

Maths in science audit

This resource accompanies the article **Work together for better results** in *Education in Chemistry* which can be viewed at: rsc.li/3O2O7sW

Use the table to audit your confidence in teaching all the components of the mathematical requirements for 11–16 science. Can you identify where in the curriculum you explicitly teach this knowledge? Find ideas on how to use this information and work with colleagues in the maths department in the article.

	Mathematical skill	RAG rating
1	Arithmetic and numerical computation	
	Recognise and use expressions in decimal form	
	Recognise and use expressions in standard form	
	Use ratios, fractions and percentages	
	Make estimates of the results of simple calculations	
2	Handling data	
	Use an appropriate number of significant figures	
	Find arithmetic means	
	Construct and interpret frequency tables and diagrams, bar charts and histograms	
	Understand the principles of sampling as applied to scientific data	
	Understand the terms mean, mode and median	
	Use a scatter diagram to identify a correlation between two variables	
	Make order of magnitude calculations	
3	Algebra	
	Understand and use the symbols: =, <, <<, >>, >, α , \sim	
	Change the subject of an equation	
	Substitute numerical values into algebraic equations using appropriate units for physical quantities	
	Solve simple algebraic equations	
4	Graphs	
	Translate information between graphical and numeric form	

	Understand that $y=mx+c$ represents a linear relationship	
	Plot two variables from experimental or other data	
	Determine the slope and intercept of a linear graph	
	Draw and use the slope of a tangent to a curve as a measure of rate of change	
	Understand the physical significance of area between a curve and the x-axis and measure it by counting squares as appropriate	
5	Geometry and trigonometry	
	Use angular measures in degrees	
	Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects	
	Calculate areas of triangles and rectangles, surface areas and volumes of cubes	