Year 7 (Maths)

'Allow mathematical thinking at every possible opportunity'

Autumn Term

What will I study?

Unit NP1 - Place Value & the Number Line

Students will explore writing integers and decimals in expanded form, rounding numbers to the nearest decimal place, and significant figures. They will then discover how to find the midpoint of two numbers and how to find the median of positive and negative integers and decimals

Unit NP2 - Addition & Subtraction

Students will discover different strategies for adding and subtracting integers, and decimals. They will then link this knowledge to help them solve perimeter problems, angle facts, and how to find the mean and range of a data set.

Unit NP3 - Multiplication & Division

Students will use their knowledge of times tables to discover how to find multiples and factors. They will then find the highest common factor and the lowest common multiple. Using this knowledge they will then link this to the area of shapes problems and the volume of cubes and cuboids.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Spring Term

What will I study?

Unit NP4 - Powers, Roots and Primes

Students will learn what a square and a cube number are and memorise these up to 15 x15 and 10x10x10, they will also be able to find the inverse roots. They will learn prime numbers up to 100 and use these to prime factorise numbers

Unit NP5 - Order of Operations
Students will learn the importance of using the correct order in calculations to achieve the correct result.

Unit NP6 - Directed Numbers
Students will explore negative numbers in context by looking at things like temperature and finance. They will then learn to use the four operations with negative numbers

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Summer Term

What will I study?

Unit A1 - Introduction to Algebraic Thinking

Students first look at algebra will see them discover what a variable, constant, term and expression is. They will then substitute numbers into an expression to obtain an answer

Unit NP7 - Fractions
Students will use fractions for all four operations. They will learn to simplify fractions and find equivalent fractions using the sneaky one. They will then find a fraction of an quantity

Unit NP8 - Percentages, Fractions and Decimals

Students will learn to convert between percentages, fractions and decimals. They will then discover how to use recurring and terminating decimals. Then they will be able to find a percentage amount of any number.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given. This term will also include the final end-of-year assessment.

Quality of Education: The Curriculum prioritises critical knowledge and gradually builds understanding over time, interleaving concepts at every opportunity. It is underpinned by the principles of cognitive science.
Vision: : The Mathematics Department's vision is to enable all students at all levels of attainment to reason and to think mathematically at every possible opportunity.

Year 8 (Maths)

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Autumn Term

What will I study?

Unit NP9 - Estimation & Use of the Calculator

Students will learn how to use a calculator effectively making sure they understand how to use each function of the calculator to make calculations more efficient. They will then learn to estimate powers and roots using their prior knowledge of rounding

Unit A2 - Manipulating and Simplifying Expressions 1

Students will learn how to collect like terms building on prior knowledge of expressions. They will then use of 4 operations when simplifying expressions

Unit GM1 - Drawing, Measuring and Constructing

Students will become confident in using a protractor, ruller and compass. They will use this equipment to construct and draw circles, triangles, bisectors, and angles.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Spring Term

What will I study?

Unit A3 - Manipulating and Simplifying Expressions 2

Students will learn how to expand an expression containing a single bracket and expressions containing double brackets. They will then learn to complete the inverse of this by factorising back into a single and double bracket.

Unit A4 - Linear Equations

Students will learn to solve one-step, two-step equations and more complex equations when the variable appears on both sides of the equations or within the denominator of the fraction

Unit NP10 - Proportional Reasoning

Students will look at problems that involve best value for money, exchange rates, and how to scale up recipes. They will then look at how to find a percentage change.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Summer Term

What will I study?

Unit GM2 - Polygons & Angles

Students will recap angle facts and then use these to support finding alternate, corresponding, and co-interior angles within parallel lines.

Unit SP1 - Discrete Data

Students will look at different ways to represent data including pie charts, bar charts, pictograms, and stem and leaf diagrams. They will then look at discrete and continuous data along with grouped and ungrouped frequency tables.

Unit GM3 – Area

Students will look at how to find the area of triangles and quadrilaterals including a parallelogram, kite, and trapezium. They will then move onto how to find an area of a circle and compound area problems

How will I be assessed?

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Year 9 (Maths)

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Autumn Term

What will I study?

Unit NP11 - Ratio

Students will learn to express quantities as ratios, simplify ratios, and share quantities into ratios.

Unit A5 - Formulae

Students will use function machines to substitute into complex formulae and create formulae from words. They will then move on to rearranging linear and nonlinear formula

Unit A6 - The Cartesian Grid

Students will explore the cartesian grid and look at co-ordinates in all 4 quadrants. They will discover how to find the midpoint and gradient of a line. This will lead to them finding the equation of linear, parallel and perpendicular graphs.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Spring Term

What will I study?

Unit SP2 - Bivariate Data & Time Series

Students will learn how to draw scatter graphs, describe and interpret relationships and correlation, and draw a line of best fit to explore trends and anomalies. This will lead to them interpreting and constructing time series graphs and calculating moving averages.

Unit A7 - Introduction to Sequences

Students will begin to generate terms in sequences given a term-to-term rule. They will then look at finding the nth term of a sequence and special sequences including triangular numbers, square numbers, cube numbers, and Fibonacci sequences

Unit A8 - Linear Inequalities

Students will explore what an inequality is and represent these on number lines. They will then set up and solve inequality with one and two variables.

How will I be assessed?

Topic tests will be completed at the end of each unit and a percentage score will be given.

Summer Term

What will I study?

Unit NP12 - Standard Form

Students will explore standard form using large and small numbers. They will then do standard form calculations using all four operations.

Unit A9 - Contextual graphs

Students will look at compound measure calculations and then use this to support with constructing and drawing distance time graphs and velocity-time graphs

Unit SP3 - Introduction to Probability

Students will be introduced to the concept that all probability sums to 1 and they will then explore probability through Venn diagrams, frequency trees and two–way tables

How will I be assessed?

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