

# The Spires College Mathematics Department Scheme of Learning

## Spring Term 1 [January to February] – MathsWatch Clips

	<b>Topic 1</b> MathsWatch Clips	<b>Topic 2</b> MathsWatch Clips	<b>Topic 3</b> MathsWatch Clips
<b>Year 7</b>	<b>Addition &amp; Subtraction</b>  N3a - Adding Integers - Mentally N3b - Adding Integers - Written Method N7c - Units - Money N13a - Addition - Integers (Harder Questions) N13b - Addition - Decimals N14b - Subtraction - Decimals N21a - Real-Life Tables - Distance Tables N21b - Real-Life Tables - Timetables	<b>Multiplication &amp; Division</b>  N7a - Units - Length, Mass and Capacity N11 - Multiples N15a - Short Multiplication - Integers N16 - Short Division of Integers N17a - Multiplying and Dividing by Powers of 10 - Integers N17b - Multiplying and Dividing by Powers of 10 - Decimals N20 - BODMAS N28a - Long Multiplication - Integers N28b - Long Multiplication - Decimals N29a - Long Division - Integers N29b - Long Division - Decimals A7a - Algebraic Simplification - Multiplication A7b - Algebraic Simplification - Division G20a - Area - Rectangles G20b - Area - Parallelograms G20c - Area - Triangles G20d - Area - Trapeziums S7 - The Mean Average	<b>Fractions &amp; Percentages of Amounts</b>  N24b - Percentages - Percentage of an Amount N33 - Fraction of an Amount
<b>Year 8</b>	<b>Brackets, Equations &amp; Inequalities</b>  A2 - Algebraic Vocabulary A4 - Algebraic Notation A7a - Algebraic Simplification - Multiplication A7b - Algebraic Simplification - Division A8 - Expanding Brackets A9 - Factorisation A18 - Expanding Brackets - Harder Questions A20b - Inequalities - Solving	<b>Sequences</b>  N12 - Number Patterns A11a - Sequences - Term-to-Term Rule A11b - Sequences - Position-to-Term Rule A22 - Special Sequences	<b>Indices</b>  N25 - Powers and Roots

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<b>Year 9</b>	<b>Numbers</b>	17 - Adding Integers and Decimals 18 - Subtracting Integers and Decimals 19 - Multiplying Integers 20 - Dividing Integers 71a - Adding and Subtracting Fractions - A Standard Method 71b - Adding and Subtracting Fractions - An Alternative Method 73 - Multiplying Fractions 74 - Dividing Fractions 79 - Highest Common Factor (HCF) 83 - Standard Form	<b>Using Percentages</b>	85 - Fractions, Percentages, Decimals 86 - Percentage of an Amount (Calc.) 87 - Percentage of an Amount (Non-Calc.) 88 - Change to a Percentage (Calc.) 89 - Change to a Percentage (Non-Calc.) 108 - Increase/Decrease by a Percentage 109 - Percentage Change 110 - Reverse Percentage Problems	<b>Maths &amp; Money</b>	22a - Money Questions - Non-Calculator Questions 22b - Money Questions - Calculator Questions 105 - Exchanging Money 111 - Simple Interest 164 - Compound Interest and Depreciation
<b>Year 10</b>	<b>Angles &amp; Bearings</b>	4 - Reading Scales 120 - Angles and Parallel Lines 124 - Bearings 150a - Pythagoras' Theorem - A Simple Approach 168 - Trigonometry	<b>Circles</b>	116 - Circle Definitions 117 - Area of a Circle 118 - Circumference of a Circle 119 - Volume of a Prism 149 - Tangents, Arcs, Sectors and Segments 167 - Sectors of a Circle 169 - Spheres 171 - Cones	<b>Ratios &amp; Fractions</b>	38 - Introduction to Ratio 41 - Value for Money 105 - Exchanging Money 106 - Sharing using Ratio 107 - Ratios, Fractions and Graphs 144 - Similar Shapes 165a - Ratio Questions - Standard Questions 165b - Ratio Questions - Questions with Overlap 165c - Ratio Questions - Ratios, Fractions, Equations 200a - Ratio Questions - Standard Questions 200b - Ratio Questions - Ratios to Equations 200c - Ratio Questions - Equations to Ratios 201 - Similarity - Area and Volume

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## Spring Term 2 [February to March] – MathsWatch Clips

	<b>Topic 1</b> MathsWatch Clips		<b>Topic 2</b> MathsWatch Clips		<b>Topic 3</b> MathsWatch Clips	
<b>Year 7</b>	<b>Directed Number &amp; Equations</b>	N2a - Ordering Numbers - Integers N18 - Negatives in Real-Life N19a - Directed Numbers - Adding and Subtracting N19b - Directed Numbers - Multiplying and Dividing N20 - BODMAS N25 - Powers and Roots A12 - Solving Basic Equations	<b>Adding &amp; Subtracting Fractions</b>	N23b - Introduction to Fractions - Equivalent Fractions N35 - Improper Fractions and Mixed Numbers N36 - Fractions - Adding and Subtracting N41 - Further Fractions - Adding and Subtracting		
<b>Year 8</b>	<b>Fractions &amp; Percentages</b>	N32 - Fractions, Decimals and Percentages N39a - Percentages - Change to a Percentage N39b - Percentages - Comparing Quantities R3 - Expressing Quantities as Fractions R9a - Increase/Decrease by a Percentage - Basics R9b - Increase/Decrease by a Percentage - Multiplier R12 - Original-Value Problems	<b>Standard Form</b>	N45a - Standard Form - Numbers Above 1 N45b - Standard Form - Numbers Between 0 and 1	<b>Number Sense</b>	N7a - Units - Length, Mass and Capacity N7b - Units - Time N7c - Units - Money N21a - Real-Life Tables - Distance Tables N21b - Real-Life Tables - Timetables N27a - Rounding - Nearest 10, 100, 1000 N27b - Rounding - Decimal Places N38 - Rounding - Significant Figures N43a - Estimating Answers - Multiplication N43b - Estimating Answers - Division R2 - Unit Conversions
<b>Year 9</b>	<b>Deduction</b>	120 - Angles and Parallel Lines 121 - Angles in a Triangle 122 - Properties of Special Triangles 145a - Constructing Perpendiculars - Bisecting a Line 145b - Constructing Perpendiculars - From any Point 145c - Bisecting an Angle 147 - Draw a Triangle Using Compasses	<b>Rotation &amp; Translation</b>	11 - Symmetries 48 - Reflections 49 - Rotations 50 - Translations 182 - Combinations of Transformations	<b>Pythagoras' Theorem</b>	81 - Squares, Cubes and Roots 150a - Pythagoras' Theorem - A Simple Approach 150b - Pythagoras' Theorem - An Algebraic Approach 150c - Pythagoras' Theorem - Line on a Graph 217 - Pythagoras in 3D

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<b>Year 10</b>	<b>Vectors</b>	174 - Introduction to Vectors	<b>Percentages &amp; Interest</b>	40 - Introduction to Percentages 85 - Fractions, Percentages, Decimals 86 - Percentage of an Amount (Calc.) 87 - Percentage of an Amount (Non-Calc.) 88 - Change to a Percentage (Calc.) 89 - Change to a Percentage (Non-Calc.) 108 - Increase/Decrease by a Percentage 109 - Percentage Change 110 - Reverse Percentage Problems 111 - Simple Interest 164 - Compound Interest and Depreciation 180 - Iterative Processes	<b>Probability</b>	59 - Calculating Probabilities 60 - Mutually Exclusive Events 61 - Two-Way Tables 125 - Experimental Probabilities 126 - Possibility Spaces 127a - Venn Diagrams - Introduction 127b - Venn Diagrams - Notation 151 - Simple Tree Diagrams 175 - Harder Tree Diagrams 185 - Probability using Venn Diagrams 204 - 'And' and 'Or' Probability Questions
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