

Working Scientifically Skills Obtaining and Presenting Evidence

Year Group	Key Skills
Nursery	<ul style="list-style-type: none"> • Talk about what they see, using a wide vocabulary. • Compare quantities using language: 'more than', 'fewer than'. • Make comparisons between objects relating to size, length, weight and capacity. • Use some of their print and letter knowledge in their early writing.
Reception	<ul style="list-style-type: none"> • Learn new vocabulary. • Articulate their ideas and thoughts in well-formed sentences. • Describe events in some detail. • Use talk to work out problems and organise thinking and activities. • Explain how things work and why they might happen. • Compare length, weight and capacity. • competently, safely and confidently.
Y1	<ul style="list-style-type: none"> • observes closely (including changes over time), using simple equipment • makes measurements using non-standard units • uses simple secondary sources to find answers, e.g. books, videos, photographs or people • gathers and records simple data to help in answering questions e.g. photograph, drawings • with support, prepares simple tables to record data • with help, records their findings in a range of ways, e.g., pictograms, sorting circles, and templates • talks about their findings using everyday terms, text scaffolds or simple scientific language
Y2	<ul style="list-style-type: none"> • observes closely (including changes over time), using equipment • makes measurements using standard and non-standard units • Can choose and use simple secondary sources to find answers, e.g. books, videos, photographs or people • gathers and records simple data to help in answering questions e.g tables • with some guidance prepares simple tables to record data • with help, records their findings in a range of ways, e.g. tables, diagrams, pictograms, sorting circles, bar charts and templates • talks about their findings with increasing confidence, using everyday terms, text scaffolds or simple scientific language
Y3	<ul style="list-style-type: none"> • beginning to make systematic and careful observation • makes reasonably accurate measurements using standard units (e.g. cm, m, °C, N, g, Kg, ml) using a range of equipment, e.g. Newton meters, measuring jugs. • With support, recognises when and how secondary sources (e.g. books, internet, experts, diagrams) might help answer questions that cannot be answered through practical investigations • Using model frames for support, gathers and records data in a variety of ways to help in answering questions • With support, prepares own format for recording data • makes decisions about how to record and analyse the data • with support, records and presents findings using drawings, labelled diagrams, keys, tally charts, Carroll diagrams, Venn diagrams, bar charts and tables • reports on findings from enquiries, in simple scientific language, using oral and written explanations.
Y4	<ul style="list-style-type: none"> • makes systematic and careful observation • makes accurate measurements using standard units (e.g. cm, m, °C, N, g, Kg, ml) using a range of equipment, e.g. scales, measuring jugs, rulers, thermometers • recognises when and how secondary sources (e.g. books, internet, experts, diagrams) might help answer questions that cannot be answered through practical investigations • gathers and records data in a variety of ways to help in answering questions • prepares own format for recording data • makes decisions about how to record and analyse the data and can give reasons for their decisions • records and presents findings using drawings, labelled diagrams, keys, tally charts, Carroll diagrams, Venn diagrams, bar charts and tables • reports on findings from enquiries, in simple scientific language, using oral and written explanations, displays or presentations of results and conclusions
Y5	<ul style="list-style-type: none"> • takes measurements, in standard units, using a range of scientific equipment, with increasing accuracy and precision • with guidance, takes repeat readings when appropriate • with support recognises which secondary sources will be most useful to research their ideas • begins to separate opinion from fact • with modelled support, records data and results of increasing complexity • decides how to record data from a choice of familiar approaches • with support, calculates mean value where appropriate • records and presents findings using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • reports on findings from enquiries, using relevant scientific language and conventions, in oral and written explanations such as displays and other presentations
Y6	<ul style="list-style-type: none"> • takes measurements, in standard units, using a range of scientific equipment, accurately and precisely • takes repeat readings when appropriate • recognises which secondary sources will be most useful to research their ideas • Separates opinion from fact • records data and results of increasing complexity • decides how to record data • calculates mean value where appropriate • records and presents findings using the most appropriate method. • reports on findings from enquiries, using relevant scientific language and conventions, in a variety of ways, including oral and written presentations.