

Year 7 Mathematics Learning Journey

Analysing and displaying data - What are the various types and properties of data and how do we present and analyse data?

Number - What are the various types and properties of number as well as their applications? *(Revisits and builds on from primary school work in year 5 and 6 statistics and number to develop a solid foundation, competence and fluency in underlying skills)*

- Identifying various types of data, presenting with charts and calculating averages.
- Identifying and using types and properties of number, using a scientific calculator, using mathematical operations, calculations with money and time.

Expressions, functions, and formulae - How do you convert and present problems in mathematical language, what is this language called and what are its specific rules?

Decimals and measure – Am I able to work with decimal numbers in various contexts? *(Development of curriculum by reintroducing the mathematical language of Algebra building on the use of simple Algebra from Primary school year 6)*

- Introduction to the language of Algebra by converting problems into mathematical language and working with the specific rules of the language.
- Developing core skills in working with decimals, metric units, scales & scale drawings, area & perimeter of rectangles, squares and connected shapes.

Start of the Year

Ratio and proportion – Am I able to work with parts of a whole?

(Students revisit and build on from number work in year 5 & 6, year 7 spring 1, to using and applying the underlying skills in the application of multiplicative relationships)

- Using ratio notation, making comparisons with ratio, solving ratio problems, knowing the difference between ratio and proportion, solving proportion problems including the use of percentages.

Fractions and percentages – Can I work with various ways of expressing parts of a whole?

Probability – Am I able to use various strategies to estimate the likelihood of an event occurring?

(Students revisit and build on from basic number work in year 5 & 6 to using and applying the underlying skills in the application of multiplicative relationships)

- Expressing quantities as a fraction, decimal, percentages and using working out fractions, decimals and percentages of quantities.
- Using the language of probability, using probability scales, 2-way tables and calculating experimental and theoretical probability.

What are the fundamental properties of shapes, associated language along with specialist equipment used in measuring and presenting shapes?

Sequences and graphs - Can I extend and apply knowledge on Algebra into working with sequences and making the connection between sequences and graphs? ((Revisiting and further building on properties of shapes from primary school year 5 & 6; developing on Algebra from year 7 Autumn 2)

- Identifying and naming shapes using their specific properties, concepts of types of angles, triangles, and quadrilaterals, using appropriate equipment to accurately measure and draw angles and triangles, solving angle problems involving triangles and quadrilaterals.
- Recognising and continuing sequences by identifying the rule, recognising arithmetic and geometric sequences, linking arithmetic sequences to straight line graphs, plotting straight line graphs from a table of values.

Transformations – Am I able to change the size and position of shapes according to a given rule and can I identify the rule after a change has been applied. *(Revisit and build on primary school year 5 & 6 Statistics to include relevant terminology and probability)*

- Identifying congruent shapes, applying enlargement, reflection, rotation and translation to 2D shapes.