SUBJECT: MATHEMATICS – Advanced+

Year Group	**Year 7**					
Rationale	To build on skills developed at KS2 and consolidate through extension and problem solving. To be introduced to the ability to model and generalise through algebraic techniques. To begin to use a scientific calculator confidently.					
	Autumn Term 1	**Autumn Term 2**	**Spring Term 1**	**Spring Term 2**	**Summer Term 1**	**Summer Term 2**
Topic/Unit	▪ Calculations Checking & Rounding ▪ Expressions Formulas & Substitution	▪ Perimeter & Area ▪ Factors, Multiples & Primes ▪ Brackets & Factorising	▪ Percentages ▪ Setting up & Solving Equations	▪ Setting up & solving Equations continued ▪ Sequences	▪ Linear Graphs (y = mx + c) & Co-ordinate Geometry ▪ Fractions	▪ Algebraic Fractions & Ratio ▪ Decimals & Place Value ▪ Product Rule for Counting ▪ Averages & Range
Knowledge	**Calculations Checking & Rounding** Pupils will know how to check the validity of their calculations using estimation by learning how to round numbers to decimal places and significant figures. Pupils will learn how to use arithmetic skills with both positive & negative numbers. **Expressions Formulas & Substitution** Pupils will learn about The definitions of term, expression, equation and identity. Pupils will know how to form expressions, simplify them and how to substitute numbers into them.	**Perimeter & Area** Pupils will know how to find the perimeter and area of a range of 2D shapes including composite shapes. **Factors, Multiples & Primes** Pupils will know the definitions of factors, multiples and primes. Pupils will be able to recognise factors, multiples and prime numbers from lists and will understand how to find the HCF and LCM and solve problems about them. **Brackets & Factorising** Pupils will understand how to expand single and double brackets using multiplying methods. Pupils will know how to simplify expanded expressions. Pupils will develop their understanding of how to factorise expressions into single brackets.	**Percentages** Pupils will know how to change between fractions, decimals and percentages. Pupils will be able to find percentages of amounts, how much one amount is as a percentage of another and how to increase/decrease an amount by a percentage. Pupils will develop their knowledge of solving real-life problems using percentage skills. **Setting up & Solving Equations** Pupils will know how to set up equations from given information and then be able to solve the equation.	**Setting up & solving Equations** Pupils will know how to set up equations from given information and then be able to solve the equation. **Sequences** Pupils will know how to recognise different types of sequences and how to find further terms in the sequence. Pupils will understand how to find any term in a sequence by deriving the nth term. Pupils will be able to use the nth term to generate a sequence. Pupils will learn how to find sequences from patterns & diagrams and be able to continue the sequence.	**Linear Graphs (y = mx + c) & Co-ordinate Geometry** Pupils will know how to plot co-ordinates in all 4 quadrants. Pupils will be able to complete a table of values and plot a linear graph from the table. Pupils will develop their understanding of horizontal & vertical lines. Pupils will be able to find the midpoint of lines and develop their understanding of finding the gradient and y intercept from an equation of a line or from a drawn line and how parallel lines have the same gradient. Pupils will know how to find approximate solutions to equations using a linear graph. **Fractions** Pupils will know how to simplify fractions, find equivalent fractions and how to order & compare fractions. Pupils will be able to find fractions of	**Algebraic Fractions & Ratio** Pupils will know how to simplify algebraic fractions and perform the 34 rules of arithmetic with algebraic fractions. Pupil will be able to simplify ratios, convert between fractions and ratios and be able to share into ratios including 3-part ratios. **Decimals & Place Value Product Rule for Counting** Pupils will know how to use the 4 arithmetic skills with decimals. Pupils will develop their knowledge of using place value with decimals to use one calculation to find the answer for another. Pupils will know how to use the product rule for counting in given situations **Averages & Range** Pupils will know the definitions of mean, median,

					amounts and use all 4 arithmetic skills with fractions. Pupils will be able convert between fractions and mixed numbers	mode and range and use this knowledge to answer questions on evaluating the averages & range from given raw data sets. Pupils will be able to draw steam and leaf diagrams and other frequency charts and sue them to find the averages and range.
Skills	**Calculations, Checking & Rounding** Apply the four rules of arithmetic with positive, negative and decimal numbers. Round numbers to different levels of accuracy and use rounded values in estimation. **Expressions, Formulas & Substitution** Define types of algebra. Write expressions and formulas from a range of situations. Substitute values into expressions and formulas. Manipulate expressions using the four rules of arithmetic to simplify	**Perimeter & Area** Use formulae efficiently to find the perimeter and/or area of a range of 2D shapes, including estimating areas and working with composite shapes. **Factors, Multiples & Primes** Define and identify factors, multiples and prime numbers. Write a number in prime factor form and use this and/or index notation to problem solve. Find common factors and multiples including the LCM and HCF and including the use of Venn diagrams. Solve problems using LCM and/or HCF. Simplify surds. **Brackets & Factorising** Expand and simplify single brackets and multiple single brackets. Expand and simplify double brackets. Factorise linear and quadratic expressions into	**Percentages** Convert between fractions, decimals and percentages. Express one number as a percentage of another, including working with more than 100%. Find a percentage of an amount using calculator and non-calculator techniques. Increase and decrease by a given percentage. Solve problems in real-life contexts using percentages, including comparisons. **Setting up and Solving Equations** Understand and use the ≠ and ≡ symbols. Solve a range of linear equations, including the use of brackets, fractions, and negative numbers and when the unknown appears on either one or both sides of	**Setting up & Solving Equations (continued)** **Sequences** Recognise and continue simple sequences including odd, even, triangular, square, cube, and Fibonacci-type sequences. Describe a term-to-term rule for a sequence including use it to generate a sequence. Find the nth term of a linear sequence. Use the nth term to find a specific term within a sequence or to generate a whole sequence. Use the nth term to deduce whether a specific value appears in a sequence.	**Linear Graphs & Co-ordinate Geometry** Identify and plot co-ordinates in all 4 quadrants. Find the co-ordinates of the midpoint of lines or missing co-ordinates on 2D shapes on a grid. Identify and/or draw horizontal and vertical graphs. Use a table of values to generate points on a linear graph. Plot and draw a range of linear graphs. Find the gradient and intercept from a linear graph and use them to define the equation of a graph. Interpret the gradient in context. Find approximate solutions to equations using a linear graph. Recognise parallel graphs have the same gradient. **Fractions** Express one value as a fraction of another. Simplify and find equivalent fractions	**Algebraic Fractions & Ratio** Simplify (using factorising of linear and quadratic expressions) Add, subtract, multiply and divide simple ones with a single term on the denominator. Ratio - Express the division of a quantity into a number of parts as a ratio and write ratios in their simplest form, including three-part ratios. Divide a given quantity into two or more parts in a given part : part or part : whole ratio **Decimals & Place Value** Multiply and divide decimals by decimals. Use place value and the properties of multiplying and dividing decimals to use one calculation to find the answer for another. **Product Rule for Counting** Use the product rule for counting in simple situations.

		single or double brackets. Simplify and use the four rules of arithmetic with simple algebraic fractions. Solve 'show that' problems using algebraic skills.	the equation. Form equations or formulae from given information or diagrams and then solve them.		including to compare or order fractions. Find a fraction of an amount. Convert between mixed numbers and improper fractions. Use the four rules of arithmetic, including with mixed numbers. Find the reciprocal of an integer or a fraction.	**Averages & Range** Find the mean, mode, median and range from small data sets. Find missing values in data sets given an average or the range. Recognise the advantages and disadvantages of different measures of the average in different contexts. Construct and find averages and the range from stem and leaf diagrams. Calculate averages and range from a frequency table. Calculate averages and range from a grouped frequency table and recognise why the mean will be an estimate.
Assessments Formative	Open Book Assessment 1. End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons	End-of-topic quizzes. Regular use of whiteboards in lessons	Open book Assessment 2. End-of-topic quizzes. Regular use of whiteboards in lessons	End-of-topic quizzes. Regular use of whiteboards in lessons	Open book Assessment 3. End-of-topic quizzes. Regular use of whiteboards in lessons
Assessments Summative		Assessment 1 will contain questions designed to assess students learning of the topics taught in the first term.			End-of-Year assessment that will contain questions designed to assess the students learning of all topics taught across the previous terms.	
Homework	Introduction to Mathswatch task Assessment 1 Advanced+ revision task Core skills homework booklets (7-week written homework that works on core skills).	Preparation for assessment window 1 including Mathswatch revision task Independent homework tasks based on class teacher professional judgement	Independent homework tasks based on class teacher professional judgement	Core skills homework booklets (7-week written homework that works on core skills). Assessment 2 Advanced+ revision (Mathswatch) Independent homework tasks based on class teacher	Preparation for end-of-year assessment week including Mathswatch revision task Independent homework tasks based on class teacher professional judgement	Mathswatch: Revision skills Assessment 3 Advanced+ revision Revision aid to be used during assessment 3 Independent homework tasks based on class teacher professional judgement

	Independent homework tasks based on class teacher professional judgement			professional judgement		

SUBJECT: MATHEMATICS – Core +

Year Group	**Year 7**					
Rationale	To build on skills developed at KS2 and consolidate through extension and problem solving. To be introduced to the ability to model and generalise through algebraic techniques. To begin to use a scientific calculator confidently.					
	Autumn Term 1	**Autumn Term 2**	**Spring Term 1**	**Spring Term 2**	**Summer Term 1**	**Summer Term 2**
Topic/Unit	▪ Integers & Place Value ▪ Expressions, Formulas & Substitution ▪ Perimeter & Area	▪ Factors, Multiples & Primes ▪ Brackets & Factorising	▪ Percentages & Conversions ▪ Setting up & Solving Equations	▪ Sequences ▪ Linear Graphs & Co-ordinate Geometry	▪ Number – Fractions & Ratios	▪ Decimals & Place Value ▪ Averages & Range
Knowledge	**Integers & Place Value** Pupil will be able to apply the four rules of arithmetic with positive, negative and decimal numbers and also order them. Pupils will know how to multiply and divide numbers by powers of 10. Pupils will be able to round numbers to different levels of accuracy and use these rounded numbers to estimate answers. **Expressions, Formulas & Substitution** Pupils will learn about The definitions of term, expression, equation and identity. Pupils will know how to form expressions, simplify them and how to substitute numbers into them. **Perimeter & Area** Pupils will know how to	**Factors, Multiples & Primes** Pupils will know the definitions of factors, multiples and primes. Pupils will be able to recognise factors, multiples and prime numbers from lists and will understand how to find the HCF and LCM and solve problems about them. **Brackets & Factorising** Pupils will understand how to expand single and double brackets using multiplying methods. Pupils will know how to simplify expanded expressions. Pupils will develop their understanding of how to factorise expressions into single brackets.	**Percentages & Conversions** Pupils will now how to convert between fractions, decimals and percentages. Pupils will recognise recurring decimals and know how to turn them into fractions. Pupils will know how to write a number as a percentage of another, increase or decrease by a percentage and find a percentage of a quantity without/with a calculator Pupils will be able to solve percentage problems in real-life situations. **Setting up & Solving Equations** Pupils will know how to set up equations from given information and then be able to solve the equations.	**Sequences** Pupils will know how to recognise different types of sequences and how to find further terms in the sequence. Pupils will understand how to find any term in a sequence by deriving the nth term. Pupils will be able to use the nth term to generate a sequence. Pupils will learn how to find sequences from patterns & diagrams and be able to continue the sequence. **Linear Graphs & Co-ordinate Geometry** Pupils will know how to plot co-ordinates in all 4 quadrants and how to draw and label axes correctly. Pupils will be able to complete a function machine and a table of values and plot a	**Number – Fractions & Ratios** Pupils will be able to write fractions to describe shaded diagrams and use diagrams to compare fractions. Pupils will know how to simplify, find equivalent fractions, how to express one value as a fraction of another, how to find a fraction of an amount, how to change between mixed numbers and improper fractions and how to use the four rules of arithmetic with fractions. Pupils will be able to find the reciprocal of an integer or a fraction. Pupils will know how to write ratios as fractions and vice versa. Pupils will be able to write ratios in their simplest form and share a quantity in a given ratio.	**Decimals & Place Value** Pupils will be able to identify the value of digits in a decimal or integer, read values from a scale, order and compare decimals and apply the four rules of arithmetic to decimal. Pupils will know how to round numbers to the nearest whole, decimal places or significant figures. Pupils will be able to use rounding to estimate calculations. **Averages & Range** Pupils will know the definitions of mean, mode, median and range and be able to find the averages & range for small data sets. Pupils will be able to find the mode and range from a bar chart and the modal value & range from a frequency table. Pupils will know how to find the total frequency

	find the perimeter and area of a range of 2D shapes including composite shapes.			linear graph from the table. Pupils will develop their understanding of horizontal & vertical lines. Pupils will be able to find the midpoint of lines and the missing vertex co-ordinates of 2D shapes.		from a frequency table.
Skills	**Integers & Place Value** Order positive and negative integers and decimals. Apply the four rules of arithmetic with positive, negative and decimal numbers. Multiply and divide numbers by powers of 10. Round numbers to different levels of accuracy and use rounded values in estimation. **Expressions, Formulas & Substitution** Define types of algebra. Write expressions and formulas from a range of situations. Substitute values into expressions and formulas. Manipulate expressions using the four rules of arithmetic in order to simplify.	**Factors, Multiples & Primes** List all numbers that can be made from given sets of digits. Define and identify factors, multiples and prime numbers. List all factors of a number systematically. List multiples of integers. Write a number in prime factor form including using index notation. Find common factors and common multiples of two numbers. Find the LCM and HCF including using Venn diagrams or listing. **Bracket & Factorising** Multiply a single bracket. Simplify expressions involved repeated single brackets. Factorise a single bracket by taking out common numerical or algebraic factors.	**Percentages & Conversions** Convert between fractions, decimals and percentages. Recognise recurring decimals and convert fractions into recurring decimals. Express one number as a percentage of another. Find a percentage of a quantity without a calculator for 50%, 25% and multiples of 10% and 5%. Find a percentage of a quantity with a calculator. Increase or decrease by a percentage. Solve problems in real-life contexts using percentages, including comparisons. **Setting up & Solving Equations** Use function machines, including to solve equations.	**Sequences** Recognise and continue simple sequences including odd, even and Fibonacci-type sequences. Use function machines to generate terms in a sequence. Describe a term-to-term rule for a sequence including use it to generate a sequence. Find the nth term of a linear sequence. Use the nth term to find a specific term within a sequence or to generate a whole sequence. Use the nth term to deduce whether a specific value appears in a sequence. **Linear Graphs & Co-ordinate Geometry** Identify and plot co-ordinates in all 4 quadrants.	**Number – Fractions & Ratios** Write fractions to describe shaded parts of a diagram and use diagrams to compare or order fractions. Simplify and find equivalent fractions including to compare or order fractions. Express one value as a fraction of another. Convert between mixed numbers and improper fractions. Use the four rules of arithmetic, including with mixed numbers. Find a fraction of an amount. Find the reciprocal of an integer or a fraction. Write ratio as fraction and vice versa. Write ratios in their simplest form. Share a quantity in a given ratio including three-part ratios	**Decimals & Place Value** Identify the value of digits in a decimal or integer. Compare and order decimals. Indicate given values on a scale, including decimals. Apply the four rules of arithmetic to decimal calculations, including money. Multiply and divide by a value between 0 and 1. Round numbers to the nearest integer, to a given number of decimal places and to a given number of significant figures. Estimate answers to calculations by rounding to 1 sig. fig. Use one calculation to find the answer to another, in simple cases. **Averages & Range** Find the mean, mode, median

	Use basic index laws when manipulating algebra. **<u>Perimeter & Area</u>** Choose the appropriate unit of measurement for a range of situations. Make sensible estimate of a range of measures in everyday settings. Measure shapes to find perimeters and areas. Find the perimeter of rectangles, triangles, parallelograms, trapezia and composite shapes. Use formulae to find the area of rectangles and triangles and composite shapes.	Show algebraic expressions are equivalent.	Solve a range of linear equations, including the use of simple brackets or fractions, when the unknown appears on either one or both sides of the equation. Form equations or formulae from simple given information or diagrams and then solve them in order to solve a problem.	Find the co-ordinates of the midpoint of line segments or missing co-ordinates on 2D shapes given on a grid. Use function machines with an input of x, to find the output, y. Identify and/or draw horizontal and vertical graphs. Use a table of values to generate points on a linear graph. Plot and draw a range of linear graphs. Draw, label and scale axes accurately.		and range from small data sets. Find the mode and range from a bar chart. Calculate the total frequency from a frequency table and identify the greatest and least values leading to finding the range. Find the mode/modal value from a frequency table or grouped frequency table.
Assessments Formative	Open book Assessment 1 End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	Open book Assessment 2 End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	Open book Assessment 3 End-of-topic quizzes. Regular use of whiteboards in lessons.
Assessments Summative		Assessment 1 will contain questions designed to assess students learning of the topics taught in the first term.			End-of-Year assessment that will contain questions designed to assess the students learning of all topics taught across the previous terms.	
Homework	Mathswatch: Assessment 1 Core+ revision Core skills homework booklets (7-week written homework that works on core skills).	Preparation for assessment window 1 including Mathswatch revision task Independent homework tasks based on class teacher	Independent homework tasks based on class teacher professional judgement	Core skills homework booklets (7-week written homework that works on core skills). Assessment 2 Core+ revision (Mathswatch)	Preparation for end-of-year assessment including Mathswatch revision task Independent homework tasks based on class teacher	Mathswatch: Assessment 3 Core+ revision Independent homework tasks based on class teacher professional judgement

	Independent homework tasks based on class teacher professional judgement	professional judgement		Independent homework tasks based on class teacher professional judgement	professional judgement	

St Edmund Arrowsmith **Catholic** High School : **Curriculum (2024-25)**

SUBJECT: MATHEMATICS – Core

Year Group	**Year 7**					
Rationale	To consolidate skills developed at KS2 with progression to problem solving techniques. To be introduced to the ability to model and generalise through algebraic techniques. To ensure numerical skills are well practised throughout. To begin to use a scientific calculator confidently.					
	Autumn Term 1	**Autumn Term 2**	**Spring Term 1**	**Spring Term 2**	**Summer Term 1**	**Summer Term 2**
	Topic/Unit:	Topic/Unit:	Topic/Unit:	Topic/Unit:	Topic/Unit:	Topic/Unit:
Topic/Unit	Integers & Place Value Expressions, Formulas & Substitution	Perimeter & Area Factors, Multiples & Primes	Brackets & Factorising Basic Percentages & Conversions	Setting up & Solving Equations Sequences	Basic Linear Graphs & Co-ordinate Geometry Fractions & Ratios	Decimals & Place Value Averages & Range
Knowledge	**Integers & Place Value** Pupil will be able to apply the four rules of arithmetic with positive, negative and decimal numbers and also order them. Pupils will know how to multiply and divide numbers by powers of 10. Pupils will be able to round numbers to different levels of accuracy and use these rounded numbers to estimate answers. **Expressions, Formulas & Substitution** Pupils will learn about The definitions of term, expression, equation and identity. Pupils will know how to form expressions, simplify them and how to substitute numbers into them.	**Perimeter & Area** Pupils will know how to find the perimeter and area of a range of 2D shapes including composite shapes. **Factors, Multiples & Primes** Pupils will know the definitions of factors, multiples and primes. Pupils will be able to recognise factors, multiples and prime numbers from lists and will understand how to find the HCF and LCM and solve problems about them.	**Brackets & Factorising** Pupils will understand how to expand a single bracket by using multiplying methods. Pupils will know how to simplify expanded expressions. Pupils will develop their understanding of how to factorise expressions into single brackets. **Percentages & Conversions** Pupils will now how to convert between fractions, decimals and percentages. Pupils will recognise recurring decimals and know how to turn them into fractions. Pupils will know how to write a number as a percentage of another, increase or decrease by a percentage and find a percentage of a quantity without/with a calculator Pupils will be able to solve percentage problems in	**Setting up & Solving Equations** Pupils will know how to set up equations from given information and then be able to solve the equations. **Sequences** Pupils will know how to recognise different types of sequences and how to find further terms in the sequence by using the term-to-term rule. Pupils will know how to use function machines to generate sequence. Pupils will know how to find sequences from patterns & diagrams and be able to continue the sequence.	**Basic Linear Graphs & Co-ordinate Geometry** Pupils will know how to plot co-ordinates in all 4 quadrants and how to draw and label axes correctly. Pupils will be able to complete function machine or a table of values and plot a linear graph from the table. Pupils will develop their understanding of horizontal & vertical lines. Pupils will be able to find the midpoint of lines and the missing vertex co-ordinates of 2D shapes. Pupils will know how to draw and label axes correctly. **Fractions & Ratios** Pupils will be able to write fractions to describe shaded diagrams and use diagrams to compare fractions. Pupils will know how to simplify, how to find equivalent fractions, how to express one value as a	**Decimals & Place Value**. Pupils will be able to identify the value of digits in a decimal or integer, read values from a scale, order and compare decimals and apply the four rules of arithmetic to decimal. Pupils will know how to round numbers to the nearest whole, decimal places or significant figures. Pupils will be able to use rounding to estimate calculations. **Averages & Range** Pupils will know the definitions of mean, mode, median and range and be able to find the averages & range for small data sets. Pupils will be able to find the mode and range from a bar chart .

			real-life situations.		fraction of another, how to find a fraction of an amount, how to change between mixed numbers and improper fractions and how to use the four rules of arithmetic with fractions. Pupils will be able to write ratios as fractions and vice versa. Pupils will understand how to write ratios in their simplest form and share a quantity in a given ratio. .	. .
Skills	**<u>Integers & Place Value</u>** Order positive and negative integers and decimals. Apply the four rules of arithmetic with positive and negative integers. Recall and use multiplication facts up to 12 x 12 and use them to support division. Multiply and divide	**<u>Perimeter & Area</u>** Choose the appropriate unit of measurement for a range of situations. Make sensible estimate of a range of measures in everyday settings. Convert between simple metric measurements. Measure shapes to find perimeters and areas. Find the perimeter of	**<u>Bracket & Factorising</u>** Multiply a single number term over a bracket. Simplify simple expressions involved repeated single brackets. Factorise a single bracket by taking out common numerical or algebraic factors. **<u>Basic Percentages & Conversions</u>** Understand that a percentage is	**<u>Setting up & Solving Equations</u>** Use function machines, including to solve equations. Solve a range of linear equations, including the use of simple brackets or fractions, when the unknown appears on either side of the equation (not both sides). Form basic equations or formulae from simple given	**<u>Basic Linear Graphs & Co-ordinate Geometry</u>** Identify and plot co-ordinates in all 4 quadrants. Find the co-ordinates of the midpoint of line segments given on a diagram and axes. Use function machines with an input of x, to find the output, y. Identify and/or draw horizontal and vertical graphs.	**<u>Decimals & Place Value</u>** Identify the value of digits in a decimal or integer. Compare and order decimals. Indicate given values on a scale, including decimals. Apply the four rules of arithmetic to decimal calculations, including money. Round numbers to the nearest integer, to a given number of

	numbers by powers of 10. Check answers by rounding or using inverse operations. **Expressions, Formulas & Substitution** Simplify algebraic expressions by collecting like terms with addition and subtraction. Multiply algebraic terms. Simplify division expressions by cancelling. Substitute values into simple expressions and formulas. Write expressions and formulas from a range of simple situations.	rectangles, triangles, parallelograms, trapezia and simple composite shapes. Use formulae to find the area of rectangles and triangles and simple composite shapes made from rectangles and triangles. **Factors, Multiples & Primes** List all 3-digit numbers that can be made from given sets of digits. Define and identify factors, multiples and prime numbers. List all factors of a number systematically. List multiples of integers. Find common factors and common multiples of two numbers. Find the LCM and HCF of simple pairs of numbers using listing.	a fraction in hundredths. Convert between simple fractions, decimals and percentages. Express one number as a percentage of another. Find a percentage of a quantity without a calculator for 50%, 25% and multiples of 10% and 5%. Find a percentage of a quantity with a calculator. Increase or decrease by a percentage. Solve simple problems in real-life contexts using percentages, including comparisons.	information or diagrams and then solve them to solve a problem. **Sequences** Recognise and continue simple sequences including odd, even and Fibonacci-type sequences. Use function machines to generate terms in a sequence. Describe a term-to-term rule for a sequence and use it to find extra terms. Recognise patterns from diagrams and draw the next diagram. Generate sequence of numbers: arithmetic, square and cube numbers and triangular numbers, and those derived from sets of diagrams.	Use a table of values to generate points on a simple linear graph. Plot and draw a range of simple linear graphs. Draw, label and scale axes accurately. **Fractions & Ratios** Write fractions to describe shaded parts of a diagram and use diagrams to compare or order fractions. Simplify and find equivalent fractions including to compare or order fractions. Express one value as a fraction of another. Convert between mixed numbers and improper fractions. Add and subtract fractions. Find a fraction of an amount. Write ratio as fraction and vice versa. Write ratios in their simplest form. Share a quantity in a given ratio including three-part ratios.	decimal places and to a given number of significant figures. Estimate answers to calculations by rounding to 1 sig. fig. **Averages & Range** Find the mean, mode, median and range from small sets of discrete data. Find the mode and range from a bar chart.
Assessments Formative	Open book Assessment 1 End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	Open book Assessment 2 End-of-topic quizzes. Regular use of whiteboards in lessons.	End-of-topic quizzes. Regular use of whiteboards in lessons.	Open book Assessment 3 End-of-topic quizzes. Regular use of whiteboards in lessons.
Assessments Sumative		Assessment 1 will contain questions designed to assess students learning of the topics taught in the first term.			End-of-Year assessment that will contain questions designed to assess the students learning of all topics taught across the previous terms.	

Homework	Mathswatch: Assessment 1 Core revision Core skills homework booklets (7-week written homework that works on core skills). Independent homework tasks based on class teacher professional judgement	Preparation for assessment window 1 including Mathswatch revision task Independent homework tasks based on class teacher professional judgement	Independent homework tasks based on class teacher professional judgement	Core skills homework booklets (7-week written homework that works on core skills). Assessment 2 Core revision (Mathswatch) Independent homework tasks based on class teacher professional judgement	Preparation for end-of-year assessment week including Mathswatch revision task Independent homework tasks based on class teacher professional judgement	Mathswatch: Assessment 3 Core revision Independent homework tasks based on class teacher professional judgement