## **Elm Court School**

## **Mathematics Curriculum Overview**



The mathematics curriculum covers four core themes: Number, Shape-Space-Measure, Data Handling, and Problem-Solving. Multi-sensory, cross-curricular, and a spiralled approach to learning is embedded within more traditional learning styles, enabling pupils to consolidate prior learning, secure new knowledge, and make important mathematical connections to real life. Learning needs are continually assessed during regular retrieval practice starter activities and short-topic tests, allowing progress to be measured on an individual basis. Pupils across the full spectrum of academic ability are appropriately supported throughout their learning journey and are entered for examinations when ready to access them.

Mathematics qualifications on offer include AQA Unit Awards, National Curriculum Edexcel Entry Level examinations (Entry Level 1, 2, and 3) and at Key Stage 4 (KS4) and Key Stage 5 (KS5), Edexcel Functional Skills Level 1 Level 2 and GCSE examinations.

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In Year 7 pupils complete an initial baseline assessment to prioritise individual learning needs.

Learning themes include:

- Working with whole numbers and recognising operator symbols (+ - ÷ ×)
- Know and sequence events of the day, days of the week, months, and years
- Describe position and direction

#### Year 8:

In Year 8, pupils complete regular formative tests as individual learning needs and progress are continually assessed.

New learning themes include:

- Working with whole numbers up to 100
- Working with place value and odd/even numbers
- Sequence hours in a day

#### Year 9:

Year 9 pupils continue level-appropriate, regular formative tests and may prepare for Functional Skills (Entry Level 1, 2, 3) examinations. To help pupils prepare for examinations, past paper practice is encouraged.

New learning themes include:

- Working with whole numbers up to 1000 including linear sequences, approximation, and rounding
- Learning times tables up to 8

## Year 10 and Year 11:

At KS4 pupils explore and apply mathematics more functionally. Numberless problemsolving techniques are introduced, allowing pupils to focus on the language of mathematics in real-life contexts.

Pupils continue levelappropriate regular formative tests and regular past examination paper practice.

KS4 learning themes include:

#### Sixth Form

At KS5 level-appropriate, regular formative testing continues in accordance with the academic attainment of each pupil.

Regular past examination paper practice is also given and pupils preparing for GCSE examinations are entered for Edexcel mock examinations at the end of the first term.

At Level 1, Level 2, and GCSE, pupils are further supported in GCSE club and will explore:

- Square numbers, indices, multiplicative reasoning and inequalities
- Checking answers using approximation and estimation
- Multiples, factors, primes
- Volume and surface area

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- Recognise and name common 2D and 3D shapes
- Recognise coins and notes
- Describe and compare items of different size, length, width, height, weight, and capacity
- Read 12-hour analogue and digital clocks in hours.
- Read and draw tally charts and block diagrams

- Describe properties of 2D and 3D shapes
- Learning 2,3,4,5 and 10 times tables
- Explore
   measures of
   length, mass, and
   capacity
- Read time in common date formats and on analogue clocks (hours, half, quarter hours)
- Recognise fractions of whole numbers and shapes
- Understand the language of position and prepositions
- Sort and classify objects using a single criterion

- Decimal place value including money calculations
- Properties of 2D and 3D shapes in different orientations including symmetry and right angles
- Using fractions (thirds, quarters, fifths, and tenths) including equivalent forms
- Solve problems involving time
- Compare and use measures of length, mass, and capacity including using measuring instruments
- Use and understand compass points and half/quarter/full turns
- Read numerical information from lists
- Read and draw simple charts including pictograms

- Recognise and use positive and negative numbers
- Estimate, approximate and round to two decimal places
- Learning times tables up to 12
- Follow the order of precedence of operators (BIDMAS)
- Read, write, and compare common fractions, decimals, and percentages
- Calculate the perimeter and area of simple shapes and volumes of cubes and cuboids
- Convert between units of length, weight, capacity, money, and time in the same system
- Compare, read, present, and interpret discrete data from various sources

- 2D area and perimeter
- Plot 2D coordinates
- Draw and measure angles
- Work with ratio and proportion
- Functional problem-solving involving time, money, perimeter, area, speed, distance, mass, capacity, basic tax calculations, budgeting, and best buys
- Operations on fractions, decimals, and percentages
- Percentage increase/decrease
- Probability scales and combined events using diagrams and tables
- Draw and interpret discrete data including tables, pie charts, bar charts, scatter diagrams, and line graphs
- Measures of central tendency (range, mode, mean, median)
- Use algebra to simplify, expand, substitute, factorise, solve problems and construct expressions and equations
- Pythagoras' Theorem
- Sequences

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### **Mathematics Curriculum Overview**



## How you can support your child in Mathematics:

- Have regular talks with your child about the work they are doing in Mathematics
- When engaging in practical activities at home, involve your child, e.g. cooking (weight, time, etc.), putting up shelves (measurement, problem-solving)
- Reinforce time by asking: What time is it? What day is it? How long until? What should we do first/last? When is your birthday?
- Practice times tables with your child ask the Mathematics Department for times tables answer sheets
- Always be positive about Mathematics and your child's achievements

We love to hear from parents and carers in pupils' books, feel free to leave comments alongside teacher marking. It is helpful at GCSE to purchase the relevant revision guide.

Please keep in touch with the Mathematics Department should you feel your child is struggling or needs more challenge – let us know. You can also use the home school diary or email. Emails can be sent to: <a href="mailto:admin@elmcourt.lambeth.sch.uk">admin@elmcourt.lambeth.sch.uk</a>.