

Mathematics Year 7 Curriculum Map

| Term | I am learning | By the end of this topic I will be able |
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| Autumn | <p>Topic: Place value & Fractions, decimals and percentage</p> <ul style="list-style-type: none"> to develop and extend understanding of place value and ordering to develop the use of equality symbols and standard form notation <p>Topic: Fraction, decimal and percentage equivalence</p> <ul style="list-style-type: none"> to gain a deeper understanding of the links between fractions, decimals and percentages | <p>Topic: Place value & Fractions, decimals and percentage</p> <ul style="list-style-type: none"> to recognise the place value of any number up to one billion. to order and round integers and decimals to be able to find averages of a set of numbers to use inequality signs correctly <p>Topic: Fraction, decimal and percentage equivalence</p> <ul style="list-style-type: none"> to convert fluently between fractions, decimals and percentage to interpret and draw a pie chart |
| | <p>Topic: Sequences</p> <ul style="list-style-type: none"> to notice and describe patterns to develop algebraic thinking <p>Topic: Algebraic notation, equality and equivalence</p> <ul style="list-style-type: none"> to deepen students' understanding of relatively simple expressions to develop a deep understanding of the concepts of equality and equivalence, using key algebraic vocabulary; equations, unknowns, like terms, identities, variables. | <p>Topic: Sequences</p> <ul style="list-style-type: none"> to explain the term-to-term rule of a sequence to fill in missing terms of a sequence <p>Topic: Algebraic notation, equality and equivalence</p> <ul style="list-style-type: none"> to understand fact families, numerically and algebraically to solve linear equations to use diagrams and letters to generalise number operations |

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| Spring | <p>Topic: Solving problems with addition and subtraction</p> <ul style="list-style-type: none"> to develop understanding of the underlying structures of addition and subtraction using contextual variety to link in to other key topics to strengthen links between topics using addition and subtraction structures to include algebraic examples <p>Topic: Solving problems with multiplication, division and fractions of amounts</p> <ul style="list-style-type: none"> to enhance procedural fluency of multiplication and division calculations by providing challenge through varied contexts, problems and linking to other areas of the curriculum to deepen understanding of fractions and percentages of amounts | <p>Topic: Solving problems with addition and subtraction</p> <ul style="list-style-type: none"> to use written methods to add and subtract integers and decimals to solve problems involving time, timetables and frequency trees <p>Topic: Solving problems with multiplication, division and fractions of amounts</p> <ul style="list-style-type: none"> to use written methods to multiply and divide integers and decimals to understand and use factors and multiples to convert between metric units to find a fraction and percentage of a given amount |
| | <p>Topic: Operations and equations with directed number</p> <ul style="list-style-type: none"> to deepen understanding of negative number arithmetic to link to and develop key algebraic manipulation to explore numbers both above and below zero linked with linear equations <p>Topic: Addition and subtraction of fractions</p> <ul style="list-style-type: none"> to master accurate conversion between mixed numbers and improper fractions to understand multiple representations of fractions and mixed numbers to fluently add and subtract fractions and mixed numbers | <p>Topic: Operations and equations with directed number</p> <ul style="list-style-type: none"> to understand and order directed numbers to add, subtract, multiply and divide directed numbers to use order of operations (BIDMAS) with directed numbers to understand how to solve two step linear equations <p>Topic: Addition and subtraction of fractions</p> <ul style="list-style-type: none"> to add and subtract fractions with the same and different denominators to add and subtract improper fractions and mixed numbers to understand and use equivalent fractions |

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| Summer | <p>Topic: Construction, measuring and using geometric notation</p> <ul style="list-style-type: none"> to understand and accurately use geometric notation to recognise and classify shapes to complete accurate constructions and to construct pie charts <p>Topic: Developing geometric reasoning</p> <ul style="list-style-type: none"> to develop a deep understanding of key angle facts related to lines, points, triangles and quadrilaterals to display understanding in a variety of contexts and link with earlier learning, including forming and solving equations and the properties of quadrilaterals | <p>Topic: Construction, measuring and using geometric Notation</p> <ul style="list-style-type: none"> to understand, measure and draw angles up to 360° to recognise types of triangles and quadrilaterals to construct triangles using a protractor and a compass to interpret and draw simple pie charts <p>Topic: Developing geometric reasoning</p> <ul style="list-style-type: none"> to understand and use the sum of angles around a point, on a straight line and vertically opposite to know and apply the sum of angles in a triangle and quadrilateral to solve more complex angle problems |
| | <p>Topic: Prime numbers and proof</p> <ul style="list-style-type: none"> to deepen understanding of square, triangle and prime numbers through testing conjectures, noticing patterns and making generalisations to understand what highest common factors and lowest common multiples are <p>Topic: Reasoning with number</p> <ul style="list-style-type: none"> to deepen understanding and fluency of mental calculation through developing multiple strategies of efficient calculation such as partitioning, use of constant difference, estimation and choice of method | <p>Topic: Prime numbers and proof</p> <ul style="list-style-type: none"> to recognise and identify prime numbers to find the HCF and LCM of a set of numbers to write a number as product of its prime factors <p>Topic: Reasoning with number</p> <ul style="list-style-type: none"> to know and use mental arithmetic strategies for addition, subtraction, multiplication and division of integers to know and use mental arithmetic strategies for decimals and fractions to use estimation as a method for checking calculations |