children can independently select equipment.</p> <p>Children can make a set of observations and say what the interval and range are.</p>
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			standard units including time in minutes and seconds.	accurately using standard units including time in minutes and seconds.	Begin to take accurate and precise measurements e.g. N, g, kg, mm, cm, mins, seconds, m per sec, m/sec. Graphs including pie and line graphs.	Begin to take accurate and precise measurements e.g. N, g, kg, mm, cm, mins, seconds, m per sec, m/sec. Graphs including pie, bar and line graphs.
Investigating	<p>Perform simple tests with support.</p> <p>To begin to discuss my ideas about how to find things out.</p> <p>To begin to say what happened in my investigation.</p>	<p>Perform simple tests.</p> <p>To discuss my ideas about how to find things out.</p> <p>To say what happened in my investigation.</p>	<p>Set up some simple practical enquiries, comparative and fair tests.</p> <p>Begin to recognise when a simple fair test is necessary and help to decide how to set it up.</p>	<p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Recognise when a simple fair test is necessary and help to decide how to set it up.</p>	<p>Begin to use test results to make predictions to set up further comparative and fair tests.</p> <p>Begin to recognise when and how to set up comparative and fair tests and explain which variables</p>	<p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>Recognise when and how to set up comparative and fair tests and explain which variables need to be</p>

			Begin to think of more than one variable factor.	Can think of more than one variable factor.	need to be controlled and why. Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test.	controlled and why, Suggest improvements to my method and give reasons. Decide when it is appropriate to do a fair test.
Recording and reporting findings	Children to gather and record data with some adult support, to help in answering questions. Begin to record simple data. Children to begin to record and communicate	Children to gather and record data to help in answering questions. Children to record simple data. Record and communicate their findings in a range of ways.	Children to 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,	Children to gather, record and begin to classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language,	Children to begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.	Children to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.

	<p>their findings in a range of ways.</p> <p>Can show results in a simple table that the teacher has provided.</p>		<p>drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Begin to report on findings from enquires, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Begin to use notes, simple tables and standard units and help to decide how to record and analyse data.</p>	<p>drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Report on findings from enquires, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use notes, simple tables and standard units and help to decide how to record and analyse data.</p>	<p>Begin to report and present findings from enquiries.</p> <p>Begin to decide how to record data from a choice of familiar approaches.</p> <p>Begin to choose how best to present data.</p>	<p>Report and present findings from enquiries.</p> <p>Decide how to record data from a choice of familiar approaches.</p> <p>Can choose how best to present data.</p>
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			Begin to record results in tables and bar charts.	Can record results in tables and bar charts.		
Identifying, grouping and classifying	<p>Children to identify and classify with some support.</p> <p>To begin to observe and identify, compare and describe.</p> <p>To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</p>	<p>Children to identify and classify.</p> <p>Observe and identify, compare and describe.</p> <p>Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</p>	<p>Children to begin to identify the differences and similarities, or changes related to simple scientific ideas and processes.</p> <p>Begin to talk about criteria for grouping, sorting and classifying and use simple keys.</p> <p>Begin to compare and group according to behaviour or properties, based on testing.</p>	<p>Children to identify the differences and similarities, or changes related to simple scientific ideas and processes.</p> <p>Talk about the criteria for grouping, sorting and classifying and use simple keys.</p> <p>Compare and group according to behaviour or properties, based on testing.</p>	<p>Children to begin to use and develop keys and other information records to identify, classify and describe living things and materials.</p>	<p>Children to use and develop keys and other information records to identify, classify and describe living things and materials.</p>
Research	Children to begin to use simple	Children to use simple secondary	Children to begin to recognise	Children to begin to recognise	Children to begin to recognise	Children to recognise which

	<p>secondary sources to find answers.</p> <p>To begin to find information to help from books and computers with help.</p>	<p>sources to find answers.</p> <p>Can find information to help me from books and computers with help.</p>	<p>when and how secondary source might help to answer questions that cannot be answered through practical investigations.</p>	<p>when and how secondary source might help to answer questions that cannot be answered through practical investigations.</p>	<p>which secondary sources will be most useful to research their ideas.</p>	<p>secondary sources will be most useful to research their ideas.</p>
Conclusions	<p>Children to begin to talk about what they have found and how they have found it out.</p> <p>To begin to say what happened in the investigation.</p> <p>To begin to say what could be changed in the investigation.</p>	<p>Children to talk about what they have found and how they have found it out.</p> <p>To say what happened in the investigation.</p> <p>To say what could be changed in the investigation.</p>	<p>Children begin to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Begin to use straightforward scientific evidence to answer questions</p>	<p>Children to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Use straightforward scientific evidence to answer questions</p>	<p>Children to begin to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p>	<p>Children to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p>

			<p>or support findings.</p> <p>With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>With support, children to begin to identify new questions arising from the data, make new predictions and find ways of improving what has been already done.</p>	<p>or support findings.</p> <p>With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>With support, children to begin to identify new questions arising from the data, make new predictions and find ways of improving what has been already done.</p>	<p>Begin to identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Begin to draw conclusions based on data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</p> <p>Begin to use test results to make predictions to set up further</p>	<p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Draw conclusions based on data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</p> <p>Use test results to make predictions to set up further comparatives and fair tests.</p>
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			<p>Begin to see a pattern in results.</p> <p>Begin to say what has been found out, linking cause and effect.</p> <p>Children begin to ask questions from what they have found.</p>	<p>Patterns should be seen in results.</p> <p>Discussions on what has been found out should take place, linking cause and effect.</p> <p>Identify how things can be made better.</p> <p>Children can answer questions from what they have found.</p>	<p>comparatives and fair tests.</p> <p>Begin to look for different causal relationships in data and identify evidence that refutes or supports ideas.</p> <p>Use results to identify when further tests and observations are needed.</p> <p>Begin to separate fact and opinion.</p> <p>Begin to draw conclusions and identify scientific evidence.</p>	<p>Look for different causal relationships in data and identify evidence that refutes or supports ideas.</p> <p>Use results to identify when further tests and observations are needed.</p> <p>Separate fact and opinion.</p> <p>Can draw conclusions and identify scientific evidence.</p> <p>Can use simple models.</p>
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					<p>Can use simple models.</p> <p>Know which evidence proves a scientific point.</p> <p>Begin to use test results to make predictions to set up further comparative and fair tests.</p>	<p>Know which evidence proves a scientific point.</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p>
Vocabulary	<p>Children can use some simple scientific language.</p> <p>Begin to use some science words.</p> <p>Use comparative language with support.</p>	<p>Children can use simple scientific language and some science words.</p> <p>Use comparative language- bigger, faster etc.</p>	<p>Children to begin to use some scientific language to talk and, later, write about what they have found out.</p> <p>Begin to use relevant scientific language.</p> <p>Begin to use comparative and</p>	<p>Children to begin to use some scientific language to talk and, later, write about what they have found out.</p> <p>Use relevant scientific language.</p>	<p>Children begin to read, spell and pronounce scientific vocabulary correctly.</p> <p>Begin to use relevant scientific language and illustrations to discuss, communicate</p>	<p>Children to read, spell and produce scientific vocabulary correctly.</p> <p>Use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.</p>

			superlative language.	Use comparative and superlative language.	<p>and justify scientific ideas.</p> <p>Begin to confidently use a range of scientific vocabulary.</p> <p>Begin to use conventions such as trend, rogue result, support prediction and –er word generalisation.</p> <p>Begin to use scientific ideas when describing simple processes.</p> <p>Begin to use the correct science vocabulary.</p>	<p>Confidently use a range of scientific vocabulary.</p> <p>Use conventions such as trend, rogue result, support prediction and –er word generalisation.</p> <p>Use scientific ideas when describing simple processes.</p> <p>Use the correct science vocabulary.</p>
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