

YEAR 9		KS3 Maths Progress	
TERM	UNIT / LESSON	Core Learning Intentions	Depth Learning Intentions
AUTUMN 1	3 Dealing with data		
Wk 1 04/09/2024	3.1 Planning a survey	Identify sources of primary and secondary data. Choose a suitable sample size and what data to collect. Identify factors that may affect data collection and plan to reduce bias.	Understand that the larger the sample size the more reliable your results, but testing can be time consuming and expensive (or may destroy the product, eg firework testing), so a 10% sample is not always appropriate.
Wk 2 09/09/2024	3.2 Collecting data	Design and use data collection sheets and tables. Design a good questionnaire.	Understand that 'closed' questions eg with tick boxes make questionnaires easier for people to complete, and that reducing options to eg age groups rather than just asking 'age', provides data that is already grouped, and so saves time recording and organising data. Understand that there is not a 'best' type of data collection sheet, but that data collection sheets have to be designed to match each individual questionnaire/survey.
Wk 3 16/09/2024	3.3 Calculating averages	Find the median from a frequency table. Estimate the mean from a large set of grouped data.	Understand the effect on the mean of adding a constant to each value in a data set. Calculate a mean using an assumed mean - and understand when this is more efficient.
Wk 4 23/09/2024	3.4 Displaying and analysing data	Construct and use a line of best fit to estimate missing values. Identify and suggest reasons for outliers in data. Identify further lines of enquiry. Draw line graphs to represent grouped data.	Understand that it is best to draw a line of best fit to predict values from a scatter diagram, and that the closer the points on a scatter diagram are to the line of best fit (ie the stronger the correlation), the more accurate the predictions will be.
Wk 5 30/09/2024	3.5 Presenting and comparing data	Draw back-to-back stem and leaf diagrams. Write a report to show survey results.	Understand how for a given set of data, different types of graph (scatter diagram, pie chart, dual bar chart, line graph, stem and leaf including back to back) or different types of table may highlight different features of the data or may better facilitate comparison of data, i.e. begin to choose appropriate graphs to represent data.
	1 Indices and standard form		
Wk 6 07/10/2024	1.1 Indices	Calculate combinations of indices, fractions and brackets. Use index laws to simplify expressions.	Understand how the sign of a power of a negative number changes the sign of the answer (ie even number powers of a negative number give a positive answer; odd number powers of a negative number give a negative answer). Understand when to insert square brackets and when to insert round brackets in a calculation.
Wk 7 14/10/2024	1.2 Calculations and estimates	Calculate combinations of powers, roots, fractions and brackets. Estimate answers to calculations.	Understand that the relationship between squares and square roots, cubes and cube roots extends to powers of 4, and 4th root etc. for integers and fractions (positive and negative).
	1.3 More indices	Understand negative and 0 indices. Use powers of 10 and their prefixes.	Understand how the rules of indices can be extended to negative powers of products.
	1.4 STEM: Standard form	Write large and small numbers using standard form. Enter and read standard form numbers on your calculator. Order numbers written in standard form.	Understand how to calculate numbers in standard form, e.g. add or subtract two numbers in standard form, or multiply or divide two numbers in standard form.
	2 Expressions and formulae		

Wk 8 21/10/2024	2.1 Solving equations	Write and solve equations with fractions. Write and solve equations with the unknown on both sides.	For solutions to equations that are fractions, understand when to give the solution as a fraction or as a decimal (and when it does not matter). For equations with the unknown on one side, understand that it does not matter which side you 'move' the unknowns too, but if you subtract the smaller term from each side this may often be easier (fewer negatives).
	Half Term		