HUNTINGTON SCHOOL
MATHEMATICS DEPARTMENT

Mathematics: Mid Term Plan for Year 8

Term 1 Assessment: w/c 23/11. The core topics from half term 1 and 2 will be included

Term 2 Assessment: w/c 8/3. The core topics from half term 3 and 4 will be included

Term 3 Assessment: Between 24/5 – 18/6. The core topics from half term 1 to 5 will be included

Homework: Weekly homework will be set on a Wednesday, due the following Wednesday via Sparx Maths.

Able and interested: Extension work, and problem-solving task will be provided in lessons where needed.

Support and Extension: Some topics in the table below may not be taught at this current point. This will depend on the attainment of the individuals, and these topics will then be taught at a later date when more appropriate.

Building on: These topics will have been seen before and are needed to progress to the core topics

Core: These topics will be on the assessments

Extension: These topics show where the core topics lead. They may be covered in class if the core topics are secure.

Why this? Why Now? The national curriculum sets out the key maths skills and knowledge that all children in England should learn, and at Huntington School we make sure your child experiences this fully throughout their time with us. Our maths curriculum is planned in a sensible, step-by-step order so that each new topic builds on what pupils already know, helping them grow in confidence and understanding. The table below shows how the learning is sequenced and explains why topics are taught in this order, making it easier for you to see how your child's maths knowledge develops over time.

Half Term	1	2	3	4	5	6
Knowledge and skills which will be covered during this half term.	**Algebra:** Calculating with roots and powers, simplifying fractions, algebraic notation, solving equations with one step, expanding single brackets, solving equations of the form ax+b=c, solving equations of the form x/a+b=c, simplifying expressions containing a single variable, substituting into	**Ratio and Proportion** Finding the highest common factor, constructing fractions, writing numbers as percentages of other numbers, writing and simplifying ratios, using equivalent ratios to find unknown amounts, writing ratios in the form 1:n Writing and simplifying ratios, writing ratios in the form 1:n,	**Number:** Multiplying and dividing by 10, 100 and 1000 Rounding integers and decimals using significant figures, estimating calculations, using standard form with positive and negative indices Finding error intervals, multiplying and dividing, and adding and subtracting	**Geometry:** Shape properties, Nets of 3D shapes, finding the area of compound shapes containing triangles, converting units of length Properties of 3D shapes, nets of 3D shapes, finding the surface area from a net, finding the surface area of cubes and cuboids, finding the surface area of prisms,	**Algebra:** Reading and plotting coordinates, substituting into algebraic formulae Plotting horizontal, vertical and diagonal lines, plotting straight line graphs, finding equations of straight line graphs **Geometry:** Reading and plotting coordinates, angles on	**Algebra:** Using number lines Solving equations with one step, mixed problems: solving equations with two or more steps, expanding single brackets and simplifying expressions, adding and subtracting fractions, adding and subtracting mixed numbers, multiplying fractions, multiplying

	expressions with multiple operations, using number lines, adding and subtracting with negative numbers, multiplying and dividing with negative numbers, term-to-term rules for numerical sequences and for sequences of patterns, solving equations of the form ax+b=c, substituting into expressions with multiple operations. Index rules with positive and negative indices, simplifying expressions using index laws, simplifying algebraic fractions by cancelling common factors, solving equations of the form (x+a)/b=c, solving linear equations involving brackets, solving equations with the unknown on both sides, solving equations with the unknown in the denominator, constructing and solving equations, term-to-term rules for numerical sequences	converting between ratios, fractions and percentages, using equivalent ratios to find unknown amounts, sharing amounts in a given ratio, drawing and interpreting scale diagrams. Combining ratios **Algebra:** Reading and plotting coordinates, calculating midpoints, mixed problems: coordinates and midpoints **Geometry:** Finding the area of rectangles, compound shapes, triangles, and of compound shapes containing triangles, converting units of length. Finding the area of parallelograms and trapeziums, converting units of area.	numbers in standard form, standard form with a calculator. **Geometry:** Calculating with roots and powers, substituting into algebraic formulae, rounding decimals. Identifying parts of circles, finding the circumference and area of circles. Finding the arc length and area of sectors **Probability:** Writing probabilities as fractions, decimals and percentages, probabilities of mutually exclusive events, Venn diagrams, finding the lowest common multiple, finding factors and using divisibility tests, finding the highest common factor, finding prime numbers, prime factor decomposition Venn diagrams, probabilities from Venn diagrams, finding the HCF and LCM using prime factor decomposition	finding the volume of cubes and cuboids, finding the volume of prisms, converting units of volume Finding the surface area of cylinders and pyramids, finding the volume of cylinders, pyramids, cones and spheres,	a line and about a point, vertically opposite angles, angles in triangles. Translation, reflection, angles in quadrilaterals, combining angle facts, angles on parallel lines, using quadrilateral properties to find angles, angles in polygons. Rotation, enlargement by a positive scale factor. **Statistics:** Drawing angles, angles on a line and about a point, fractions of amounts without a calculator, averages and range Drawing and interpreting pie charts, drawing and interpreting line graphs, drawing and interpreting stem-and-leaf diagrams, finding averages from diagrams Plotting and interpreting scatter graphs	with mixed numbers, dividing fractions, dividing with mixed numbers, calculating with fractions, simplifying algebraic fractions by cancelling common factors, factorising into one bracket Reading and drawing linear inequalities on number lines, solving single inequalities, expanding double brackets, calculating with fractions and mixed numbers, simplifying algebraic fractions by factorising, adding and subtracting algebraic fractions Factorising quadratic equations of the form x^2+bx+c **Number:** Using a written method to divide by integers to get a decimal answer, converting between fractions, decimals and percentages Using recurring decimal notation,

	and for sequences of patterns, substituting into position-to-term rules, position-to-term rules for arithmetic sequences and for sequences of patterns		Venn diagrams with set notation			converting fractions to recurring decimals Converting recurring decimals to fractions
Key vocabulary	**Algebra**	**Ratio & Proportion** **Algebra** **Geometry**	**Number** **Geometry** **Probability**	**Geometry**	**Algebra** **Geometry** **Statistics**	**Algebra** **Number**