

Mathematics Enhancement Programme

TEACHING SUPPORT: Year 5

LEARNING OBJECTIVES

At the end of Year 5 we expect students to

- *use numbers up to 10 000 in calculations (addition, subtraction, multiplication and division) with confidence*
- *have instant recall of multiplication tables up to 10×10 and number bonds up to 10*
- *understand equivalent fractions and be able to add and subtract fractions in context and find fractions of quantities*
- *understand multiplication of fractions by integers*
- *understand the decimal equivalent of fractions with tenths and hundredths and be able to convert simple fractions to/from decimals and percentages*
- *add, subtract and multiply decimal numbers, using the column notation and divide decimal numbers by natural numbers*
- *understand factors and multiples and be able to express natural numbers in terms of their prime factors*
- *round numbers to the nearest 10, 100, 1000*
- *use Venn diagrams to classify a set of numbers*
- *extend units of measurement to include mm*
- *use 12 and 24 hour clocks for time and understand the concept of speed*
- *understand and use negative numbers on a number line and in context, e.g. thermometer, sea level*
- *order a set of numbers, including negative numbers*
- *understand simple calculations, additions and subtractions with negative numbers and multiplication of positive by negative numbers*
- *understand and solve simple equations*
- *find the perimeter and area of 2D shapes with lengths given as natural numbers, fractions or decimals and surface area and volume of simple 3D shapes*
- *understand the concepts of symmetry and congruence of simple 2D shapes*
- *understand parallel and perpendicular lines*
- *recognise and understand convex and concave shapes*

- *understand and use reflection, rotation and translation and enlargement of 2D shapes*
- *use and construct nets for 3D shapes*
- *use positive 2D coordinates to define shapes*
- *construct and measure angles up to 360°*
- *understand compass direction, including SE, SW, etc. and SSW, etc.*
- *use tally charts, pie charts, bar charts and pictograms to illustrate data*
- *understand and calculate the mode, median and mean of a set of numbers*
- *find simple probabilities as fractions or percentages.*