Maths
Year 7

The Lowry Academy
The best in everyone™
Part of United Learning

OVERVIEW

The Maths department at The Lowry Academy aims to provide students with a secure understanding of mathematical knowledge, categorised according to the following areas: number, algebra, geometry, ratio and proportion, probability, and statistics, meeting the needs of the National Curriculum at KS3 and KS4. The focus of the curriculum is to develop procedural knowledge of the fundamental elements of mathematics in order for students to access further problem solving elements and reason mathematically, whilst fostering a love of maths. By the end of Year 7, students will have developed their mathematical skills within the different areas of Maths (number, algebra, ratio and proportion, geometry, probability and statistics).

AUTUMN

- 7.00* Basic Numeracy - Place value, number bonds and basic arithmetic
- 7.01 Numerical Skills - Place value for decimals, calculations with negative numbers and estimating calculations
- 7.02 Order of Operations - BIDMAS
- 7.03 Introduction to Algebra - Simplifying, manipulating and substituting into expressions
- 7.04 Primes, Factors and Multiples - Understanding of prime numbers, HCF and LCM
- 7.05 Expanding and Factorising – Simplifying and manipulating algebraic expressions
- 7.06 Addition and subtraction – Appling using formal methods including to integers and decimals
- 7.07 – Perimeter – Finding the perimeter of rectangles and compound shapes including conversion of metric units of length

ASSESSMENT

Year 7 students will be given a baseline assessment within Maths.

In addition they will also complete the following: KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly).

SPRING

- 7.08 Mean – Describe, interpret and compare distributions of a single variable
- 7.09 Multiplication and division – Applying using formal methods to integers and decimals
- 7.10 Area of triangles and quadrilaterals – Derive and apply formulae to solve problems including conversion of metric units of length
- 7.11 Fraction Manipulation – Expressing one quantity as a fraction of another
- 7.12 Adding and subtracting fractions – Applied to proper, improper and mixed numbers
- 7.13 Comparing and ordering fractions – By creating common denominators
- 7.14 Fractions of amounts – Interpreting fractions as operators

ASSESSMENT

Year 7 students will be given a mid-year assessment within Maths.

In addition they will also complete the following: KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly).

SUMMER

- 7.15 Polygons – Derive, describe and illustrate properties of triangles and quadrilaterals
- 7.16 Angles – Apply the properties of angles at a point, on a straight line and vertically opposite
- 7.17 Coordinates – Read and plotting
- 7.18 Time – Converting between analogue and dialogue and using timetables.

*This unit is optional

ASSESSMENT

Year 7 students will be given an end of year assessment within Maths.

In addition they will also complete the following: KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly).

PERSONAL DEVELOPMENT

The Maths Department look for opportunities throughout the year to enrich the curriculum through trips and guest speakers. During each half term there is a Reading to Learn Opportunity, in which we look at the life and work of influential mathematicians and the political and equality battles they faced.

We also enable our students to become involved with the UK maths challenge and MESME circles whereby resilience continues to be developed and also weekly SPARX clubs to develop their key mathematical skills further. Chess club also takes place weekly whereby students are given the opportunity to logically think through problems and build confidence.

Useful resources for supporting your child at home:

- Corbett Maths
- BBC Bitesize
- Maths Genie
- SPARX

Homework

Students will complete weekly homework on SPARX (online platform) Homework is set every Friday (4pm) and due in every Friday (4pm) SPARX club is available during every lunch time (L8) There is also a SPARX club available to attend every Tuesday in L6 and every Thursday in P5.