

## Science investigations – ‘working scientifically’

<b>Progression of investigative skills</b>	<b>measuring</b>	<b>Recording and presenting</b>	<b>Fair testing variables</b>	<b>Predictions and conclusions</b>	<b>planning</b>
Y1/2	<p>Use non standard measures and introduce standard measure to the nearest whole unit</p> <p>Introduce repeated measures</p> <p>Recognise if something doesn't fit in a pattern</p>	<p>Teacher specifies recording method, by Y2 drawing own tables</p> <p>Use block graphs and bar charts with labels</p> <p>Record observations clearly</p>	<p>Introduce and discuss variables, record after teacher led</p> <p>Introduce fair test, teacher led</p>	<p>Make predictions that are reasonable</p> <p>Children can explain what their results show</p> <p>Conclusions answer the question asked at the start of the investigation</p>	<p>Plan as a class after discussion ideas</p> <p>Make choices from equipment available</p> <p>Use personal style to explain methods</p> <p>Ask simple questions and recognise they can be answered in different ways</p>
Y3/4	<p>Measuring to the nearest division</p> <p>Use repeated measures and take the median</p> <p>Introduce anomalies and discuss why they might happen</p>	<p>Record using bar charts, drawing and diagrams, keys and tables</p> <p>Begin to make choices with teacher supervision</p> <p>Create basic lines graphs</p> <p>Make systematic and careful observations</p>	<p>Introduce need for a control test</p> <p>Recognise variables and begin to list independently</p> <p>Recognise which variables need to be controlled and why</p>	<p>Make reasonable predictions and begin to justify</p> <p>Draw comparable conclusions using results</p> <p>Compare results with control</p>	<p>Plan in small groups after initial discussion and questioning</p> <p>Make appropriate choices of equipment</p> <p>Begin to use impersonal style to explain method</p> <p>Ask relevant questions</p>
Y5/6	<p>Consistent accuracy with all measures</p> <p>Repeated measures as the norm</p> <p>Find mean average</p> <p>Identify anomalies and give an explanation for them</p>	<p>Independent choice of recording methods</p> <p>Line graphs where appropriate using graph paper</p> <p>Introduce scatter-graphs</p> <p>Report findings from enquiries including conclusions, causal relationships, and degree of trust in results</p>	<p>Use a control test and understand why this is necessary</p> <p>List all possible variables to change</p> <p>Plan and identify fair testing, recognise when a test might not be fair</p>	<p>Justify predictions with scientific understanding</p> <p>Relate conclusions to results and compare with control</p>	<p>Plan independently in small groups, teacher to check before beginning</p> <p>Justify choice of equipment</p> <p>Use impersonal style to explain method</p>