**Progression of skills in Science**

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| EYFS | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
| Show curiosity about events, people and objects. Question things that are happening around them. | Explore the world around them and raise their own simple questions. | Explore the world around them and raise their own simple questions, share their ideas with others. | Raise their own relevant questions about the world around them. | Raise their own relevant questions about the world around them and begin to look for answers. | Use their science experience to explore ideas and raise questions about the world. | Use their science experience to explore ideas and raise relevant questions of different kinds. |
| Engage in open-ended activity (Playing and Exploring) | Experience different types of science enquiries, including experiments | Experience different types of science enquiries, including practical activities | Be given a range of scientific experiences including different types of scientific enquiry | Be given a range of scientific experiences including different types of scientific enquiry to answer questions | Talk about how different scientific ideas have developed over time | Talk about how different scientific ideas have developed over time giving specific examples |
| Take a risk, engage in new activities and learn by trial and error | Begin to recognise ways in which to answer scientific questions | Begin to recognise different ways in which to answer scientific questions | Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions | Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions and give justifications | Select and plan, with help, the most appropriate type of scientific enquiry they might use to answer questions and give justifications | Select and plan the most appropriate type of scientific enquiry they might use to answer questions and give justifications |
| Find ways to problem solve/new ways of doing things/ test ideas (Creating and Thinking Critically). | Carry out simple tests | Carry out simple tests using some basic equipment | Set up simple practical enquiries, comparative and fair tests. Recognise when a simple fair test is necessary and help decide how to set it up, with help | Set up simple practical enquiries, comparative and fair tests. Recognise when a simple fair test is necessary and help decide how to set it up | Recognise when and how to set up comparative and fair tests. Explain, with help, which variables need to be controlled and why | Recognise when and how to set up comparative and fair tests. Explain which variables need to be controlled and why |
| Develop ideas of grouping, sequences, cause and effect (Creating and Thinking Critically). Know about similarities and differences in relation to places, objects, materials and living things. | Use simple features to compare objects, minerals, materials and living things. With help, decide how to sort and group. | Use simple features to compare objects, minerals, materials and living things. With help, decide how to sort and group them. | Talk about criteria for grouping, sorting and classifying; use simple keys, with some help | Talk about criteria for grouping, sorting and classifying; use simple keys and explain how they should be used | Use and develop keys and other information records to identify, classify and describe living things and materials. Identify patterns that might be found in natural environments | Use and develop more complex keys and other information records to identify, classify and describe living things and materials. Identify patterns that might be found in natural environments |
| Comments or asks questions about the place where they live/immediate environment/natural world | Ask people questions and use simple secondary resources | Ask people questions and use simple secondary resources, select their own, reliable secondary sources | Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations | Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations. Use a selection of resources | Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact. | Recognise which secondary sources will be most useful to research their ideas; separate opinion from fact and give justifications for their reasoning |
| Closely observes what animals/people/vehicles do and uses senses to explore the world | Observe closely using simple equipment to help, with help, observe changes over time. | Observe closely using simple equipment to help. Observe changes over time. | Make systematic and careful observations. 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. | Make systematic and careful observations. Make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. | With help, make decisions about what observations to make, what measurements to use and how long to make them for | Make their own decisions about what observations to make, what measurements to use and how long to make them for |
| Makes links and notice patterns in their experiences | With guidance, begin to notice patterns and relationships | With guidance, begin to notice patterns and relationships | Begin to look for naturally occurring patterns and relationships; begin to decide what data to collect to identify them. | Look for naturally occurring patterns and relationships; decide what data to collect to identify them. | With support, for causal relationships in their data and identify evidence that refutes or supports their ideas | Look for causal relationships in their data and identify evidence that refutes or supports their ideas |
| Choose the resources they need for their activities | Use simple measurements and equipment to gather data | Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data | With help, take accurate measurements using standard units, learn how to use a range of equipment, such as data loggers and thermometers, appropriately. | Take accurate measurements using standard units, learn how to use a range of equipment, such as data loggers and thermometers, appropriately. | Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate. | Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate and give justifications for their choice. |
| Create simple representations of events, people and objects | Record simple data | Record simple data using at least two different methods | Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts, tables. Use standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse the data. | Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts, tables. Select and use the most appropriate standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse the data. | Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. | Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, use multiple methods where appropriate. |
| Make observations of plants and animals; explain why some things occur and talk about changes. Answer ‘how’ and ‘why’ questions about their experiences. | Use their observations and ideas to suggest answers to questions. Talk about what they found out and how they found it out | Use their observations and ideas to suggest answers to questions. Talk about what they found out and how they found it out and offer their own opinions | With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions | With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw accurate conclusions and answer further questions | Identify scientific evidence that has been used to support of refute ideas or arguments. | Identify scientific evidence that has been used to support of refute ideas or arguments, begin to form opinions about validity of these. |
| Develop their own narratives and explanations by connecting ideas or events; build up their vocabulary to reflect the breadth of their experience | With help, record and communicate their findings in a range of ways and begin to use scientific language | With help, record and communicate their findings in a range of ways and begin to use scientific language | Use relevant scientific language to discuss their ideas and communicate their findings, in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions. | Confidently use relevant scientific language to discuss their ideas and communicate their findings, in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions. | With help, use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, use oral and written forms (such as displays and other presentations) to report conclusions, causal relationships and explanations of degree of trust in results. | Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, use oral and written forms (such as displays and other presentations) to report conclusions, causal relationships and explanations of degree of trust in results. |
|  |  |  | With support, they should identify new questions arising from their data, making predictions for new values within or beyond the data they have already collected and finding ways of improving what they have already done | Children should identify new questions arising from their data, making predictions for new values within or beyond the data they have already collected and finding ways of improving what they have already done. | Use their results to make predictions and identify when further observations, comparative and fair tests might be needed. | Use their results to make predictions and identify when further observations, comparative and fair tests might be needed, carry these out where appropriate. |