

Landau Learner Curriculum Overview

Subject: Mathematics

Director of Learning: Mr Ryan Bathew

Year: 7

| Curriculum organisation | | | | |
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| Students are taught in mixed ability groups for the equivalent of four single lessons per week. | | | | |
| What topics will students be studying this year? Includes links to National Curriculum, Curriculum Intent and Prior Related Learning* | | | | |
| Term 1: | Term 2: | Term 3: | Term 4: | Term 5: |
| <ul style="list-style-type: none"> Numbers and the number system Counting and Comparing Calculating Visualising and Constructing Investigating Properties of Shapes | <ul style="list-style-type: none"> Algebraic Proficiency: Tinkering Exploring Fractions, Decimals, Percentages | <ul style="list-style-type: none"> Proportional Reasoning Pattern Sniffing Measuring Space Solving Equations and Inequalities | <ul style="list-style-type: none"> Investigating Angles Calculating Fractions, Decimals, Percentages Calculating Space Checking, Approximating, Estimating Mathematical Movement | <ul style="list-style-type: none"> Presentation of data Measuring data |
| <p>Links to Prior learning (KS2): Factors, Multiples, Times Tables, Ordering numbers, Negative numbers, Short Division, Long Multiplication, Use a ruler/Protractor, Names of 2D and 3D shapes.</p> <p>National Curriculum: Solve problems involving prime numbers. Use highest common factors and lowest common multiples to solve problems. Explore powers and roots. Investigate number patterns. Compare and order numbers. Apply understanding of place value. Explore written methods of calculation. Calculate with decimals, order of operations. Interpret and apply geometrical conventions and notation. Investigate the properties of 3D shapes. Explore quadrilaterals and triangles.</p> <p>Curriculum Intent: Allows students to understand the different properties of numbers thus providing students with the skills to solve more complex mathematical problems.</p> | <p>Links to Prior learning: Order of operations, finding missing numbers, Equivalent Fractions, Concept of a fraction as a proportion, Equivalence of Fractions and Percentages.</p> <p>National Curriculum: Understand the vocabulary and notation of algebra. Manipulate algebraic expressions. Explore functions. Evaluate algebraic statements. Understand and use top-heavy fractions. Understand the meaning of 'percentage'. Explore links between fractions and percentages.</p> <p>Curriculum Intent: To develop the algebraic skills required to be able to manipulate algebraic expressions presented in multiple forms. Enables students to make cross-curricular links and understand the origin and meaning of mathematical terms such as 'percent'.</p> | <p>Links to Prior learning: Multiplications/Division Facts, Convert between units of time/measures, Factors, Find the next term and rule of a sequence.</p> <p>National Curriculum: Understand and use ratio notation. Solve problems that involve dividing in a ratio. Explore number sequences. Explore sequences. Measure accurately. Convert between measures. Solve problems involving measurement. Explore ways of solving equations. Solve two-step equations. Solve three-step equations.</p> <p>Curriculum Intent: Develop the skills to identify patterns and follow logical steps to find the solution to problem. To be aware of different measures and units and how to convert between them in everyday life.</p> | <p>Links to Prior learning: Identify types of angles and know basic angle rules, Add, Subtract, Multiply and Divide fractions, Convert between F,D,P, Area, Volume and Perimeter, Coordinates, Reflect and Translate a shape on a grid.</p> <p>National Curriculum: Investigate angles. Calculate with fractions. Calculate with percentages. Develop knowledge of area. Investigate surface area. Explore volume. Explore ways of approximating numbers. Explore ways of checking answers. Explore lines on the coordinate grid. Use transformations to move shapes. Describe transformations.</p> <p>Curriculum Intent: Encourages students to base estimates and approximates from a sound mathematics base and apply this to everyday life.</p> | <p>Links to Prior learning: Construct and interpret a pictogram, bar chart and line graph, Understand that pie charts are used to show proportions, Understand the meaning of 'average'.</p> <p>National Curriculum: Explore types of data. Construct and interpret graphs. Select appropriate graphs and charts. Investigate averages. Explore ways of summarising data. Analyse and compare sets of data.</p> <p>Curriculum Intent: To be able to analyse, interpret and present data and understand the uses of this in the real-world.</p> |

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| <p>Equipment needed for sessions:</p> <ul style="list-style-type: none"> Mathematics exercise book Scientific calculator with fractional display | <p>What can you do to support your child?</p> <ul style="list-style-type: none"> Encourage them to complete homework tasks to the best of their ability Encourage your child to aid in common place mathematical problems (managing money, measuring space etc). Check understanding of commonly used language such as 'credit' and 'debit'. |
| <p>How will learning be assessed and progress measured?</p> <ul style="list-style-type: none"> Marking of bookwork is carried out on a regular basis in line with college policy Two summative assessments Individual topic assessments Regular peer and self-marking | <p>Extension and enrichment activities:</p> <ul style="list-style-type: none"> Maths clinic extension – Tuesday 3:30 - 4:25 every week Weekly problem solving challenge Maths challenge (TBA) |