Mathematics department Curriculum Outline 2026-27

Year 8 Pi

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic/theme	Number: Number properties and calculations Geometry: Shapes and measures in 3D	Geometry: Shapes and measures in 3D -continue Statistics: Statistics	Algebra: Expressions and equations Number: Decimal calculations	Geometry: Angles	Number: Number properties Algebra: Sequences	Number: Fractions and percentages Statistics: Probability
Key Skills	-Add and subtract large numbers -Multiply large numbers -Use brackets -Four operations with negative numbers -Work with ratios, find equivalent ratios and solve problems -Use proportion to solve problems -Recognize and name 3d solids -Count faces, edges and vertices -Identify and draw nets of 3D solids	-Design a data collection sheet -Group data into equal class intervals -Interpret complex bar charts -Draw bar charts for more than one set of data -Interpret pie charts -	-Simplifying expression by collecting like terms -Find outputs and inputs of function machines -Construct functions -Solve simple equations -Use brackets with numbers and letters -Add and subtract decimals -Multiply decimals -Round and order decimals -Solve problems involving decimals	- Measure and draw Obtuse and reflex angles -Use vertically opposite angles? -Work out the size of unknown angles in a triangle -Accurately draw triangles, net of 3D shapes	-Calculate square, cube, square roots and cube roots mentally -Do calculations involving brackets and square numbers -Use index notation -Find the factors of any whole numbers -Use LCM, HCF -Write the prime factor decomposition of a number -Recognize, describe and continue number sequence	-Compare fractions -Simplify fractions Identify equivalent fractions -Calculate with fractions mentally -Calculate fractions of quantities - Add and subtract simple fractions -Write a number as a fraction of another -Change between fractions and percentages -Compare proportions using percentages

	-Calculate the surface area of cube and cuboids -Find the volume of a cube or cuboids, solve problems - Convert between cm^3 and litres				-Find and use the term-to-term rule -Recognize an arithmetic sequence -Describe and continue special sequences -Generate terms of a sequence using the position-to-term rule -Find the nth term of simple sequence	-Use the language of probability -Use the probability scale -Find all the possible outcomes of an event -Use equally likely outcomes -Use probability notation -Calculate the probability of an event not happening -Use the data from an experiment to estimate probabilities -Compare and interpret probabilities
Previous learning and next steps links	-The four operations -Rounding numbers -Xtables knowledge -Finding the common value of a set of data -Order numbers -Doubling and halving numbers -Identifying parallel and perpendicular	-Counting from 0 up and down in steps of 2, 5 and 10 -Halving and doubling numbers -Ordering fractions -How could a sports team use charts to measure its	-The four operations -Rounding numbers -Xtables knowledge -Place value knowledge -Doubling and halving numbers -How long will it take to do a charity	-Subtract angles from 360 -Four operations -Sketch prisms -Which angles describe SW, NW and other points on the compass? -How many vertically opposite	-Four operations -Naming shapes and calculating their area and perimeter -Xtable knowledge -Knowing multiples and factors -Do all numbers have a root? -How do we use	- Understanding what numerator or denominator represent -Write fractions as decimals 23/100, 9/10 etc -Work out the half of 30, 50, 25 -Four operations

	lines -Describe faces of 3D solids -Multiply and divide by 10, 100 and 1000 -How many people are there in your school building? -How many hours are there in a month, year? -How much warmer is it in summer than winter? -How much milk would you need to make pancakes for your class? -Do different 3D solids look the same when drawn in 3D? -How many different ways can you draw the net of a cube? -How much wrapping paper do you need to completely cover a large box? -How much fruit juice do you need to fill up a punch bowl?	performance? -How has the population of the UK changed since 1950? -How could a Scientist use a pie chart to show the different types of animals on Earth?	walk? -How could you multiply a number by 27 in your head? -How could you add £9.99 to any -amount? -Why do shops use prices like £999.99? -How could you estimate the price of your shopping?	angles are formed when 3 lines are crossed? -How can you draw a kite and a rhombus? -How can you tell if a triangle is right-angled?	brackets in maths? -Can every number be written as a product of prime numbers? -How do you generate a Fibonacci sequence? -What is the quickest way to calculate 100th term of a sequence?	-How long is a model aeroplane? -Why do you use percentages instead of fractions to compare test results? -How do banks and building societies use percentages? -How can you describe the probability that it will be sunny tomorrow? -How can you design a profitable game for a school fete?

Literacy opportunities/ VIPERS	Spelling key ***vocabulary*** correctly ***(VIPERS)*** Promoting the use of ***Mathematical language*** during lessons Developing literacy through ***discussion using the correct mathematical terminology***, reasoning and problem solving tasks Create opportunities for explanation of learning, ***expressing mathematical conclusion*** after completing investigative task Pupils to design a ***worded question*** based on learning Comprehension activities while learning about famous mathematicians- Diversity links
Wider reading fiction/ non-fiction	Display mathematical Tier 3 vocabulary around the classroom Introduce new terminology but also consolidate previously used terms wherever possible Use key vocabulary in context so pupils begin to understand when/how to use it Comprehension activities while learning about famous mathematicians
Numeracy Opportunities	Applied fluency and connecting different area of mathematics in a range of real-life contexts Making connections how mathematics can be used in every-day life situations – 'Window to the Wider World' Interlinking different area of mathematics Reason using the mathematical strategies and solve problems
SMSC and British Values/Window into the wider world	Linslade pupils receive both support and challenge needed to become increasingly confident in arithmetic, fluency, reasoning and problem solving in all areas of Mathematics. The curriculum is carefully designed and sequenced to provide our learners with an aspirational bridge between lower and upper school, understanding the world and in their future careers. We build on prior knowledge so that our learners leave us having achieved fluency in this creative and highly interconnected discipline. They will be ready to start upper school and feeling confident, prepared and with a way of thinking that will provide them with a platform to become the leaders of tomorrow. During their time with us, our learners are given the opportunity to apply their ever-growing knowledge to reasoning and problem solving questions so that they can deepen their understanding and appreciation of the beauty of mathematics. By regularly working on real-life problems, our curriculum allows learners to look through the window to the wider world and see how the maths that are taught in lessons will be applied in everyday life.