

Starlings Maths - Autumn Term 1&2

Key Stage/Year	Upper KS4
Approximate Number of Lessons and Term	Autumn Term 1 - 30 Autumn Term 2 - 40
Qualification/Exam (if applicable)	GCSE Foundation Maths

Consideration of prior learning	Work following SOW for previous classes from previous academic year, differentiation within the topic to provide for both lower and higher achievers
How will learners' knowledge, skills and understanding be checked at the start of the unit?	Teacher has already taught this group so knows each individual learners' strengths and areas for development

How will learners' knowledge, skills and understanding be checked at the end of the unit?	Assessment tests covering topics covered in both terms and scores entered into Academic Tracker GCSE mock papers as part of assessment to allow familiarity with question type, length of paper and first of questions
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Learning Outcome	Approx. No. of Lessons	Potential Activities	Behaviour/Safety/Personal Development/SMSC Opportunities
Percentages	5	Percentage of an amount Reverse calculations - finding the missing amount Key fraction, decimals and percentages of amounts with and without a calculator Chrome book practise using My Maths activities	Key percentages in real life- tax etc Mental calculations Shopping Money - saving and borrowing
Direct and inverse proportion	5	Direct proportion Conversion graphs Inverse proportion Ratio - part and whole Best buy problems My Maths activities	Examples where 1 quantity increases and so does the other and vice versa in real life Fair sharing Value for money and the cost of living crisis
Algebra	15	Forming expressions Brackets Inequalities Formulae Rearranging formulae 1 and 2 step	Well known formulae in real life
Revision and assessment	5	My Maths practice Assessment test and or mock GCSE papers	Working in exam conditions Time pressure Checking work Managing anxiety
Rates	5	Speed, distance and time calculations with and without a calculator Distance-time graphs	Relationship with science and PE Using graphs to calculate useful information when travelling

		Density, mass and volume	Importance of these quantities in building and engineering
Pythagoras	5	Identify hypotenuse Calculate hypotenuse Calculate other sides in right angled triangle	The value of right angle triangles in structures
Trigonometry	5	Sine, cosine and tangent ratios Find missing sides Find missing angles Selection of appropriate method to solve right angled triangle questions Key angle ratios	Who uses trigonometry in their jobs and why?
Equations and inequalities	5	1 and 2 step equations and inequalities Representing inequalities on a number line	When greater than or less than is useful
Quadratics	5	Plot and read from quadratic graphs Identify and interpret roots and intercepts Factorisation of quadratics	Real life examples of quadratics
Ratio and proportion	5	Link between ratio and fractions Link ratios and graphs Use ratio to solve problems	Difference between ratio and proportion in real life What can be shown on a graph
Collecting and representing data	5	Frequency tables Frequency polygons Line and bar charts Time series graphs Stem and leaf diagrams	Different/ best way of representing data to give clearest information

Assessment	5	GCSE mock papers - non calculator and calculator	Exam conditions Using time Checking Coming back to things again

<p>Possible Adaptations for Higher and Lower Achievers</p>	<p>Higher achievers - larger and more complex numbers, worded problems, creating their own questions for partner to solve, development of checking strategies, more challenging tasks set on My Maths</p> <p>Lower achievers - Sums set out more clearly and spaced more widely, scaffolding provided in terms of step by step approach, creating question for an answer provided to promote thinking, further consolidation of key skills using My Maths or lower level worksheets from WRM</p>
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