



Mathematics

Autumn Term

Year 7

In this booklet you will find information about what your child will be covering in Maths in the Autumn Term. To reach the expected standard by the end of the year pupils should be able to understand and apply these skills. The back page has information on how you can help your child to achieve these expectations.



Autumn Term

First Half



Block 1—Sequences

- Step 1: Describe and continue a sequence given diagrammatically.
- Step 2: Predict and check the next term(s) of a sequence.
- Step 3: Recognise the difference between linear and non-linear sequences.
- Step 4: Continue numerical linear sequences.
- Step 5: Continue numerical non-linear sequences.
- Step 6: Explain the term-to-term rule of numerical sequences in words.
- H: Find missing numbers within sequences.

Block 2 —Understand and use algebraic notation

- Step 1: Given a numerical input , find the output of a single function machine.
- Step 2: Use inverse operations to find the input given the output.
- Step 3: Use diagrams and letters to generalise number operations.
- Step 4: Use diagrams and letters with single function machines.
- Step 5: Find the function machine given a simple expression.
- Step 6: Substitute values into single operation expressions.
- Step 7: Find numerical inputs and outputs for a series of two function machines.
- Step 8: Use diagrams and letters with a series of two function machines.
- Step 9: Find the function machines given a two—step expression.
- Step 10: Substitute values into two-step expressions.
- Step 11: Generate sequences using an algebraic rule.
- Step 12: Represent one -and two-step functions graphically.

Block 3—Equality and Equivalence

- Step 1: Understand the meaning of equality.
- Step 2: Understand and use fact families, numerically and algebraically.
- Step 3: Solve one-step linear equations involving $+/-$ inverse operations.
- Step 4: Solve two-step linear equations involving x/\div inverse operations.
- Step 5: Understand the meaning of like and unlike terms.
- Step 6: Understand the meaning of equivalence.
- Step 7: Simplify algebraic expressions by collecting like terms, using the \equiv symbol.



Autumn Term

Second Half



Block 4—Place value and ordering decimals and integers

Step 1: Recognise the place value of any number in an integer up to one billion.

Step 3: Understand and write integers up to one billion in words and figures.

Step 3: Work out intervals on a number line.

Step 4: Position integers on a number line.

Step 5: Round integers to the nearest power of 10.

Step 6: Compare two numbers.

Step 7: Order a list of integers.

Step 8: Find the range of a set of numbers.

Step 9: Find the median of a set of numbers.

Step 10: Understand place value for decimals,

Step 11: Position decimals on a number line.

Step 12: Compare and order any number up to 1 billion.

Step 13: Round a number to one significant figure.

H: Write 10,100,1000 etc as powers of 10.

H: Write positive integers in the form $A \times 10^n$.

H: Investigate negative powers of 10.

H: Write decimals in the form $A \times 10^n$.

Block 5—Fraction, decimals and percentage equivalence

Step 1: Represent tenths and hundredths in diagrams and on number lines.

Step 2: Interchange between fractional and decimal number lines.

Step 3: Convert between fractions and decimals.

Step 4: Understand the meaning of percentage.

Step 5: Convert between fractions, decimals and percentages.

Step 6: Use and interpret pie charts.

Step 7: Represent fractions as diagrams and on number lines.

Step 8: Identify and use simple equivalent fractions.

Step 9: Understand fractions as division.

H: Explore fractions above one, decimals and percentages.

H denotes higher level



How can you help your child?



Mymaths— This is a maths based website. Each pupil has their own login and password for this website. The website contains a wealth of resources and games for pupils to practise and consolidate learning from the classroom. This website is also often used as a homework resource.

Homework—Pupils will receive one piece of Maths homework each week. This homework will be given out on a Thursday and will be due in the following Thursday. All details should be written in your child's homework diary. Homework will either be paper based homework, set in google classroom or on Mymaths. Your support with this is invaluable.

Calculations - There is a big emphasis in the new curriculum on using formal methods for calculating. Solid foundations of the four calculation methods (addition, subtraction, multiplication and division) will help your child greatly when applying these skills to word problems and problem solving. For more information on how we teach these methods please see our calculation policy on the school website.

Get your child involved — As adults, we use maths in our day-to-day lives without really thinking about it. Sometimes it doesn't even seem like maths to us, because we've become so used to it. Get your child involved in activities like shopping, cooking, working out holiday budgets; anywhere you realise you use maths, get your child involved!

Thank you for all your support, please don't hesitate to get in touch if you have any questions or queries.