

YEAR 9 CURRICULUM INFORMATION - SUBJECT

	Autumn 1	Autumn 2
What will students be learning?	Properties of number Factors, multiples, primes Product of prime factors HCF and LCM Venn diagrams Integers, real numbers and rational numbers Introduction to surds Percentages Percentage increase and decrease Percentage change Reverse percentages Repeated percentage change Simple interest Compound interest Area and volume Nets Area of 2d shapes Area and circumference of a circle Surface area of 3D shapes	Equations, inequalities and formulae Solve equations and inequalities -with brackets -with negative numbers -with unknowns on both sides Substitute into formulae and equations Change the subject of a formula Fractions Add and subtract fractions Multiply and Divide fractions Fraction of an amount Rates Speed, distance and time Distance-time graphs Solve flow problems Rates of change and units Converting compound units Standard form Writing and comparing numbers in standard form Multiplying, dividing, adding and subtracting numbers in standard form
How will students be assessed?	2 checkpoint assessments on selected topics.	Trust BASE assessment in November. (2 different tiers)
Literacy – What keywords will be taught?	Factor, multiple, prime, square, cube, root, cube root, product, Venn diagram, integer, surd, rational, irrational, real, increase, decrease, percentage, interest, depreciate, loss, profit, rise, fall, original, initial, compound, net, area, perimeter, unit, circle, diameter, radius, circumference, surface area, volume, length, width, height, perpendicular, parallel	Solve, equation, inequality, expression, represent, brackets, eliminate, substitute, formulae, subject, numerator, denominator, improper fraction, mixed number, speed, distance, time, gradient, constant, rate, compound, standard form, power
What employability skills are being developed?	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians

	• Systems analysts • Actuaries • Accountants • Operational researchers • Chemists • Software engineers • Statisticians Employability skills Interpreting data and justifying validity Explaining and justifying to another person Being able to approximate calculations mentally. Logical reasoning and problem-solving skills Support your opinion with historical data or trends. Use mathematics to help develop solutions to practical problems Supports productions schedules alongside budget Critical thinking Analytical thinking Communication	• Systems analysts • Actuaries • Accountants • Operational researchers • Chemists • Software engineers • Statisticians • Employability skills Interpreting data and justifying validity Explaining and justifying to another person Being able to approximate calculations mentally. Logical reasoning and problem-solving skills Support your opinion with historical data or trends. Use mathematics to help develop solutions to practical problems Supports productions schedules alongside budget Critical thinking Analytical thinking Communication
Wider Curriculum Links?	Art and Design and Maths Multicultural designs like rangoli patterns Ratio is used to mix paints to make secondary colours (primary colours are red, yellow and blue. English and Maths Spelling mathematical vocabulary and use in correct context/sentence. To reason or explain mathematical thinking and to justify their conclusion. Solving comprehension and extracting key information. Design and technology Reading and using scales Proportion and ratio in recipes	

	Nutritional information Geography and maths Collecting and representing data Grid references, coordinates and bearing Using scale on ordnance survey maps Computing and Maths Angles and direction using apps/programming. Information using excel Foreign language and Maths Numbers used calculations/ times tables/time Music and Maths Time and speed represented by tempo, chord progression , form and meter. Equivalent fractions using musical notation eg a semibreve last for four crochet beats. A minim last for two crochet beats, so a minim is half a semibreve. History and Maths Historical timelines as a key aspects of maths Interpreting graphs and data Physical education and maths Times distance and speed Averages to discuss athletes performance.		
What useful websites are there for this topic?	<table> <tr> <td data-bbox="434 1201 1288 1498"> Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps): </td><td data-bbox="1288 1201 2148 1498"> Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps): </td></tr> </table>	Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps):	Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps):
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	www.mathsapps.com/ Brainbashers (games and puzzles): www.brainbashers.com/puzzles.asp Funbrain (puzzles & games): www.funbrain.com/ Hellam (puzzles & games): www.mathematics.hellam.net/ www.mathsgenie.co.uk www.mathsbot.com	www.mathsapps.com/ Brainbashers (games and puzzles): www.brainbashers.com/puzzles.asp Funbrain (puzzles & games): www.funbrain.com/ Hellam (puzzles & games): www.mathematics.hellam.net/ www.mathsgenie.co.uk www.mathsbot.com
What wider reading could be done for this topic?	KS3 Maths Revision and Practice by CGP books	KS3 Maths Revision and Practice by CGP books
What else can students be doing independently to develop their understanding of this topic?	The following workbooks and revision guides are available for you to purchase on Parentpay: • Key Stage Three Mathematics Higher Level: Complete Revision and Practice Workbook (includes answers) by CGP • Key Stage Three Mathematics Foundation Level: Complete Revision and Practice Workbook (includes answers) by CGP You can also access additional Maths resources via the school website	The following workbooks and revision guides are available for you to purchase on Parentpay: • Key Stage Three Mathematics Higher Level: Complete Revision and Practice Workbook (includes answers) by CGP • Key Stage Three Mathematics Foundation Level: Complete Revision and Practice Workbook (includes answers) by CGP You can also access additional Maths resources via the school website