



Progression of Skills in Science: WORKING SCIENTIFICALLY

Year 3	Year 4	Year 5	Year 6
Planning, communication and sources			
<ul style="list-style-type: none"> • Use pictures, writing, diagrams and tables as directed by their teacher • Use simple texts, directed by the teacher, to find information record their observations in written, pictorial and diagrammatic forms • Select the appropriate format to record their observations 	<ul style="list-style-type: none"> • Record observations, comparisons and measurements using tables and bar charts • Begin to plot points to form a simple graph • Use graphs to point out and interpret patterns in their data • Select information from a range of sources provided for them 	<ul style="list-style-type: none"> • Record observations systematically • Use appropriate scientific language and conventions to communicate quantitative and qualitative data • Select a range of appropriate sources of information including books, internet and CD Rom 	<ul style="list-style-type: none"> • Choose scales for graphs which show data and features effectively • Identify measurements and observations which do not fit into the main pattern • Begin to explain anomalous data • Use appropriate ways to communicate quantitative data using scientific language
Enquiring, testing, obtaining and presenting evidence			
<ul style="list-style-type: none"> • Put forward own ideas about how to find the answers to questions • Recognise the need to collect data to answer questions • Carry out a fair test with support • Recognise and explain why it is a fair test • With help, pupils begin to realise that scientific ideas are based on evidence 	<ul style="list-style-type: none"> • With help, pupils begin to realise that scientific ideas are based on evidence • Show in the way they perform their tasks how to vary one factor while keeping others the same • Decide on an appropriate approach in their own investigations to answer questions • Describe which factors they are varying and which will remain the same and say why 	<ul style="list-style-type: none"> • Use previous knowledge and experience combined with experimental evidence to provide scientific explanations • Recognise the key factors to be considered in carrying out a fair test 	<ul style="list-style-type: none"> • Describe evidence for a scientific idea • Use scientific knowledge to identify an approach for an investigation • Explain how the interpretation leads to new ideas
Observing and recording			
<ul style="list-style-type: none"> • Make relevant observations • Measure using given equipment • Select equipment from a limited range 	<ul style="list-style-type: none"> • Carry out measurement accurately • Make a series of observations, comparisons and measurements • Select and use suitable equipment 	<ul style="list-style-type: none"> • Make a series of observations, comparisons and measurements with increasing precision • Select apparatus for a range of tasks 	<ul style="list-style-type: none"> • Measure quantities with precision using fine – scale divisions • Select and use information effectively

	<ul style="list-style-type: none"> • Make a series of observations and measurements adequate for the task 	<ul style="list-style-type: none"> • Plan to use apparatus effectively • Begin to make repeat observations and measurements systematically 	<ul style="list-style-type: none"> • Make enough measurements or observations for the required task
Considering evidence and evaluating			
<ul style="list-style-type: none"> • Begin to offer explanations for what they see and communicate in a scientific way what they have found out • Begin to identify patterns in recorded measurements • Suggest improvements in their work • Evaluate their findings 	<ul style="list-style-type: none"> • Predict outcomes using previous experience and knowledge and compare with actual results • Begin to relate their conclusions to scientific knowledge and understanding • Suggest improvements in their work, giving reasons 	<ul style="list-style-type: none"> • Make predictions based on their scientific knowledge and understanding • Draw conclusions that are consistent with the evidence • Relate evidence to scientific knowledge and understanding • Offer simple explanations for any differences in their results • Make practical suggestions about how their working methods could be improved 	<ul style="list-style-type: none"> • Make reasoned suggestions on how to improve working methods • Show how interpretation of evidence leads to new ideas • Explain conclusions, showing understanding of scientific ideas