



# Science

## Year Group Expectations for Working Scientifically Skills (Grid 1)

<b>Year3</b>	<ul style="list-style-type: none"> <li>Observe and record relationships between structure and function (linked to Y3 PoS).</li> <li>Observe and record changes /stages over time (linked to Y3 PoS).</li> <li>Explore / observe things in the local environment / real contexts and record observations (linked to Y3 PoS) – see 'Communicating' section also re links to vocabulary.</li> </ul>	<ul style="list-style-type: none"> <li>Decide ways and give reasons for sorting, grouping, classifying, identifying things / objects, living things, processes or events based on specific characteristics.</li> <li>Compare and contrast and begin to consider the relationships between different things (e.g. structures of plants, functions of plant parts, diets, skeletons of humans and other animals, changes over time, etc.).</li> <li>Record similarities as well as differences (e.g. what do all skeletons have? as well as the differences between skeletons).</li> </ul>	<ul style="list-style-type: none"> <li>Explore their own ideas about 'what if...?' scenarios e.g. humans did not have skeletons.</li> <li>Ask questions such as 'What if we tried...?' or 'What if we changed...?'</li> <li>Begin to understand that some questions can be tested in the classroom and some cannot.</li> <li>Within a group suggest questions that can be explored, observed, tested or investigated further.</li> <li>Within a group suggest relevant questions about what they observe and about the world around them.</li> </ul>	<ul style="list-style-type: none"> <li>Find things out using a range of secondary sources of information (e.g. books, photographs, videos and other technology).</li> </ul>	<ul style="list-style-type: none"> <li>Act out or make a model of something to represent something in the real world using appropriate scientific vocabulary verbally.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to make some decisions about an idea within a group from a list of choices (e.g. let's put them all in a pile first OR I think we should try...).</li> <li>With help; support, listen to and acknowledge others in the group (e.g. Yes. I prefer that one too).</li> <li>Build on / add to someone else's idea. (e.g. we could use x as well as y).</li> <li>Begin to understand that it is okay to disagree with their peers and offer a reason for their opinion.</li> </ul>
<b>Year2</b>	<ul style="list-style-type: none"> <li>Use simple scientific language from the Y2 PoS to talk about / record what they have noticed.</li> <li>Use observations to make suggestions and / or ask questions.</li> <li>Observe and describe simple processes / cycles / changes with several steps (e.g. growth cycle, simple food chain, saying how living things depend on one another).</li> <li>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</li> </ul>	<ul style="list-style-type: none"> <li>Name / identify common examples, some common features or different uses.</li> <li>Sort and group objects, materials or living things by observable and/or behavioural features.</li> <li>Compare and contrast... a variety of things [objects, materials or living things] - focusing on the similarities as well as the differences.</li> </ul>	<ul style="list-style-type: none"> <li>Raise their own logical questions based on or linked to things they have observed.</li> <li>With help / scaffolds, begin to ask questions such as 'What will happen if...?'</li> </ul>	<ul style="list-style-type: none"> <li>Talk about how useful the information source was and express opinion about findings.</li> <li>Make suggestions about who to ask or where to look for information.</li> <li>Ask people questions to help them answer their questions.</li> <li>Use simple and appropriate secondary sources (such as books, photographs, videos and other technology) to find things out / find answers.</li> </ul>	<ul style="list-style-type: none"> <li>Act out something to represent something else about the world around us (e.g a life cycle).</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas in a group and listen to the ideas of others.</li> <li>Work cooperatively with others on a science task making some choices.</li> </ul>
<b>Year1</b>	<ul style="list-style-type: none"> <li>Begin to use simple scientific language (from Y1 PoS) to talk about or record what they have noticed.</li> <li>Use observations to make suggestions and / or ask questions.</li> <li>Look / observe closely and communicate changes over time.</li> <li>Look / observe closely and communicate the features or properties of things in the real world.</li> <li>Observe closely using their senses.</li> </ul>	<ul style="list-style-type: none"> <li>Name / identify common examples and some common features.</li> <li>With help, decide how to sort and group objects, materials or living things.</li> <li>Name basic features of objects, materials and living things.</li> <li>Say how things are similar or different.</li> <li>Compare and contrast simple observable features / characteristics of objects, materials and living things.</li> </ul>	<ul style="list-style-type: none"> <li>Ask simple questions about what they notice about the world around them.</li> <li>Demonstrate curiosity by the questions they ask.</li> </ul>	<ul style="list-style-type: none"> <li>Ask people questions (e.g. an expert or hot-seating).</li> <li>Use simple primary and secondary sources (such as objects, books and photographs) to find things out.</li> </ul>	<ul style="list-style-type: none"> <li>With help, follow movements (dance / drama) to act out their science.</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas in a group and listen to the ideas of others.</li> <li>Work with others on a science task.</li> </ul>
<p><b>EXPLORING / OBSERVING</b> LKS2 - Developing their own ideas and their understanding of the world around them. KS1 - Observing closely Using their observations and ideas to suggest answers to questions.</p>	<p><b>GROUPING AND CLASSIFYING</b> LKS2 - Compare and contrast a variety of examples linked to LKS2 PoS. KS1 - Compare and contrast a variety of examples linked to KS1 PoS.</p>	<p><b>QUESTIONING</b> LKS2 - Asking relevant questions. KS1 - Asking simple questions.</p>	<p><b>RESEARCH</b> LKS2 - Finding things out using a wide range of secondary sources of information. KS1 - Finding things out using secondary sources of information.</p>	<p><b>MODELLING</b> Non Statutory Using dance, drama or a visual aid to represent science in the real world.</p>	<p><b>COLLABORATING</b> Non Statutory Interacting effectively as part of a group.</p>	



# Science

## Year Group Expectations for Working Scientifically Skills (Grid 2)

<p><b>Year 3</b></p>	<ul style="list-style-type: none"> <li>Help to decide about how to set up a simple <b>fair test</b> and begin to recognise when a test is not <b>fair</b>.</li> <li>Make a <b>prediction</b> based on everyday experience.</li> <li>With support / as a group, set up simple practical enquiries including comparative and <b>fair tests</b> e.g. <u>make a choice</u> from a list of a things (variables) to change when conducting a <b>fair test</b>. (e.g. choose which magnets to compare and which method to use to test their strength).</li> <li>As a group, begin to make some <u>decisions</u> about the best way of answering their questions.</li> <li>Find / suggest a practical way to compare things e.g. rocks, magnets.</li> </ul>	<ul style="list-style-type: none"> <li>Collect data from their own observations and measurements using notes / simple tables / standard units.</li> <li>Help to make some decisions about what observations to make, how long to make them for, the type of simple equipment that might be used and how to work safely.</li> <li>Make simple <b>accurate</b> measurements using whole number standard <b>units</b>, using a range of equipment.</li> <li>Gather data in a variety of ways to help in answering questions.</li> <li>Use equipment <b>accurately</b> to improve the detail of their measurements / observations (e.g. microscopes, measuring syringes, measuring cylinders, hand lenses).</li> </ul>	<ul style="list-style-type: none"> <li>Record and present findings using simple scientific language and vocabulary from the Y3 PoS, including discussions, oral and written explanations, notes, annotated drawings, pictorial representations, labelled diagrams, simple tables, bar charts (using scales chosen for them), displays or presentations.</li> <li>With scaffold / support record, and present data in a variety of ways to help in answering questions.</li> <li>Communicate their findings in ways that are appropriate for different audiences. (linked to Y3 PoS).</li> </ul>	<ul style="list-style-type: none"> <li>With scaffold / support, describe and compare the effect of different factors on something (e.g. we noticed that larger magnets are not always stronger).</li> <li>With help, look for changes and simple patterns in their observations, data, chart or graph.</li> <li>Use their results to consider whether they met their <b>predictions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Use their experience and some <b>evidence</b> or results to draw a simple <b>conclusion</b> to answer their original question.</li> <li>Write a simple explanation of why things happened (using the word 'because') and using simple scientific language and vocabulary from the Y3 PoS.</li> </ul>	<ul style="list-style-type: none"> <li>Say whether what happened was what they expected and notice any results that seem odd.</li> <li>Begin to recognise when a test is not <b>fair</b> and suggest improvements.</li> </ul>
<p><b>Year 2</b></p>	<ul style="list-style-type: none"> <li>Carry out simple comparative tests as part of a group, following a <b>method</b> with some independence.</li> <li>Make a simple prediction about what might happen and try to give a vague reason (even though it might not be correct).</li> <li>With support, make suggestions on a <b>method</b> for setting up a simple comparative test.</li> <li>Talk about a practical way to find answers to their questions.</li> </ul>	<ul style="list-style-type: none"> <li>Measure using non-standard and simple standard measures (e.g. cm, time) with increasing accuracy.</li> <li>Begin to make decisions about which equipment to use.</li> <li>Correctly and safely use <b>equipment</b> provided to make observations and/or take simple measurements.</li> </ul>	<ul style="list-style-type: none"> <li>Record and communicate their findings in a range of ways to a variety of audiences.</li> <li>Use simple scientific language with increasing accuracy (from Y2 PoS).</li> <li>Record simple data with some accuracy to help in answering questions:               <ul style="list-style-type: none"> <li>With support or using frameworks, make decisions about how to complete a variety of tables/charts (e.g. a 2 column table, tally charts, Venn diagram, pictograms, block graphs with 1:1 scale).</li> <li>Present findings in a class displays.</li> <li>Sequence / annotate photographs of change over time.</li> </ul> </li> <li>Produced increasingly detailed drawings which are labelled / annotated.</li> </ul>	<ul style="list-style-type: none"> <li>With guidance, begin to notice <b>patterns</b> in their data e.g. order their findings, sequence best to worst, say what happened over time, etc.</li> <li>Recognise if <b>results</b> matched <b>predictions</b> (say if results were what they expected).</li> <li>Use their recordings to talk about and describe what has happened.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to use simple scientific language (from Y2 PoS) to explain what they have found out.</li> <li>Give a simple, logical reason why something happened (e.g. I think... because...).</li> </ul>	<ul style="list-style-type: none"> <li>Begin to discuss if the test was <b>unfair</b>.</li> </ul>
<p><b>Year 1</b></p>	<ul style="list-style-type: none"> <li>With help, carry out a simple test / comparative test.</li> <li>With help, make a simple prediction or suggestion about what might happen.</li> <li>Begin to suggest some ideas e.g. choose which equipment to use, choose which materials to test from a selection.</li> <li>Talk about ways of setting up a test.</li> </ul>	<ul style="list-style-type: none"> <li>Measure using non-standard units e.g. how many lolly sticks / cubes / handfuls, etc.</li> <li>Observe closely, using simple <b>equipment</b> (e.g. hand lenses, egg timers).</li> <li>Use senses to <b>compare</b> different textures, sounds and smells.</li> </ul>	<ul style="list-style-type: none"> <li>Communicate their ideas to a range of audiences in a variety of ways.</li> <li>Complete a pre-constructed table / chart using picture records or simple words.</li> <li>Contribute to a class display.</li> <li>Add annotations to drawings or photographs.</li> <li>Begin to use some simple scientific language from Y1 PoS.</li> <li>Record simple visual representations of observations made.</li> </ul>	<ul style="list-style-type: none"> <li>Use recordings to talk about and describe what happened.</li> <li>Sequence photographs of an event / observation.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to use simple scientific language (from Y1 PoS) to talk about what they have found out or why something happened.</li> </ul>	<ul style="list-style-type: none"> <li>N/A in Y1.</li> </ul>
	<p><b>PLANNING AND TESTING</b> LKS2 - Making decisions about and setting up simple practical enquiries, comparative tests and fair tests. KS1 - Performing simple tests.</p>	<p><b>USING EQUIPMENT AND MEASURES</b> LKS2 - Making accurate measurements and gathering data. KS1 - Using simple equipment and gathering data to help in answering their questions.</p>	<p><b>COMMUNICATING</b> UKS2 / LKS2 / KS1 Reporting findings, recording data, presenting findings. Read, spell and pronounce scientific vocabulary correctly linked to the relevant Year Group.</p>	<p><b>CONSIDERING THE RESULTS OF AN INVESTIGATION / WRITING A CONCLUSION</b> <b>DESCRIBING RESULTS / LOOKING FOR PATTERNS</b> LKS2 - Describing their findings / results. KS1 - Talk about what happened / what they noticed.</p>	<p><b>EXPLAINING RESULTS</b> LKS2 - Reporting on findings saying why something happened. KS1 - Talk about what they found out.</p>	<p><b>TRUSTING RESULTS</b> LKS2 - Suggest improvements for further tests. KS1 - Beginning to spot when a method is not fair.</p>