



Key Stage 3 Science Assessment Grid

	A	B	C	D	E	F	G	H	I
Theory Strand <u>Demonstrate and apply knowledge and understanding of scientific ideas, techniques and procedures</u>	Remember some scientific keywords Name some key scientific principles Identify simple similarities and differences between ideas	State key scientific principles Write a short answer based on scientific fact Complete a sentence or diagram Label a diagram Identify theory in everyday contexts	Describe scientific concepts, recalling some facts, events or processes in an accurate way Define the meaning of some scientific keywords and concepts Choose the most accurate answer from a range of alternatives	Describe and explain scientific concepts, recalling some facts, events or processes in an accurate way Describe some real world examples which demonstrate scientific concepts Compare simple ideas in science	Describe and explain how real world examples apply to scientific concepts Define the meaning of most scientific keywords and concepts Can use simple models to describe scientific concepts	Outline multiple descriptions and explanations of scientific concepts Accurately compare different scientific concepts, outlining similarities and differences with precision	Compare and contrast different scientific concepts using examples to support understanding A breadth and depth of scientific definitions used	Apply scientific knowledge to unfamiliar concepts Describe how scientific evidence can support or disprove scientific ideas Suggest ideas by applying knowledge and understanding to a new situation	Explain how evidence supports accepted scientific ideas or contribute to questions science cannot answer Make connections between abstract ideas
Interpret Strand <u>Analyse information and ideas to interpret and evaluate; make judgements and draw conclusions</u>	Write a simple, scaffolded conclusion Perform a basic calculation with scaffolding	Draw partially complete conclusions from data Perform a basic calculation	Draw simple conclusions from qualitative and quantitative data Write a simple evaluation Identify given data to make simple calculations	Use and quote data to draw conclusions Write an evaluation based on data Make simple predictions based upon data Recall an equation to perform calculations	Outline simple advantages and disadvantages based on simple data Write an evaluation using data to support response Recall multiple equations and mathematical skills to perform calculations	Assess information provided to make conclusions based upon scientific knowledge, making simple predictions Outline advantages and disadvantages, quoting data to support decisions Choose the most appropriate equation to support with a calculation	Analyse qualitative and quantitative data and draw logical conclusions and making predictions Evaluate data using quantitative information to justify reasoning Manipulate data to use in a correct equation	Explain and justify how evidence may have limitations and critically evaluate the use of data to make conclusions Analyse qualitative and quantitative data and draw logical conclusions supported by evidence Attempt multi-step calculations with some degree of success	Explain and justify how both qualitative and quantitative evidence may have limitations and critically evaluate the use of data to make conclusions Use a range of mathematical skills to perform complex, multi-step scientific calculations
Practical Strand <u>Demonstrate knowledge and understanding of investigative science and experimental procedures to obtain results used to make conclusions</u>	Name some pieces of equipment Identify a variable Identify one hazard and its risk Record some data in a table but there may be some inaccuracies Give a simple description of what results show	Name most pieces of equipment required for a specific experiment Identify two variables Write a simple prediction Write a simple method but some information may be missing Make a full set of measurements or observations in a table but there may be some inaccuracies Present data in a graph but with consistent errors Suggest a simple improvement for an experiment	Write a simple method including how to use different pieces of equipment Identify independent, dependent and one control variable Make a full set of measurements or observations in a table Identify a hazard, risk and how to reduce risk Present data in appropriate graph with some labels but with some errors Give a full description of trends or patterns in results	Write a full method including apparatus and variables you will control Prediction includes the independent and dependent variable Identify multiple hazards, their risk and how to reduce risk Identify independent, dependent and multiple control variables Graph has fully labelled axes with mostly accurate points Use data from your table to support your conclusion Suggest an improvement to the practical method or a piece of apparatus	Write a full method including apparatus, variables you will control and how you will make your method repeatable Prediction is supported by correct scientific vocabulary Identify independent, dependent and multiple control variables giving full detail and correct scientific vocabulary Make a full set of measurements in a table with appropriate headings Graph has fully labelled axes and fully accurate plotting	Write a full, repeatable method including appropriate intervals for your independent variable Explain your prediction using your scientific understanding and keywords Make a full set of measurements in a table with appropriate headings and units Graph has fully labelled axes, fully accurate plotting, units and line of best fit or labelled bars Explain your conclusion using your scientific understanding and keywords Suggest an improvement to the practical method or a piece of apparatus and give a reason	Make a full set of repeatable data in a table with appropriate headings and units Carry out mathematical analysis of data accurately, including calculating averages and uncertainties Give a quantitative relationship in your results Identify errors that could be introduced into a given practical Comment on the extent to which data is consistent with a given hypothesis	Justify the choice of different pieces of equipment Identify variables that may be difficult to control Explain why given data is repeatable and precise Give multiple quantitative relationships in your results	Identify errors that could be introduced into a given practical and suggest ways to reduce these Identify variables that may be difficult to control and suggest how to mitigate or monitor these Suggest and explain modifications to a given method to improve validity, repeatability and reproducibility Evaluate limitations in data collected to support a given conclusion



Key Stage 3 Assessment Pathway Plan

Year 7		
Pathway	Assessment Point 1	Assessment Point 2
Foundation (99-)	A	A-B
Intermediate (100-110)	A-B	B-C
Higher (111+)	B-C	C-D

Year 8		
Pathway	Assessment Point 1	Assessment Point 2
Foundation	B-C	B-C
Intermediate	C-D	D-E
Higher	D-E	E-F

Year 9		
Pathway	Assessment Point 1	Assessment Point 2
Foundation	C-D	C-D
Intermediate	E-F	E-F
Higher	F-G	G-H