



CURIOSITY

COMPASSION

COURAGE



## Recovery curriculum outline 2022-23

	Mathematics
	Term 6 Jun-Jul
Year 7:	Developing Number Sense Sets and Probability Prime Numbers and Proof <a href="#">Home Learning   White Rose Maths</a>
Year 8:	The Data Handling Cycle Measures of Location <a href="#">Home Learning   White Rose Maths</a>
Year 9:	Probability Algebraic representation Revision <a href="#">Home Learning   White Rose Maths</a>
Year 10: GCSE	Non-calculator methods Types of Number and sequences Indices & Roots <a href="#">Home Learning   White Rose Maths</a>



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## Curriculum overview

Subject	Mathematics	Year group	X
<p><b>Vision statement:</b></p>	<p>At Landau Forte our curriculum exists to ensure all students regardless of background and ability have the opportunity to unlock their potential. We are committed to students being challenged from their previous key stage learning experiences. Our broad and balanced curriculum is ambitious, coherently planned and sequenced, and will provide the platform for preparing students with the foundations for examination success.</p> <p>Our Curriculum Intent has been informed by a wide variety of researchers and is steeped in evidence based research. Christine Counsell summarises the aspiration of our curriculum to empower all learners creating a pathway to success in university, their career and life:</p> <p><i>'A curriculum exists to change the pupil, to give the pupil new power. One acid test for a curriculum is whether it enables even lower attaining or disadvantaged pupils to clamber into the discourse and practices of educated people, so that they gain powers of the powerful.'</i></p> <p>As well as excellent academic success we aim to ensure our students leave us as polite and well-rounded young adults. Our new core values of Compassion, Courage and Curiosity are currently being embedded throughout our curriculum offer to ensure we continue to meet our social, emotional, spiritual and moral obligations.</p>		
<p><b>Curriculum intent:</b></p>	<p>All students acquire the mathematical life skills necessary for the world of work, no matter what their starting point is, catering for all abilities and backgrounds. We have a strong belief that all students can achieve in Maths.</p> <p>Students will be taught to have a firm understanding of number bonds and be confident in using non-calculator strategies for solving problems.</p> <p>Students will be stretched and challenged through problem solving tasks to develop resilience.</p> <p>Students are encouraged to show courage through attempting questions in environment where other students show compassion through a culture of being non-judgmental when questions are answered incorrectly. Students are also encouraged to show curiosity through asking questions and taking a genuine interest in the real life applications of the Maths that they are learning.</p> <p>This will be achieved by staff working together in planning lessons that allow ALL students to achieve/ exceed their potential through:</p> <p>Common lesson planning formats; Expert knowledge of the subject; Differentiated material;</p> <p>Regular use of AfL to assess progress in a lesson; Regular use of formal marking and feedback;</p> <p>Regular summative assessments to ensure appropriate progress and intervention.</p>		
<p><b>Threshold Concepts (TCs):</b></p>	<p>TC1 Algebraic manipulation - This concept involves recognising mathematical properties and relationships using symbolic representation</p> <p>TC2 Number sense - This concept involves understanding the number system and how they are used in a wide variety of mathematical ways</p> <p>TC3 Shape facts - This concept involves recognising the names and properties of geometry shapes and angles.</p> <p>TC4 Multiplicative reasoning - This concept involves using ratio and proportion and understanding of reciprocals in real world applications</p> <p>TC5 Representing and interpreting data - This concept involves interpreting, manipulating and presenting data in various ways.</p> <p>TC6 Calculator skills - This concept involves fluent application of mathematical operations on a scientific calculator</p> <p>TC7 Understanding and calculating risk - This concept involves knowing the rules of probability in the correct context</p>		



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### KS2 National Curriculum summary:

The curriculum ensures that all pupils around England get the essential knowledge they need to become educated citizens. So, it doesn't matter which school or area children are studying at - they will develop the same fundamental maths skills. Included in this frame of work are curriculum aims, which pupils need to meet at the end of each school year. Children who want to expand their knowledge even further will get the opportunity to do so. But essentially, they will all start from basics by learning about the key topic areas covered in the national curriculum for KS2 maths.

The eight main maths areas, which are included in the national curriculum for maths throughout KS2 are:

- Number - Number and Place Value
- Number - Addition and Subtraction
- Number - Multiplication and Division
- Number - Fractions
- Measurement
- Geometry - Properties of Shape
- Geometry - Position and Direction (not included in year 3)
- Statistics

As pupils get to year 6, they would have developed a deep understanding of these maths concepts. That's why two additional topic areas are introduced to the curriculum, which are:

- Ratio and Proportion
- Year 6 Algebra









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<b>Learner skills:</b>	Critical thinking  CRITICAL THINKING	Organisation  ORGANISATION	Collaboration  COLLABORATION	Adaptability  ADAPTABILITY	Oracy  ORACY	Self-quizzing  SELF QUIZZING
Term 6 Jun-Jul						
<b>The Big Question</b>						
<b>Big picture questions:</b>	How can I use Venn diagrams to solve maths problems?					
<b>Content (Linked to TCs):</b>	<p>TC2 – Number Sense</p> <p>TC7 – Understanding and Calculating Risk</p> <ul style="list-style-type: none"> <li>• Know and use mental addition and subtraction strategies for integers</li> <li>• Know and use mental multiplication and division strategies for integers</li> <li>• Know and use mental strategies for decimals</li> <li>• Know and use mental strategies for fractions</li> <li>• Use factors to simplify calculations</li> <li>• Use estimation as a method for checking mental calculations</li> <li>• Use known number facts to derive other facts</li> <li>• Use known algebraic facts to derive other facts</li> <li>• Know when to use a mental strategy, formal written method or a calculator</li> <li>• Identify and represent sets</li> <li>• Interpret and create Venn diagrams</li> <li>• Understand and use the intersection of sets</li> <li>• Understand and use the union of sets</li> <li>• H - Understand and use the complement of sets</li> <li>• Know and use the vocabulary of probability</li> <li>• Generate sample spaces for single events</li> <li>• Calculate the probability of a single event</li> <li>• Understand and use the probability scale</li> </ul>					



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	<ul style="list-style-type: none"><li>• Know that the sum of probabilities of all possible outcomes is 1</li><li>• Find and use multiples</li><li>• Identify factors of numbers and expressions</li><li>• Recognise and identify prime numbers</li><li>• Recognise square and triangular numbers</li><li>• Find common factors of a set of numbers including the HCF</li><li>• Find common multiples of a set of numbers including the LCM</li><li>• Write a number as a product of its prime factors</li><li>• H - Use a Venn diagram to calculate the HCF and LCM</li><li>• Make and test conjectures</li><li>• Use counterexamples to disprove a conjecture</li></ul>
<b>Vocabulary Instruction:</b>	Venn diagrams, intersection, union, sample space, probability, triangular numbers, HCF, LCM.
<b>Assessment:</b>	Topic Assessments  Summative Assessment 2
<b>Key/Historical misconceptions in this unit:</b>	<ul style="list-style-type: none"><li>• Replication of elements in the intersection.</li><li>• 9 is a prime number.</li><li>• Confusing factors and multiples.</li></ul>
<b>Sequencing:</b>	We have chosen to sequence the Year 7 Recovery Curriculum like this because students are able to build on their knowledge from previous years and extend and deepen their understanding of the concepts. Regular revisiting of topics which would have been covered in previous years in the four to start allows for any gaps to be identified and addressed.



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<b>Values</b>	<p>This scheme of work promotes the school values of Compassion, Curiosity and Courage by:</p> <p>Compassion - Students show compassion through a culture of being non-judgmental when questions are answered incorrectly.</p> <p>Curiosity - Students are encouraged to show curiosity through asking questions and taking a genuine interest in the real life applications of the Maths that they are learning.</p> <p>Courage - Students are encouraged to show courage through attempting questions</p>
<b>National Curriculum plus:</b>	<p>In addition to teaching the statutory elements of the national curriculum, we also include opportunities to extend their learning beyond the classroom. For example practical examples and going further than the curriculum in terms of what they are expected to know from a financial literacy perspective.</p>