Subject: Mathematics		Year 9 Curriculum Map 2024 - 25
Week Commencing	**Topic (including links to additional resources)**	**Assessment Window**
Staff INSET 02/09 Students Return 03/09 09/09/2024 16/09/2024 23/09/2024 30/09/2024	**Algebra – Graphs** • Plot straight line graphs by using a table of values • Use the table function on a calculator to generate a table of values for a straight-line graph • Identify the y-intercept on a straight-line graph, and within its equation • Identify the gradient on a straight-line graph, and within its equation • Plot straight line graphs by interpreting the gradient and the y-intercept • State the equation of a line when given its graph • Plot a quadratic graph by using a table of values • Use the table function on a calculator to generate a table of values for any variation of graphs (quadratic, cubic, reciprocal, exponential) • Identify the midpoint of a line segment on a graph	1 teacher marked learning checkpoint
07/10/2024 14/10/2024	**Algebra – Algebraic manipulation** • Expand double brackets, with a variety of negative and positive terms • Write a formula as a function machine • Change the subject of two step formulae using function machines • Change the subject of two step formulae using balancing	1 teacher marked learning checkpoint
21/10/2024	**Algebra – Equations and inequalities** • Solve linear equations with unknowns on both sides • Set up linear equations from written descriptions and solve • Describe the integer solutions to closed and open inequalities • Solve two-step linear inequalities • Solve closed linear inequalities • Represent and interpret solutions to linear inequalities on a number line	1 teacher marked learning checkpoint
October Half Term		
04/11/2024	**Algebra – Equations and inequalities** • Solve linear equations with unknowns on both sides • Set up linear equations from written descriptions and solve • Describe the integer solutions to closed and open inequalities • Solve two-step linear inequalities • Solve closed linear inequalities Represent and interpret solutions to linear inequalities on a number line	1 teacher marked learning checkpoint

11/11/2024	**Assessment Round 1**	Achievement Round 1
18/11/2024	**Assessment Round 1**	Achievement Round 1
25/11/2024 02/12/2024 09/12/2024 16/12/2024	<u>**Number**</u> • Add and subtract with mixed numbers, giving answers in their simplest form • Multiply with mixed numbers, giving answers in their simplest form • Divide with mixed numbers, giving answers in their simplest form • Multiply standard form without a calculator, using the commutative property of multiplication • Divide with standard form without a calculator, using the distributive property of division • Add and subtract with standard form without a calculator • Write a number as a product of prime factors, using prime factor trees • Use a calculator to write a number as a product of prime factors • Recognise that composite numbers have a unique product of prime factors • Use Venn Diagrams and product of prime factors to identify the HCF and LCM of two numbers	1 teacher marked learning checkpoint
Christmas Break		
06/01/2025 13/01/2025	<u>**Geometry and measure – Angles**</u> • Explore properties of special quadrilaterals and their angle relationships (specifically parallelograms, trapezia and kites) • Explore relationships between angles on parallel lines • Identify corresponding angles on parallel lines • Identify alternate angles on parallel lines • Identify co-interior angles on parallel lines • Identify polygons and link their names to ancient Greek numbers • Explore the sum of the interior angles in polygons, identifying any relationships • Show that exterior angles in any polygon will sum to 360 degrees	1 teacher marked learning checkpoint
20/01/2025	<u>**Ratio and Proportion – Percentages**</u> • Solve worded problems with fractions, decimals and percentages • Calculate repeated percentage increase and decrease • Identify why increasing by a percentage then decreasing by the same percentage does not result in the original answer • Use non-calculator methods to identify original values after a percentage change has occurred • Use calculator methods to identify original values after a percentage change has occurred • Calculate simple interest • Identify the compound interest formula and how it links to repeated percentage change • Use compound interest formulae to calculate totals	1 teacher marked learning checkpoint

27/01/2025 03/02/2025 10/02/2025	**Probabilities** • Compare theoretical and experimental probability • Explain the meaning of bias and how experimental probability is used to test for bias • Recongise that probability experiments become more accurate as more trials are completed • Select appropriate probability diagrams based on the problems being posed • Form links between combined probability outcomes and the probabilities of each individual event • Use basic 'and' probability rules in problems • Use basic 'or' probability rules in problems	1 teacher marked learning checkpoint
February Half Term		
24/02/2025	**Geometry and measure – Right-angled triangles** • Explore the relationship between the squares of lengths in right-angled triangles • Identify Pythagoras' theorem and explain its origins • Use Pythagoras' theorem to calculate the hypotenuse • Use Pythagoras' theorem to calculate shorter sides • Use Pythagoras' theorem to calculate the height of a triangle, hence find the area • Calculate lengths of line segments on a coordinate axis • Explore similar triangles and the relationship between lengths and angles • Identify the three main trigonometric ratios • Label a right-angled triangle and choose the correct trigonometric ratio that is required Calculate missing lengths using trigonometric ratios	1 teacher marked learning checkpoint
03/03/2025	**Assessment Round 2**	**Achievement Round 2**
10/03/2025	**Assessment Round 2**	**Achievement Round 2**
17/03/2025 24/03/2023 31/03/2025 07/04/2025	**Ratio and Proportion – Similarity and congruence** • Identify lines of symmetry in shapes • Identify order of rotational symmetry of shapes • Explain the meaning of congruency, and identify congruent shapes • Translate a shape using a vector on a coordinate axis • Rotate a shape when given a centre, direction and angle on a coordinate axis • Reflect a shape in a given mirror line on a coordinate axis • Explain the meaning of mathematical similarity • Use ratio and/or scale factors to decide whether two shapes are similar • Identify missing lengths in similar shapes Enlarge a shape on a coordinate axis when given a positive or fractional scale factor	1 teacher marked learning checkpoint
Easter Break		
28/04/2025 05/05/25	**Ratio and Proportion – Proportional reasoning** • Identify totals or missing parts of ratio (reverse ratio problems) • Solve context-based problems that require ratio sharing or simplification • Identify links between recipes and unitary methods for proportion	1 teacher marked learning checkpoint

Date	Content	Assessment
12/05/2025 19/05/2025	• Use unitary methods, or other proportional methods, when working with recipes • Work with recipes and a range of measures, which may require conversion • Use proportional methods within value for money, or best buy problems • Identify situations that are examples of inverse proportion • Solve problems using inverse proportion methods • Identify graphs of direct and inverse proportion • List the features of a direct and an inverse proportion graph	
May Half Term		
02/06/2025 09/06/2025	**Geometry and measure – Area and Volume** • Calculate area and circumference of circles without a calculator, stating solutions as multiples of pi • Calculate the area of simple sectors (1/2, 1/4, 3/4 circles) • Calculate the arc length and perimeter of simple sectors (1/2, 1/4, 3/4 circles) • Calculate compound area of shapes, including a range of standard 2D shapes • Calculate the volume of cubes and cuboids • Calculate the volume of prisms, including cylinders • Calculate the surface area of a cube or cuboid	1 teacher marked learning checkpoint
16/06/2025	**Assessment Round 3**	Achievement Round 3
23/06/2025	**Assessment Round 3**	Achievement Round 3
30/06/2025	**Assessment Round 3**	Achievement Round 3
07/07/2025 14/07/2025 21/07/2025	**Geometry and measure – Measures** • Recognise speed as a comparison of two units • Use speed units to interpret speed/distance/time problems • Recognise and use the formula linking speed/distance/time • Recognise the standard units for speed and how this affects problems with speed, knowing to convert before calculation • Use a calculator to effectively calculate speed, distance and time, including use of the time button • Recognise features of distance - time graphs • Interpret and compare speed on a distance - time graphs • Complete distance - time graphs using written information • Recognise density as a comparison of two units • Use density units to interpret density problems • Recognise and use the formula linking density/volume/mass	1 teacher marked learning checkpoint