



Maths Department

Yr 7 Curriculum and Assessment Map

| | Half Term 1 | Half-Term 2 | Half Term 3 | Half Term 4 | Half Term 5 | Half Term 6 |
|---------------------------|--|--|---|---|--|---|
| Year 7 | Arithmetic Structure and Generalised Number | Algebra | Co-ordinate Geometry | Structure of Number (Decimals) | Structure of Number (Fractions) | Probability and Venn Diagrams |
| Fundamental Knowledge | <ul style="list-style-type: none">Understand and generalise the relationship between addition and subtraction and multiplication and divisionUnderstand the laws of arithmetic including commutativity, associativity, distributivity and the meaning of the equals sign.Add, subtract, multiply and divide negative numbersUnderstand and use the concept of zero pairs | <ul style="list-style-type: none">New: Use the order of operationsNew: Understand the concept of a variable and generalised arithmeticSimplifying algebraic expressions, including adding, subtracting, multiplying, dividingSubstituting into an expression including positive, negative numbers.Expanding brackets and simplifying the resulting expression, including double and triple bracketsUnderstanding how algebraic notation can be used to represent worded scenarios, aspects of shape, calculations and different types of numbers (such as even, odd and consecutive numbers). | <ul style="list-style-type: none">Plotting and reading co-ordinates in all 4 quadrantsUse square numbers, roots and squaring numbersFinding the perimeter and area of rectangles, triangles, parallelograms, trapeziums, and compound shapes made up of these. | <ul style="list-style-type: none">Reading and writing (in words or digits) any number correctly, including being able to give the value of any digit in any number.Estimating calculations and distinguishing between exact answers and approximations (e.g., square roots)Ordering, adding, subtracting and multiplying any decimal numbers (including negative numbers and considering order of operations); including calculations involving conversion of decimal units.Rounding numbers to a given power of 10, number of decimal placesAppreciating the infinite nature of decimals | <ul style="list-style-type: none">Finding and using, products, prime numbers, factors, multiples, common multiples and factors, highest common factor, lowest common multiple.Ordering, adding, subtracting, multiplying and dividing any fractions, including use of equivalent fractions where necessary (including working with mixed numbers and improper fractions).Converting between terminating decimals and fractions | <ul style="list-style-type: none">Writing a probability in words or calculating as a fraction or decimal, and marking on a scale (including use of the fact that the total probability of all of the outcomes is 1).Recording all of the possible combinations/outcomes in a given situation, including theoretical and experimental, and using these to calculate probabilities including those with equally likely and mutually exclusive outcomesCalculating, comparing and explaining relative frequencies and theoretical probabilities<i>Knowing And/Or/Not set notation</i> and expressing simple regions using these on a Venn diagram.Writing one number as a fraction of another. |
| Learning Checkpoint Tasks | Learning checks will take place after each unit. | Learning checks will take place after each unit. | Learning checks will take place after each unit. | Learning checks will take place after each unit. | Learning checks will take place after each unit. | Learning checks will take place after each unit. |
| Common Assessment Task | CA1 Trust Assessment | | N/A | | CA2 Trust Assessment | |
| Interleaved Knowledge | <p>Number; Generalised number</p> <p>Y6: Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</p> <p>KS3: Recognise and use relationships between operations including inverse operations. Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships. Understand and use standard mathematical formulae; rearrange formulae to change the subject.</p> <p>Algebra;</p> <p>This builds on commutativity, associativity and negative numbers from term 1 introducing generalisations and variables.</p> | | <p>Co-ordinate geometry;</p> <p>The students have met coordinates in 4 quadrants in primary school but it's important that a) we connect to their primary school work b) we have a solid foundation from which to approach the rest of the half term.</p> <p>This uses the language of negative numbers and algebraic expressions from last half term (which the students will not have done in primary school).</p> <p>We will use the co-ordinate grid throughout the rest of this half term</p> <p>We are laying eggs for straight-line graphs and transformations.</p> <p>Structure of number;</p> <p>We have looked at the laws of arithmetic which apply whichever number system we use. We are now zooming in on particular number systems (registers), looking at the structures within each system and how the laws apply. Having a good</p> | | <p>Structure of Number</p> <p>KS2 - Prime numbers and factors, common factors and multiples, associate fraction with division, equivalences between simple fractions, decimals and percentages, recognise equivalent fractions with small denominators, families of common equivalent fractions, simplifying by dividing by common factor, compare and order fractions, add and subtract fractions with different denominators and mixed numbers, multiply proper fractions and mixed numbers by whole numbers, multiply simple pairs of proper fractions, writing the answer in its simplest form</p> <p>Probability;</p> <p>The topic of probability is an opportunity to apply our knowledge and skills from previous half terms and to provide a bridge into the themes of proportion in Year 8.</p> | |

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| | | understanding of place value is vital for working with decimals and understanding the connections between fractions and decimals. | |
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