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|  | |  | **Progression in Science Skills** | |  |  |
| **Working Scientifically** | |  |  | |  |  |
| **Ref** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Testing** | *Perform* **simple tests** (Year 1 focus) e.g.   * Which materials keep things warmest? Know whether the test has been successful and can say what has been learned. | *Perform* **simple**  **comparative and fair tests** (Yr 2 focus) e.g.   * Finding out how seeds grow best | ***Set up* simple practical enquiries, comparative and fair tests** e.g.   * To see which type of   soil is most suitable when growing two similar plants?   * To see if their right hand is as efficient as their left. * Set up a fair test with different variables e.g. the best conditions for a plant to grow. * Can explain to a   partner why a test is a fair one. | ***Set up* simple practical enquiries, comparative and fair tests** e.g.   * Which of two   instruments make the highest or lowest sound? Does a glass of ice weigh more than a glass of water?   * Set up a fair test with more than one variable e.g. using different materials to cut out sound. * Can explain to others why a test is fair e.g. discover how fast ice melts in different temps. | ***Set up* an investigation** when it is appropriate e.g. finding out which materials dissolve or not.  ***Set up* a fair test when needed** e.g.   * Which surfaces   create most friction?  ***Set up* an enquiry-based investigation** e.g.   * Find out what   adults/ children can do now that they couldn’t do when they were a baby.  ***Know* what *variables* are in a given enquiry and can *isolate* each one when investigating.** e.g.   * Finding out how   effective parachutes are  when made with different materials. | ***Know* which type of investigation is needed to suit a particular scientific enquiry** e.g.   * Looking at the   relationship between pulse and exercise.  ***Set up* a fair test when needed** e.g.   * Does light travel in straight lines?   ***Know* how to set up an enquiry-based investigation** e.g.   * What is the   relationship between oxygen and blood? |

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| **Ref** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Scientific questioning** | ***Ask* simple questions** and recognise that they can be answered in different ways e.g.   * Why are flowers different colours? * Why do some animals eat meat and others do not? | ***Ask* simple questions** and recognise that they can be answered in different ways **including use of** **scientific language from the national curriculum** e.g.   * Why do some trees lose their leaves in Autumn and others do not? * How long are the roots of tall trees? * Why do some animals have underground habitats? | ***Ask* relevant questions and use different types of scientific enquiries to answer them** e.g.   * Why does the moon   appear as different shapes in the night sky?   * Why do shadows   change during the day?   * Where does a fossil come from? | ***Ask* relevant questions and use different types of scientific enquiries to answer them** e.g.   * Why are steam and ice the same thing? * Why is the liver important in the digestive system? * What do we mean by pitch when it comes to sound? | ***Plan* different types of scientific enquires to *answer given questions.*** | ***Plan* different types of scientific enquiries to answer *their own or others' questions.*** |
| **Measuring** | ***Use* simple equipment to *observe* closely** (Y1 focus) | ***Use* simple equipment such as thermometers and rain gauges to *observe* closely *changes over time***  (Y2 focus) | ***Make* *systematic* and *careful* *observations* and, where appropriate, *take accurate measurements* using standard units, using a range of equipment, including thermometers and data loggers** (Year 3 focus) | ***Make* *systematic* and careful *observations* and, where appropriate*, take accurate measurements using standard units*, using a range of equipment, including thermometers and data loggers** (Year 4 focus | ***Take measurements* using a range of scientific equipment, with *increasing***  ***accuracy and precision*, taking repeat readings when appropriate** (Y5 maths focus  including capacity and mass) | ***Take measurements*, using a range of scientific equipment, with *increasing***  ***accuracy and precision,* taking repeat readings when appropriate** (Y6 focus including capacity, mass, ratio and proportion) |

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| **Ref** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Gathering and recording** | ***Gather and record data* to help in answering questions** (Year 1 focus) | ***Gather and record data* to help in answering questions including from secondary sources of information *using drawings, labelled diagrams, block graphs or tables.***(Year  2 focus) | ***Gather, record, classify and present data* in a variety of ways to help in answering questions drawings, *labelled diagrams, keys and child-constructed bar charts and tables*** (Year 3 focus) | ***Gather, record, classify and present data* in a variety of**  **ways to help in answering questions *drawings, labelled diagrams, keys and child-constructed bar charts and tables***  (Year 4 focus) | ***Record* data and results of**  **increasing complexity using *scientific diagrams and labels, classification keys,***  ***tables, scatter graphs, bar***  ***and line graphs*** (Year 5 focus) | ***Record* data and results of**  **increasing complexity using *scientific diagrams and labels, classification keys,***  ***tables, scatter graphs, bar***  ***and line graphs*** (Year 6 focus) |
| **Communicating Findings** | ***Make a simple written explanation* about what has been learned from an investigation or what conclusions have been found.** | ***Communicate their ideas,* what they do and what they find out in a variety of ways** e.g. simple written reports or write ups. | ***Report on findings from enquiries,* including *oral* and *written* explanations, *displays* or *presentations* *of results and conclusions***  (Year 3 focus) | ***Report on findings from enquiries,* including *oral* and *written explanations, displays or presentations of***  ***results and conclusions***  (Year 4 focus) | ***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** (Year 5 focus) | ***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** (Year 6 focus) |

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| **Classifying** | ***Identify and classify*** e.g.  Mammals and birds  (Year1 focus) | ***Identify, group and classify* according to a given criteria** e.g. Deciduous and coniferous trees  (Year 2 focus) e.g. using a Venn Diagram | ***Group information* according to common**  **factors** e.g. plants that grow in woodlands/plants that grow in gardens. (Yr 3 focus) e.g. Venn Diagrams with bisecting sets or Carroll Diagrams | ***Group information* according to common factors** e.g. materials that make good conductors or insulators. (Yr4 focus) e.g. Venn Diagrams with bisecting sets or Carroll Diagrams | ***Group and classify* things and *recognise patterns* using appropriate ways of presenting** e.g. classification keys. | ***Group and classify things* and *recognise patterns* using appropriate ways of presenting** e.g. classification keys. |
| **Scientific research** |  |  | **Use research to find out a range of things** e.g.   * How reflection can   help us see things that are around the corner.   * What are the main differences between sedimentary and igneous rocks? | **Use research to find out a range of things** e.g.   * Which materials   make effective conductors and insulators of electricity?   * How much time it   takes to digest our food. | **Find things out using a *wide range* of *secondary***  ***sources* of information** | **Find things out using a *wide range of secondary***  ***sources* of information** |
| **Concluding and questioning** |  | **Use observations and ideas to *suggest answers to questions* noticing similarities, differences and patterns**  (Year 2 focus) | **Use results to *draw simple conclusions, make predictions for new values, suggest improvements and raise further questions***  (Year 3 focus) | **Use results to *draw simple conclusions, make predictions for new values, suggest improvements and raise further questions***  (Year 4 focus) | **Use results to *draw conclusions*. Is *evaluative* when explaining findings from scientific enquiries and is clear about what has happened in recent enquiries and *can relate this to other enquiries where appropriate***  (Year 5 focus) | **Use results *to draw conclusions.* Is *evaluative* when explaining findings from scientific enquiries and is clear about what has happened in recent enquiries and *can relate this to other enquiries where appropriate***  (Year 6 focus) |

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| **Ref** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Using scientific evidence** |  |  | ***Use straightforward scientific evidence* to answer questions or to support findings**  (Year 3 focus) | ***Use straight forward scientific evidence* to answer questions or to support findings**  (Year 4 focus) | ***Identify scientific evidence* that has been used to support or refute ideas or arguments** (Year 5 focus) | ***Identify scientific evidence* that has been used to support or refute ideas or arguments** (Year 6 focus) |