Hexham Middle School
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The HMS curriculum is sequenced to build on learning from first schools. Staff develop a coherent understanding of curricula across the Partnership as part of our ongoing working groups. At HMS, teachers plan in the long, medium and short-term to ensure consistency in learning experience for all children. The long-term mapping details the sequence of learning in each subject, the key themes, how reading and literacy are developed, how our personal development curriculum is embedded and the key assessment strategies to understand the security of substantive knowledge and learning. The curriculum is planned with ambition for all learners at its core. Detailed medium-term planning is produced for effective implementation and consistency giving teachers the understanding of why learning happens when it does, what pupils should already know, how they will build on this learning in the future and the end-points.

HMS Long Term Curriculum

Subject: Maths

Disciplinary knowledge/ key themes: mental and written calculation; problem solving; conjecture; proof; reasoning; real-world context

Year	Autumn	Spring	Summer
Year 5	Place Value • Decimal numbers, rounding, ordering, comparing and negative numbers Addition and subtraction • rounding, approximation, mental methods and inverse operations. Recap formal methods and calculate with decimal numbers. Perimeter • rectilinear and compound shapes Multiplication and division • multiples, factors, prime numbers, square and cube numbers, multiplying and dividing by powers of 10 Fractions • Proper and improper fractions, equivalent fractions, adding and subtracting fractions.	Multiplication and division • Formal methods for calculating. Short multiplication, long multiplication, and short division Area • compound, rectilinear shapes. Fractions • Multiplying fractions by integers, fractions of amount, fraction problem solving Decimals and percentages • Understanding percentages, finding equivalent fractions, decimals, and percentages. Finding percentages of amounts. Statistics • interpreting charts and line graphs; reading tables and timetables	Properties of shapes • Types of angles, measuring angles, drawing angles, angles on a straight line and around a point, angles, and length within shapes Negative Numbers • Crossing the 0 boundary, temperature changes, introduction to adding and subtracting using a number line Position and direction • Coordinates on the first quadrant, introduction to coordinates in all 4 quadrants, translation of points Converting units, measures, and volume • Converting metres, millimetres, centimetres and kilometres, millilitres, centilitres and litres, grams, kilograms and tonnes, introduction to volume.
Why now?	Place value is introduced at the beginning of the year to secure pupils understanding of number from year 4. They are familiar with money in the form of a decimal, so they are introduced to decimal numbers within this unit too.	Pupils should be familiar with the grid method and short multiplication form year 4. They will use their prior knowledge to help extend this to long division. This links back to the multiples, factors, and primes unit. They are familiar with factorising and are then taught to short division	Properties of shape is taught first; pupils are familiar with types of angles and are introduced measuring in degrees. This is related back to properties of shape taught in previous year including polygons. Then they study negative numbers. Negative numbers are useful to teach

	Once pupils are secure with place value, they revisit addition, subtraction, and calculations including decimals are introduced here to develop that further. They can then apply the rules for addition to find the perimeter of shapes. Multiples and factors are then introduced before the fractions unit to support pupils when finding equivalent fractions and simplest form. They can then convert fractions with denominators that are multiples of the same number to begin adding and subtracting fractions with different denominators.	using their knowledge of factors and multiples. Once secure in this method they can apply the knowledge to finding area of shapes. This is taught initially separately to perimeter so that the pupils are secure with the difference between the two. Once they are secure in methods for finding area, they can link this back to perimeter to find missing sides of compound shapes. They are then taught how to multiply fractions as they should be secure with written methods so they can convert large fractions to mixed numbers and use division to find fractions of amounts. They are then taught about percentages and the links to decimals and fractions and are introduced to finding simple percentages of amounts. The next unit is statistics, it is done now as it means the pupils can use scales effectively involving fractions and decimals. They can also use written methods effectively to solve problems linked to the data.	before position and direction so pupils can be introduced to four quadrants before year 6. Finally, pupils look at converting measurements. They are reminded of the units throughout the year. They then use this knowledge to solve problems with units of measure. These should include area, perimeter, and volume. They are also introduced to imperial measures. Pupils should at this point be able to apply knowledge of percentages, decimals, fractions to problems involving measures.
Assessing the end points	1. Baseline assessment to identify starting points and to consolidate learning from Year 4 – GL assessment 2. Fortnightly arithmetic assessments (calculation and mental skills). 3. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 4. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term).	1. Fortnightly arithmetic assessments (calculation and mental skills). 2. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 3. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term). 4. End of term summative assessment (incl. arithmetic and reasoning).	1. Fortnightly arithmetic assessments (calculation and mental skills). 2. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 3. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term). 4. End of term summative assessment (incl. arithmetic and reasoning). 5. End of year progress assessment (external baseline/ end of year measure).

	5. End of term summative assessment (incl. arithmetic and reasoning).		
Vocabulary	Powers of 10 Numbers to 1,000,000 Roman numerals to 1000 = M Efficient written methods Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written methods Proper fractions, improper fractions, mixed numbers Half, quarter, fifth, two fifths, four fifths Simplest form Equivalent Common multiples	Percentage Tenths, hundredths, thousandths Long multiplication Short division Compound Rectilinear shapes Line graph Bar chart Timetable Remainders	Volume Imperial units (such as inches, pounds and pints) Convert between different metric units (kilometre, metre; centimetre and metre; gram and kilogram; litre and millilitre) Reflex angle Dimensions Regular and irregular polygons Degrees Whole turn = 360°
Ready to Progress	**Number and Place Value** 5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	**Number and Place Value** 5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. **Multiplication and Division** 5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	**Geometry** 5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size. 5NPV–5 Convert between units of measure, including using common decimals and fractions. standard units.

	5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. **Number Facts** 5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. 5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). **Multiplication and Division** 5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. **Fractions** 5F–1 Find non-unit fractions of quantities. 5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context. **Fractions** 5F–1 Find non-unit fractions of quantities. 5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F–3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10, and for multiples of these proper fractions. **Geometry** 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	
Year 6	Place Value • Multiples of 1000, numbers to 1,000,000, negative numbers, rounding numbers to nearest decimal or whole number. Calculations • Addition and subtraction of whole and negative numbers, introduction to algebra through missing numbers, bar	Decimals and Percentages • Linking fractions, decimals, and percentages, calculating with decimals and percentages Measures • Converting between metric units of length, mass and capacity. Geometry	Geometry • Position and direction on all four quadrants Statistics • Interpreting graphs, charts, and timetables, construct simple pie charts, find mean value Consolidation of Y6 objectives

	models and problems, Recap factors, multiples, and primes. Fractions • Finding equivalent fractions, simplest form, addition, and subtractions of fractions with different denominators Calculations • Recap of short and long multiplication, recap short division, long division, link to algebra through missing numbers, bar models and word problems. Fractions • Multiplication and division of fractions	• Area and perimeter of shapes, volume of cuboids Ratio • Understand what ratio means, compare ratio and fractions, solve problems involving ratio, understand scale and how to use scale to scale something up or down Algebra • Understand what and expression and an equation is, know that equations must balance, begin to use algebraic notation Geometry • Construction shapes, angles within shapes, nets of 3d shapes, know features of a circle	• Recap key RTP criteria through investigations and problems Year 7 transition tasks • Secure understanding of multiples, factors, primes, equivalent fractions and corresponding decimals and percentages, secure formal calculations methods, understanding of shape, introduction to calculator skills
Why now?	Pupils are familiar with place value and decimals from year 5, they recap this and extend understanding to millions. This will underpin calculations. We recap addition and subtraction with large numbers and are introduced to algebraic ideas such as missing numbers which will support solving more difficult multi-step word problems. They also recap multiples, factors and primes before revisiting calculating with fractions. The pupils will add and subtract fractions with different denominators by finding the lowest common multiple and converting answers to simplest form. They then revisit calculation and are introduced to long division- links back to multiples. They then are taught how to multiply and divide fractions; this is taught	To make links and connections they start this term by revisiting percentages and decimal calculations, continually relating these back to fractions to secure that understanding. Because pupils should now be secure with written calculations, they can apply these to solve more complex area and perimeter problems. They recap compound shapes and develop this to finding the area of triangles and parallelograms. They then use these formal methods to find the volume of cuboids using formula. Ratio is taught next so pupils can understand the differences between fractions and ratio. They solve problems including measures and shape and scaling up and down using methods taught. Algebra is taught next as they should be familiar with the principles	Once pupils are confident with constructing shapes this will support them to translate shapes on a four-quadrant grid. Understanding those key features supports pupils to draw the accurately. Pupils have looked at statistics continually over the year through science so this unit should secure their understanding further of different types of graphs. New learning here is pie charts and pupils should be able to use their understanding of percentages, angles, and circles to interpret and draw these.

	separately from addition and subtraction, so the methods are fully embedded.	from previous units, and this looks at it in a more formal way. They can then use formula and knowledge of area and perimeter and angles to begin constructing shapes, including features of a circle.	
Assessing the end points	1. Fortnightly arithmetic assessments (calculation and mental skills). 2. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 3. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term). 4. End of half term summative assessment (incl. arithmetic paper 1 and reasoning paper 2 and paper 3).	1. Fortnightly arithmetic assessments (calculation and mental skills). 2. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 3. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term). 4. End of half term summative assessment (incl. arithmetic paper 1 and reasoning paper 2 and paper 3).	1. Fortnightly arithmetic assessments (calculation and mental skills). 2. Fortnightly 'Review to Remember' sessions focused on substantive knowledge retention. 3. Fortnightly 'Maths Flex' assessment to understand ongoing learning security and block assessments and quizzing (throughout the term). 4. End of half term summative assessment (incl. arithmetic paper 1 and reasoning paper 2 and paper 3).
Vocabulary	Numbers to ten million Order of operations Common factors Common multiples Interpret remainders Prime numbers Simplify Simplest form Same denomination Place value in numbers given to 3 decimal places (tenths, hundredths, thousandths)	Vertically opposite angles Circumference Radius Diameter Degree of accuracy Formulae Linear number sequence Substitute Ratio Scale Variables Symbol Known values Construct	Four quadrants in relation to coordinates Mean average Translate shapes Pie chart
Ready to Progress	**Number and Place Value**	**Number and Place Value**	

	6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. 6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. **Addition and Subtraction/Multiplication and Division** 6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 6AS/MD–3 Solve problems involving ratio relationships. 6AS/MD–4 Solve problems with 2 unknowns. **Fractions**	6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. **Geometry** 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	

	6F–1 Recognise when fractions can be simplified and use common factors to simplify fractions. 6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. 6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.		
Year 7	Exploring Sequences • All new content. Describing and continuing sequences, explain term-to-term rules, recognise different types of sequence, represent sequences as graphs Understanding and Using Algebraic Notation • All new content. Function machines, understand and use algebraic notation, substitute into simple expressions (positive numbers only), simplify expressions, expanding and factorising single brackets, problem solving Equality and Equivalence • Recap of KS2 content. BIDMAS, solving one and two step equations, solving equations with single brackets (HA only), problem solving Place Value • Recap of KS2 content. Rounding numbers, multiplying and dividing by powers of 10, solving problems Fractions, Decimals and Percentages	Multiplication and Division • Recap of KS2 content. Factors and multiples, area of a rectangle and parallelogram, problem solving Fractions and Percentages of an Amount • Recap of KS2 content. Calculate a fraction/percentage of an amount, calculating with percentages over 100 (HA only), using a calculator, problem solving Directed Number • Recap of KS2 content. Order and compare directed numbers, use all four operations with directed numbers, use a calculator with directed number, BIDMAS, algebra with directed number, understanding that positive numbers have more than one square root (HA only), higher powers and roots with directed numbers (HA only) Fractional Thinking	Geometric Reasoning • Recap of KS2 content. Basic angle facts, angle sum of polygons (HA only), angles in parallel lines, problem solving Developing Number Sense • Recap of KS2 content. Estimation for sense checking, multiplying and dividing decimals and integers, using a calculator Sets and Probability • All new content. Basic probability, sample spaces, Venn Diagrams Prime Numbers and Proof • Recap of KS2 content. Work with prime, square and triangular numbers, HCF and LCM, product of prime factors (index form HA only), proof and conjectures (HA only), problem solving Time for recap/problem solving/end of year assessments

	• Recap of KS2 content. Convert fluently between FDP, FDP on number lines, FDP over 1/100, problem solving Addition and Subtraction • Recap of KS2 content. Financial maths problems, timetables, frequency trees, perimeter, problem solving	• Recap of KS2 content. Compare and order fractions, convert between mixed numbers and improper fractions, add and subtract fractions (mixed numbers HA only), linking fractions and decimals, equations with fractions (HA only), problem solving Construction and Measures • Recap of KS2 content. Label geometric figures, draw and measure angles (over 180^o HA only), identify parallel and perpendicular lines, types of triangles and quadrilaterals, identify polygons, construct triangles	
Why now?	Exploring Sequences is new content for Year 7. This will help them to feel that they have transitioned into KS3 as it contains no prior knowledge. Other topics build upon KS2 knowledge and cover the key skills needed for students to progress through KS3 and for their GCSE course. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency and reasoning. For example, students covering one and two step equations with positive numbers in the Autumn Term before covering them with directed number in the Spring Term.	These topics build upon KS2 knowledge and cover the key skills needed for students to progress through KS3 and for their GCSE course. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency and reasoning. For example, students covering one and two step equations with positive numbers in the Autumn Term before covering them with directed number in the Spring Term.	Sets and Probability is new content for Year 7. This will help them to feel that they have transitioned into KS3 as it contains no prior knowledge. Other topics build upon KS2 knowledge and cover the key skills needed for students to progress through KS3 and for their GCSE course. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency and reasoning. For example, students covering one and two step equations with positive numbers in the Autumn Term before covering them with directed number in the Spring Term.
Assessing the end points	1. Baseline assessment given to Year 7 to assess their starting point and their KS2 knowledge	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will

	2. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 3. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 4. Summative assessment at the end of term which includes reasoning and problem solving	allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 3. Summative assessment at the end of term which includes reasoning and problem solving	allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 3. Summative assessment at the end of term which includes reasoning and problem solving
Vocabulary	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.
Ready to Progress	Continuing sequences Function machines Using algebraic notation Simplifying expressions Expanding single brackets BIDMAS Solving one step equations Rounding to powers of 10 Convert between FDP Perimeter Reasoning and problem solving	Factors and multiples Area of a rectangle Unit fraction of an amount Key percentage of an amount (50%, 25%, 10%, 1%) Using a calculator Order and compare directed number Four operations with directed number Compare and order fractions Convert between mixed numbers and improper fractions Add and subtract fractions where the denominators are the same or where one denominator is a multiple of the other	Basic angle facts Angles in parallel lines Multiplying a decimal by an integer Dividing a decimal by an integer Basic probability Interpreting and completing simple Venn Diagrams Prime and square numbers HCF and LCM Reasoning and problem solving

		Reasoning and problem solving	
Year 8	Ratio and Scale • All new content. Ratio notation, simplifying ratios (including in the form 1:n and n:1), divide into a given ratio, converting between ratios and fractions, understand pi as the ratio between diameter and circumference, problem solving Multiplicative Change • All new content. Direct proportion (not algebraic), best buy, direct proportion graphs, converting currencies, enlarging a shape, problem solving Multiply and Divide Fractions • Recap of KS2 and Year 7 content. Multiply fractions (including with integers), reciprocal, divide fractions (including with integers) Working in the Cartesian Plane • Recap of KS2 and Year 7 content. Midpoint of a line, lines parallel to the axes, recognise and use y = mx + c, link linear sequences to graphs, explore non-linear graphs (HA only), problem solving Representing Data • Scatter graphs, describe non-linear relationships, frequency tables, describe types of data, two-way tables. Tables and probability	Algebra Techniques • Recap of Year 7 content. Collect like terms, simplify expressions (including indices) including brackets and binomials. Understand and use the multiplication and division laws of indices. Form and solve equations with and without brackets. Use of inequalities on a number line. Solve inequalities. Sequences • Recap of KS2 and Year 7 content. Generate a sequence from nth term, decide whether a term is in a sequence from the nth term Percentages and fractions • Recap of KS2 and Year 7 content of FDP. Increase and decrease by a percentage (including with a calculator and using a multiplier), percentage change, simple reverse percentages, choosing the appropriate method for percentage questions, problem solving Number Sense • Recap of KS2 and Year 7 content. Problem solving with money, time, timetables, calendars, and distance tables. Standard indeix form. Angles • Recap of KS2 and Year 7 content. Solve problems with angles in parallel lines (HA only), properties of special quadrilaterals,	Area and Volume • Recap of KS2 and Year 7 content. Area of a triangle, area of a circle and semi-circle, area of compound shapes, circumference of a circle, volume of cubes and cuboids, volume of prisms, volume of a cylinder, problem solving Transformations • Recap of KS2 and Year 7 content. Enlargement, reflection, translation, rotation, mixed transformations Constructions and Loci • Recap of KS2 and Year 7 content. Scale diagrams, construct 3D solids, construct circles, perpendicular bisector, angle bisector, loci, problem solving Data Handling Cycle • Recap of KS2 and Year 7 content. Statistical enquiries, bar charts, vertical line charts, line graphs, pie charts, compare charts, financial graphs Measures of Location and Dispersion • Averages and range from a list, mean from an ungrouped frequency table (HA only), limitations and advantages of each average, compare data using averages and range, problem solving

	• Construct sample space diagrams. Find probability from two-way tables and sample space diagrams. Find probabilities from Venn diagrams. Use the product rule.	construct special quadrilaterals, sum of interior angles (LA only – HA covered it earlier), one interior and exterior angle of regular polygons (HA only)	
Why now?	There are quite a few topics that contain new content in Year 8. Most of the key skills from KS2 have been recapped in Year 7. Year 7 content is built upon in Year 8, as well as the new content which contains more key skills needed for Year 9 and the GCSE course. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency, and reasoning. For example, students covering some fractions in Year 7 which is then built upon in Year 8 where they cover multiplying and dividing fractions.	All of the topics in this half term build upon knowledge covered in Year 7. Students should have a solid foundation from lessons, "can you still?" assessments, interleaved starters, and interleaved homework. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency, and reasoning. For example, students covering area of a rectangle and parallelogram in Year 7 which is then built upon to find volume in Year 8.	Measures of location and dispersion is a new topic for Year 8. Most of the key skills from KS2 have been recapped in Year 7. Year 7 content is built upon in Year 8, as well as the new content which contains more key skills needed for Year 9 and the GCSE course. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency, and reasoning.
Assessing the end points	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention

	3. Summative assessment at the end of term which includes reasoning and problem solving	3. Summative assessment at the end of term which includes reasoning and problem solving	3. Summative assessment at the end of term which includes reasoning and problem solving. This assessment is sat by all the feeder middle schools and will help with setting for the high school.
Vocabulary	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the definition and meaning of these words with students.
Ready to Progress	Ratio notation Simplifying ratio Dividing into a ratio Direct proportion Best buy Multiplying and dividing fractions Lines parallel to the axis Scatter graphs Frequency tables Reasoning and problem solving	Working with time, calendars, and money Increase and decrease by a key percentage (50%, 25%, 10%, 1%) Using a calculator Area of a triangle Area and circumference of a circle Volume of a cube and cuboid Reflection Enlargement Translation (no vectors) Reasoning and problem solving	Scale diagrams Constructing circles Bar charts Vertical line charts Averages and range from a list Reasoning and problem solving
Year 9 (QEHS)	Key Number Skills • Recap of lower KS3 content. Using a Venn Diagram to find the HCF and LCM (HA only) Angles • All content is recap from lower KS3. Time should be spent on problem solving Scale Diagrams • Recap of lower KS3 content. Converting metric units, scale diagrams (constructing), map scales	Area and Perimeter • Recap of lower KS3 content. Properties of 3D solids, area of a trapezium, area of semi-circles and quarter circles, area of composite shapes, problem solving Equations and Expressions • Recap of lower KS3 content. Identities, equations, expressions and formulae; substitution into formulae, equations with unknowns on both sides, equations with brackets, equations and fractions, problem solving	Constructions and Loci • Recap of lower KS3 content. Construct a circle, construct a perpendicular bisector, problem solving Pythagoras' Theorem • All new content. Pythagoras' Theorem, applying it twice (HA only), 3D Pythagoras (HA only), distance between two coordinates (HA only), problem solving Time for recap/problem solving/end of year assessments

	Decimals • Recap of lower KS3 content. Multiply a decimal by a decimal, divide numbers where the divisor is a decimal (HA only), problem solving Fractions • All content is recap from lower KS3. Time should be spent on problem solving Rounding and Estimation • Recap of lower KS3 content. Rounding to significant figures (more than 1sf HA only), estimation, truncation (truncation to decimal places HA only), problem solving Collecting and Representing Data • Recap of lower KS3 content. Construct and interpret pie charts, line graphs Scatter Graphs • Recap of lower KS3 content. Correlation, predictions from a scatter graph	Co-ordinates and Linear Graphs • Recap of lower KS3 content. Gradient, y = mx + c, problem solving Real Life Graphs • Recap of lower KS3 content. Distance-time graphs, real life graphs, graphs of situations in geometry Ratio and Proportion • Recap of lower KS3 content. Value for money, recipes, ratios as linear functions (HA only), problem solving Sequences • Recap of lower KS3 content. Finding and working with the nth term (linear sequences only), geometric sequences Percentages • Recap of lower KS3 content. Reverse percentages (HA only), percentage change, simple interest, compound interest and depreciation, problem solving Measures • Recap of lower KS3 content. Speed, density, pressure	The timetable rolls over at the end of Summer Half Term 1 so Year 9 students become Year 10 students and start the Year 10 curriculum.
Why now?	The start of Year 9 is majority recap from lower KS3 to account for the fact that students come from a number of different middle schools, and we need to make sure they are all at the same level before we build upon this knowledge. Lower KS3 content is built upon to cover the final objectives from the KS3 national curriculum before the students start the KS4 national curriculum objectives in Year 10. This should	Spring Half Term still contains recap from lower KS3 to account for the fact that students come from a number of different middle schools, and we need to make sure they are all at the same level before we build upon this knowledge. Lower KS3 content is built upon to cover the final objectives from the KS3 national curriculum before the students start the KS4 national curriculum objectives in Year 10. This should	

	ensure that students are ready to progress into KS4 and have the necessary knowledge and skills, especially problem-solving skills. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency, and reasoning. For example, students covering plotting scatter graphs and lines of best fit in Year 8 before covering correlation and predictions from a line of best fit in Year 9.	ensure that students are ready to progress into KS4 and have the necessary knowledge and skills, especially problem-solving skills. Care has been taken over the sequencing of topics, and students should notice topics being "drip fed" throughout the KS3 curriculum to help to avoid cognitive overload and help with understanding, fluency, and reasoning. For example, students covering area and perimeter before problem solving with equations to allow them to answer questions that combine these topics.	
Assessing the end points	1. Baseline assessment given to Year 7 to assess their starting point and their KS2 knowledge 2. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 3. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 4. Summative assessment at the end of term which includes reasoning and problem solving	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 3. Summative assessment at the end of term which includes reasoning and problem solving	1. "Can You Still?" assessments given a few lessons before a new topic to see what students can recall from KS2. This will allow teachers to plan their lessons and starters, recapping where necessary. 2. Taking Learning Forwards (TLF) assessments given at the end of each topic to assess the skills covered in that topic, and to build reasoning and problem solving. This also includes a prior topic (4 topics ago) which will help with recall and retention 3. Summative assessment at the end of term which includes reasoning and problem solving. This assessment will help us to set students for Year 10.
Vocabulary	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the	Buzzwords are given for every learning objective in a topic. Time should be spent discussing the

	definition and meaning of these words with students.	definition and meaning of these words with students.	definition and meaning of these words with students.
Ready to Progress	Converting metric units Rounding to 1sf Estimation Correlation Predictions from a scatter graph Reasoning and problem solving	Area of a semi-circle Area of composite shapes Substitution Gradient Distance-time graphs Recipes Value for money Finding the nth term of a linear sequence Simple interest Speed Reasoning and problem solving	Pythagoras' theorem Reasoning and problem solving