

**Oral/Mental starter:** mental strategies, rapid recall, estimating, visual imagery, problem solving, explaining methods etc. are all covered in the left-hand page for each spread and enhanced by teacher input (with relevant mental questions in the Teacher's Resource). *The calculations policy is to be covered regularly in lessons in the form of starters/plenaries and embedded into other topics*

CHAPTE R	TOPIC	CONTENT	OBJECTIVES: pupils will be taught to . .
1	Whole numbers and decimals	Place value and decimal numbers Multiply and divide by 10 100 or 1000 Negative numbers <del>Mental addition and subtraction</del> Written addition and subtraction Calculator methods (Bracket and negative keys)	<ul style="list-style-type: none"> <li>Understand place value in decimal numbers</li> <li>Order decimals and negative numbers</li> <li>Multiply and divide by powers of ten</li> <li>Add, subtract, multiply and divide negative numbers</li> <li>Use appropriate mental and written methods to add and subtract decimals</li> <li>Interpret and use a calculator effectively</li> </ul>
2	Measures, perimeter and area	Units of measurement Converting between units Perimeter and area of a rectangle Perimeter and area of a triangle Area of a parallelogram and trapezium Surface area of a cuboid Volume of a cuboid	<ul style="list-style-type: none"> <li>Find the perimeter and area of a rectangle and triangle</li> <li>Find the area of a parallelogram and trapezium</li> <li>Know, use and convert between metric and imperial units</li> <li>Find the surface area and volume of a cuboid</li> </ul>
<b>Revision and Half Term Assessment 1 To be completed after chapter 3</b>			
<b>Homework to be used for revision.</b>			
<b>1 lesson on Numeracy revision and 1 lesson revision techniques, 1 lesson on test, 1 feedback..</b>			
<b>NOTE: In order to complete Chapter 3 – Expressions and Formulae, you will need to allocate the remaining extra lessons of this half term to starting the material covered</b>			
<b>HALF TERM</b>			
3	Expressions and formulae	Using letter symbols Collecting like terms Expanding brackets Using a formula Writing a formula Further substitution Further simplification Simplification and division	<ul style="list-style-type: none"> <li>Use letter symbols, collect like terms and expand brackets</li> <li>Use and derive a formula</li> <li>Substitute numbers into a range of expressions</li> <li>Simplify expressions that involve brackets, powers and division</li> </ul>
4	Fractions, decimals and percentages	Fraction notation Adding and subtracting fractions Decimals and fractions Fraction of a quantity Percentages Fractions, decimals and percentages	<ul style="list-style-type: none"> <li>Use fraction notation and simplify fractions</li> <li>Add and subtract fractions</li> <li>Change between fractions, decimals and percentages</li> <li>Find fractions and percentages of amounts</li> </ul>
5	Angles and 2D shapes	Calculating angles Angles and parallel lines	<ul style="list-style-type: none"> <li>Know and use facts about the angles around a point, on a straight line and in a right angle</li> <li>Know and use facts about angles in triangles and quadrilaterals</li> </ul>

		Angles in triangles and quadrilaterals Properties of triangles Properties of quadrilaterals Properties of polygons	<ul style="list-style-type: none"> <li>Know and use facts about angles that are formed when a line intersects parallel lines</li> <li>Name and recognise properties of different types of triangles, quadrilaterals and polygons</li> </ul>
<b>Revision and Half Term Assessment 2</b> <b>To be completed after chapter 6</b> <b>1 lesson on Numeracy revision and 1 lesson revision techniques, 1 lesson on test, 1 feedback..</b> <b>Homework to be used for revision.</b>			
<b>CHRISTMAS</b>			

**MYMATHS: BOOK 1C - YEAR 7 SCHEME OF WORK**

**LEVELS 4 TO 7**

**SPRING**

CHAPTER	TOPIC	CONTENT	OBJECTIVES: pupils will be taught to . .
6	Graphs	Coordinates Plotting horizontal and vertical lines Plotting straight-line graphs The equation of a straight line Real-life graphs <del>Line graphs for time series</del>	<ul style="list-style-type: none"> <li>Plot coordinates, including on negative axes</li> <li>Plot and recognise graphs for horizontal and vertical lines</li> <li>Plot straight-line graphs</li> <li>Understand graphs which describe real-life situations including time series</li> </ul>
7	Whole numbers and calculations	Rounding Order of operations <del>Mental methods of multiplication and division</del> Written methods of multiplication Written methods of division Calculator methods (using square and square root)	<ul style="list-style-type: none"> <li>Round whole numbers and decimals</li> <li>Do calculations in the correct order</li> <li>Use mental and written methods of multiplication and division</li> <li>Use a calculator for a range of calculations</li> </ul>
8	Statistics	Types of data and averages The mean Frequency tables Bar charts Pie charts <del>Collecting data</del> <del>Designing a questionnaire</del> Grouping data Comparing data	<ul style="list-style-type: none"> <li>Recognise and describe different kinds of data</li> <li>Find the mean, median, mode and range for raw data and data in a frequency table</li> <li>Construct and understand different types of bar charts and pie charts</li> <li>Create suitable data collection sheets</li> <li>Write questions which are clear, unbiased and easy to answer</li> <li>Collect discrete and continuous data in a grouped frequency table and find the modal class</li> <li>Compare sets of data</li> </ul>

**Revision and Half Term Assessment 3**    **To be completed after chapter 9.**

**1 lesson on revision techniques, 1 lesson on test, 1 lesson**

feedback. Homework to be used for revision.

### HALF TERM

9	Transformations and symmetry	Reflection Rotation Symmetry Translation Enlargement Tessellations	<ul style="list-style-type: none"> <li>• Draw and describe reflections, rotations and translations</li> <li>• Recognise and describe reflectional symmetry and rotational symmetry</li> <li>• Draw and describe enlargements that use positive whole number scale factors</li> <li>• Make tessellations by reflecting, rotating and translating a shape</li> </ul>
10	Equations	Solving equations (focus on answering two-step equations) Unknowns on both sides Further equations Constructing equations	<ul style="list-style-type: none"> <li>• Use inverse operations to solve one-step and two-step equations</li> <li>• Solve equations with brackets and with an unknown on both sides</li> <li>• Write equations to describe different situations and then solve them</li> </ul>

Revision and Half Term Assessment 4  
Homework to be used for revision.

To be completed after chapter 11.

1 lesson on Numeracy revision and 1 lesson revision techniques, 1 lesson on test, 1 feedback.

### EASTER

MYMATHS: BOOK 1C - YEAR 7 SCHEME OF WORK

LEVELS 4 TO 7

SUMMER

CHAPTE R	TOPIC	CONTENT	OBJECTIVES: pupils will be taught to . .
11	Factors and multiples	Squares and square roots Factors and multiples Prime factors <del>Divisibility tests</del> LCM and HCF using prime factors	<ul style="list-style-type: none"> <li>• Find squares and square roots of whole numbers with and without a calculator</li> <li>• Use factors and multiples to find the HCF and LCM of numbers</li> <li>• Write a whole number as the product of its prime factors</li> <li>• <del>Use tests of divisibility to find factors and to test for prime numbers</del></li> <li>• Use prime factors to find the HCF and LCM of two numbers</li> </ul>
15	Ratio and proportion	Introducing proportion Direct proportion Ratio Dividing in a given ratio Ratio and proportion Percentage problems	<ul style="list-style-type: none"> <li>• Use fractions, decimals and percentages to describe proportions</li> <li>• Find the value of quantities that are directly proportional to each other</li> <li>• Simplify and use ratios</li> <li>• Divide a quantity into a given ratio</li> <li>• Know how to find and use ratios and proportions in problems</li> <li>• Find the outcome after a percentage increase or decrease</li> </ul>
13	Sequences	Sequences Sequence rules Sequences and algebra Finding a rule from a sequence	<ul style="list-style-type: none"> <li>• Use a rule to find the next term of a sequence</li> <li>• Use and find a term-to-term rule of a sequence</li> <li>• Use and find the rule for the nth term of a sequence</li> <li>• Find a formula to fit a sequence of patterns</li> </ul>

		Sequences in context	
Revision and Optional Assessment <i>(end of year exams)</i>			7
HALF TERM			
14	Decimal calculations	<del>Mental methods of multiplying and dividing decimals</del> Multiplying decimals Dividing decimals Calculator methods 3	<ul style="list-style-type: none"> <li>• Multiply and divide decimal numbers using a range of mental methods</li> <li>• Multiply decimal numbers using the standard method</li> <li>• Divide decimal numbers using written methods including short division</li> <li>• Interpret the calculator display after doing a division</li> </ul>
16	Probability	The probability scale Equally likely outcomes Mutually exclusive outcomes Experimental probability Comparing probabilities Sorting with venn diagrams	<ul style="list-style-type: none"> <li>• Describe probabilities using words, fractions, decimals and percentages</li> <li>• Find probabilities of events which are equally likely to happen</li> <li>• Know what 'mutually exclusive' events are and find their probabilities</li> <li>• Use experiments to find the experimental probability of an event</li> <li>• Compare results using theoretical and experimental probabilities</li> <li>• Understand and use venn diagrams to find probabilities</li> </ul>
12	Construction and 3D shapes	Constructing bisectors Constructing triangles 1 (protractor) Constructing triangles 2 (compass) Simple loci Scale drawings 2D representations of 3D shapes Plans and elevations	<ul style="list-style-type: none"> <li>• Construct angle bisectors and perpendicular bisectors</li> <li>• Construct triangles accurately</li> <li>• Describe a locus of a moving point and draw it accurately</li> <li>• Use and construct scale drawings</li> <li>• Name and describe 3D solids</li> <li>• Draw plans, elevations and nets of 3D solids</li> </ul>
17	Everyday maths	The swimming gala The diving pool and ticket sales Getting ready The swimming competitions The final results	<ul style="list-style-type: none"> <li>• Problem solving</li> </ul>
SUMMER HOLIDAY			