

Mellers Progression of Scientific Enquiry Skills

| <u>Scientific Attitudes</u> | | <u>Analysis and Evaluation</u> | |
|--|--|--------------------------------|--|
| <u>Year 5 and 6</u> | <ul style="list-style-type: none"> ➤ Take repeat readings, with increasing accuracy and precision and consider degree of trust in results ➤ Identify that scientific evidence may support or refute earlier ideas | <u>Year 5 and 6</u> | <ul style="list-style-type: none"> ➤ Use data to give a scientific conclusion ➤ Use results to set up further enquiry ➤ Suggest improvements to increase degree of trust in results ➤ Report findings from enquiry, including conclusions, causal relationships and explanations |
| <u>Year 3 and 4</u> | <ul style="list-style-type: none"> ➤ Appreciate that big ideas in science have changed over time and continue to do so | <u>Year 3 and 4</u> | <ul style="list-style-type: none"> ➤ Report findings from enquiries in a variety of ways (oral and written, displays or presentations) ➤ Answer questions, giving explanations and evidence ➤ Draw simple conclusions and predictions based on results ➤ Suggest simple improvements |
| <u>Year 1 and 2</u> | <ul style="list-style-type: none"> ➤ Show an awareness that science can be a career path | <u>Year 1 and 2</u> | <ul style="list-style-type: none"> ➤ Use observations to answer questions ➤ Communicate findings using simple scientific language ➤ Notice patterns and relationships |
| <u>EYFS</u> | <ul style="list-style-type: none"> ➤ Be curious about the world around them ➤ Show a willingness to explore and learn about the world | <u>EYFS</u> | <ul style="list-style-type: none"> ➤ Explain why some changes happen ➤ Use simple vocabulary linked to the area of science they have covered |
| <u>Experimental Skills and Investigation</u> | | <u>Measurement</u> | |
| <u>Year 5 and 6</u> | <ul style="list-style-type: none"> ➤ Use test results to make predictions to set up further tests ➤ Plan different types of enquiry to answer questions including recognising and controlling variables when necessary ➤ Take repeated measurements using a range of equipment, considering accuracy and precision ➤ Present data in ways of increasing complexity (using scientific diagrams, classification keys, tables, scatter graphs, bar and line graphs) | <u>Year 5 and 6</u> | <ul style="list-style-type: none"> ➤ Take measurements using a range of scientific equipment, taking repeat readings when appropriate ➤ Solve problems involving the calculation and conversions of units of measure |
| <u>Year 3 and 4</u> | <ul style="list-style-type: none"> ➤ Use results to make predictions for new values ➤ Ask relevant questions ➤ Set up and carry out simple enquiries, comparative and fair tests ➤ Make observations and take measurements using a range of equipment ➤ Present data in a variety of ways (using scientific language, drawings, diagrams, keys, bar charts, tables) | <u>Year 3 and 4</u> | <ul style="list-style-type: none"> ➤ Use standard units when taking measurements ➤ Make careful observations ➤ Use a range of equipment to measure |
| <u>Year 1 and 2</u> | <ul style="list-style-type: none"> ➤ Ask simple questions ➤ Make simple predictions ➤ Perform simple tests ➤ Make observations using simple equipment ➤ Gather and record data (observations, simple tables, drawings and some scientific language). ➤ Identify, classify and sort | <u>Year 1 and 2</u> | <ul style="list-style-type: none"> ➤ Use standard and non-standard units to measure ➤ Use simple measurements and equipment (e.g. egg timers and hand lenses) to gather data. |
| <u>EYFS</u> | <ul style="list-style-type: none"> ➤ Identify similarities and differences ➤ Make visual observations | <u>EYFS</u> | <ul style="list-style-type: none"> ➤ Notice differences between objects including size and length ➤ Handle and use equipment appropriately |