

**BLESSED TRINITY LEARNING PROGRAMME**

**SUBJECT: Maths - Stage 2**

**YEAR: 7**

**Half Term: 1**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Geometrical reasoning: lines, angles and shapes</b>	To label lines, angles and shapes  To be able to identify parallel, perpendicular lines  To calculate missing angles in diagrams	Learn correct mathematical vocabulary  Label various shapes, lines and angles correctly with their mathematical properties  Solve problems involving: the sum of angles at a point, on a straight line  the sum of angles in a triangle  Recognise vertically opposite angles	<b>L4SSM1</b>	Peer, self and teacher assessment
<b>Construction and Loci</b>	To understand how to complete basic constructions using compasses and straight edge	Use a ruler and protractor to measure and draw lines and angles accurately (including reflex angles)  Construct a triangles accurately using compasses and protractor	<b>L5SSM4</b>	Peer, self and teacher assessment



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**Half Term:** 1

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Equations, formulae, identities and expressions</b>	To be able to solve a range of problems involving algebra	Use letter symbols to solve problems  Understand that algebraic operations follow the rules of arithmetic  Simplify expressions by collecting like terms  Substitute into expressions  Expand a single bracket	<b>L4ALG1</b>	Peer, self and teacher assessment
<b>Ratio and proportion</b>	To understand the relationship between ratio and proportion	Solve problems such as:  Use direct proportion in simple contexts  Use ratio notation  Simplify ratios, divide a quantity into in a given ratio	<b>L4NNS6</b>	Peer, self and teacher assessment  Class Test

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**Half Term: 2**

<b>Title</b>	<b>Learning Objectives</b>	<b>Classroom Activity</b>	<b>Recommended Homework</b>	<b>Marking &amp; Assessment</b>
<b>Fractions, decimals and percentages</b>	To be able to solve problems involving fractions, decimals and percentages	Simplify fractions  Convert between fractions, decimals and percentages  Compare fractions using diagrams  Calculate with fractions and the four operations  Calculate fractions and percentages of quantities	<b>L4NNS4</b>  <b>L5NNS5</b>	Peer, self and teacher assessment
<b>Processing and representing data; Interpreting and discussing results</b>	To be able to solve problems involving the manipulation and representation of data.	Calculate mean, mode, median and range.  Decide which average is the most appropriate to use in a given situation  Draw accurate bar charts and pie charts for discrete and continuous data	<b>L4HD4</b>  <b>L4HD5</b>	Peer, self and teacher assessment
<b>Statistical Enquiry</b>	To plan how to collect and organise small sets of data from surveys and experiments and analyse results.	Undertake a small statistical investigation using the Data Handling Cycle, Eg. "Boys in year 7 are taller than girls on average"  Incorporating: design of data collection sheets or questionnaires, frequency tables, comparison of data using appropriate calculations and diagrams	<b>L4HD2</b>	Peer, self and teacher assessment  Class Test

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**SUBJECT: Maths - Stage 2**

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**Half Term: 3**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Types of number</b>	<p>To solve problems involving multiples, factors and primes.</p> <p>To be able to use negative numbers correctly.</p> <p>Know and use squares and square roots and triangle numbers</p>	<p>Find highest common factors and lowest common multiples</p> <p>Add and subtract negative numbers in context.</p> <p>Calculate square numbers up to 12 x 12 and corresponding roots.</p> <p>Write out the first few triangle numbers.</p> <p>Perform simple tests of divisibility.</p>	<p><b>L5NNS3</b></p> <p><b>L5CALC4</b></p>	Peer, self and teacher assessment
<b>Probability</b>	To be able to solve problems involving simple probability	<p>Use vocabulary of probability correctly.</p> <p>Use the probability scale from 0 to 1.</p> <p>Calculate simple probabilities based on equally likely outcomes.</p> <p>List all the outcomes of mutually exclusive events.</p> <p>Estimate probabilities from a simple experiment.</p> <p>Compare theoretical and experimental probabilities.</p>	<b>L5HD3</b>	Peer, self and teacher assessment



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**Half Term: 3**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Mental calculations and checking</b>	To be able to solve a range of number problems using mental methods and check results	Use the rules of arithmetic and inverse operations  Use order of mathematical operations correctly (BIDMAS)  Use mental methods to calculate with fractions, decimals and percentages  Check results are of the right order of magnitude by working problems backwards	<b>L4CALC1</b>  <b>L4CALC2</b>	Peer, self and teacher assessment  Class test

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**SUBJECT: Maths - Stage 2**

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**Half Term: 4**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Sequences, functions and graphs</b>	To be able to solve problems involving coordinates, functions, mappings, straight line graphs and real life graphs	<p>Write simple functions in words.</p> <p>Represent functions in mappings.</p> <p>Generate coordinate pairs that satisfy a simple rule</p> <p>Recognise straight line graphs parallel to the x and y axes</p> <p>Plot and interpret graphs arising from real life situations.</p>	<b>L4ALG2</b>	Peer, self and teacher assessment
<b>Transformations and coordinates</b>	To be able to solve problems involving transformations	<p>Use the language associated with reflection, rotation and translation</p> <p>Recognise line symmetry in 2D shapes</p> <p>Transform 2D shapes by reflecting in a mirror line, rotating about a point or translating.</p>	<p>Research line symmetry in a range of logos</p> <p><b>L4SSM3</b></p>	Peer, self and teacher assessment



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**Half Term: 4**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<p><b>Written calculations and checking</b></p>	<p>To be able to estimate, approximate and check working</p>	<p>Use the rules of arithmetic for whole numbers and decimals, check answers using inverse operations</p> <p>Complete long multiplication and division calculations.</p> <p>Use the order of operations correctly (BIDMAS)</p> <p>Work problems backwards using inverse operations to check answers are of the right magnitude.</p>	<p><b>L4CALC3</b></p> <p><b>L4CALC5</b></p>	<p>Peer, self and teacher assessment</p> <p>Class test</p>



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**YEAR:** 7

**Half Term:** 5

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Sequences</b>	To represent problems making correct use of symbols, words, diagrams, tables and graphs	Describe and generate integer sequences  Find a term using the previous term.  Find a term given its position in the sequence  Generate sequences from patterns and practical contexts  Find the nth term of a sequence	To carry out an investigation of a mathematical pattern	Peer, self and teacher assessment
<b>Written calculations and checking</b>	To be able to solve problems using efficient written methods	Use the order of operations including brackets  Add and subtract whole numbers and decimals using efficient methods  Perform accurate long multiplication and division calculations (including decimals with one or two decimal places by a single digit whole number)  Use calculator functions correctly  Check that results are of the correct magnitude	<b>L4CALC3</b>  <b>L4CALC5</b>	Peer, self and teacher assessment





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**Half Term: 5**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Calculations and checking</b>	To be able to solve problems involving place value, rounding and efficient mental methods	Multiply and divide integers by 10, 100 and 1000 and explain the effect  Compare and order decimals (including using measurements)  Round positive whole numbers to nearest 10, 100 or 1000  Round decimals to nearest whole number, 1 decimal place  Use the order of operations correctly (including brackets)  Perform mental calculations using fractions, decimals and percentages	<b>L4NNS5</b>  <b>L5NNS1</b>  <b>L4CALC4</b>	Peer, self and teacher assessment  Class test



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**Half Term: 6**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<p><b>Equations, formulae, identities and expressions</b></p>	<p>To be able to solve problems using algebra</p>	<p>Know the meaning of the words term, expression and equation</p> <p>Construct and solve equations with unknown on one side only</p> <p>Solve real life problems through the use of algebra</p>		<p>Peer, self and teacher assessment</p>
<p><b>Geometrical Reasoning and Mensuration</b></p>	<p>To be able to solve problems involving 2-D and 3-D shapes</p>	<p>Match up plan and other elevations to 3-D objects</p> <p>Visualise 3-D shapes and deduce some of their properties</p> <p>Correctly identify coordinates in all four quadrants using correct notation</p> <p>Find coordinates of vertices of shapes</p> <p>Calculate the surface area of cubes and cuboids</p>	<p><b>L4SSM2</b></p> <p>Co-ordinate puzzle</p>	<p>Peer, self and teacher assessment</p>



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**Half Term: 6**

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
<b>Measures and mensuration</b>	To be able to solve problems involving area, perimeter and units of measurement	Choose correct units of measurement to use in different scenarios and solve problems in everyday contexts  Calculate the area of rectangles  Calculate the perimeter of shapes made from rectangle  Convert one unit into another (eg. grams to kilograms) Read and interpret scales on a range of measuring instruments  Distinguish between and estimate the size of acute, obtuse and reflex angles	Research task on metric and Imperial units  mymaths task Converting units	Peer, self and teacher assessment  Class Test