



Subject: Maths

Year 7

Overview

In the Year 7 curriculum students study topics from four key strands of mathematics: Number, Algebra, Geometry and Shape. Each strand builds on their prior learning from the KS2 programme of study. We focus on developing knowledge and skills in each of the four strands which students will then build on to solve problems and exhibit their mathematical reasoning.

Autumn

Autumn Term 1

Factors and Multiples

- Factors and highest common factors
- Multiples and common multiples
- Prime factors

Calculations

- Short and long multiplication
- Short and long division
- Calculations with measurements
- Multiplication with large and small numbers
- Division with large and small numbers

Negative Numbers

- Short and long multiplication
- Short and long division
- Calculations with measurements
- Multiplication with large and small numbers
- Division with large and small numbers

Autumn Term 2

Algebraic Expressions

- Order of operations
- Expressions and substitution
- Simplifying expressions

Solving Equations

- Solving equations
- Solving more complex equations
- Setting up and solving equations

Assessment:

Formative assessment is ongoing in the classroom: targeted questions, 'show me' on a whiteboard, teacher monitoring

Every unit will have a short 'low-stakes' assessment task at the end to check pupils' knowledge. These will involve a selection of test-style questions and records are kept by the class teacher.

An end of term assessment based on the topics covered throughout the term.

Expressions and EquationsExpressions:

- Use algebraic notation
- Algebraic terminology
- Simplifying expressions with a single variable
- Simplifying expressions containing multiple variables
- Simplifying expressions containing non-linear terms

Substitution:

- Substituting with one operation
- Substituting with multiple operations
- Substituting into algebraic formula

Solve Equations:

- Finding the output of a function machine
- Use inverse to find the input in a function machine

2D Shape

- Line properties
- Shape properties
- Types of Triangle
- Types of Quadrilateral
- Symmetry
- Transformations

Perimeter and Area

- Perimeter of rectangles and compound shapes
- Area of rectangles and compound shapes
- Area of a triangle
- Area of a parallelogram
- Area of trapezium

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Summer Term 1**Decimals**

- Rounding numbers to dp
- Multiplying and dividing by powers of 10
- Putting decimals in order
- Adding and subtracting decimals
- Multiplying and dividing decimals

Linear Graphs

- Coordinates
- Graphs of $x = a$, $y = b$, $y = x$ and $y = -x$
- Conversion graphs

Summer Term 2**Percentages**

- Fractions, decimals and percentages
- Fractions of a quantity
- Percentages of quantities
- Percentages with a calculator

Introduction to Probability

- Probability words
- Probability scales
- Experimental probability

Finding Probabilities

- Using probability scales
- Mutually exclusive outcomes
- Using sample spaces to calculate probabilities

Assessment:

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Useful resources for supporting your child at home:

- Videos on Century (<https://www.century.tech>)
- Videos on Corbett Maths (Videos and Worksheets – www.corbettmaths.com)
- CGP KS3 revision guides/work books

Homework:

- Homework will be set once a week on Century (<https://www.century.tech>)
- Should your child be struggling to access their homework – please encourage them to speak to their teacher.