

Working Scientifically Key Stage 3 Assessment Criteria

	Year 7	Year 8
<u>“Exceeding”</u> Evaluating Judging Hypothesising Creating	I can describe how to improve accuracy, precision, repeatability and reproducibility. I can accurately make and record observations and measurements, rounding and using decimal places correctly. I can describe random and systematic error. I can evaluate risks. I can create and carry out the most appropriate types of scientific enquires to test predictions. I can estimate the sizes of specimens seen under a microscope. I can explain why hazard symbols are necessary.	I can explain the importance of publishing results and peer review, to enable scientific methods and theories to develop. I can explain the importance of some sampling techniques. I can make some more complex quantitative predictions using scientific knowledge and understanding. I can suggest improvements to methods where reliability may be a concern. I can present reasoned explanations of conclusions from data, in relation to predictions and hypotheses. I can rearrange mathematical equations.
<u>“Securing”</u> Analysing Differentiating Organising Attributing	I can define accuracy, precision, repeatability and reproducibility. I can identify some variables in an investigation (including independent, dependent and control variables where appropriate). I can present observations and data using an appropriate line graph. I can calculate microscope magnifications.	I can evaluate risks and hazards to plan a safe scientific investigation. I can explain the importance of control variables. I can explain how random and systematic errors occur. I can evaluate the reproducibility of an investigation. I can evaluate the reliability of methods and suggest possible improvements.
<u>“Achieving”</u> Applying Executing Inferring Implementing	I can carry out basic data analysis, including simple statistical techniques e.g. mode, median, mean, range bars. I can describe some safety precautions during scientific investigations. I can carry out appropriate types of scientific enquiries to test predictions. I can create predictions using scientific knowledge and understanding. I can use simple equations. I can explain how parts of a microscope work. I can identify scientific, non-scientific and ethical questions. I can recognise common hazard symbols	I can present observations and data using an appropriate line graph. I can recognise that scientific methods and theories develop as earlier explanations. I can create and carry out the most appropriate types of scientific enquires to test predictions I can create tables with headings and units. I can interpret observations and data
<u>“Developing”</u> Interpreting Classifying Summarising Explaining	I can correctly use some SI units. I can follow instructions to conduct a safe scientific investigation. I can make and record simple observations and measurements in a table e.g. using a tally, descriptions or numbers. I can interpret observations and data to identify simple patterns of correlation I can present observations and data using an appropriate table. I can apply simple sampling techniques. I can describe how to make a slide and explain what a coverslip is for. I can name some common hazard symbols.	I can identify some variables in an investigation (including independent, dependent and control variables where appropriate). I can implement accuracy into practical work. I can recognise the importance of repeatability. I can analyse risks. I can analyse observations and measurements. I can use simple equations.

“Emerging” Remembering Recognising Recalling Describing	I can identify some hazards during scientific investigations I can name some SI units. Implementing appropriate techniques and apparatus during lab work. I can state and record observations. I can create a bar chart. I can identify and name some parts of a microscope	I can describe some safety precautions during scientific investigations. I can create predictions using scientific knowledge and understanding. I can apply simple mathematical concepts (means). I can create a table. I can identify patterns and trends. I can use SI units.
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