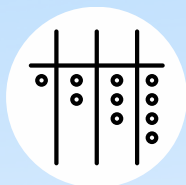


# MATHS

## Place Value



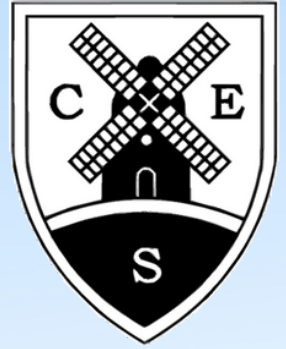
Children are first taught to count, read, write, and order numbers to 100. Additionally, children will identify and represent numbers in different ways. Children will be taught how to identify 1 more and 1 less and how to use the signs equal to, more than and less than. Children will be introduced to using 0 as a place holder and using place value to compare and order 2-digit numbers to solve problems. Additionally, they will be taught how to count in 2's 3's 5's and 10's.

As children progress, they will also look at the place value of digits in 3-digit and 4-digit numbers. Children will also be shown how to use different number representations. Additionally, children will look at rounding numbers to the nearest 10, 100 and 1000. Children will be taught how to count in multiples. Children will learn how to find 10, 100 and 1000 less and more than a given number. In addition, children will learn how to count backwards into negative numbers. Children will also look at Roman numerals to 100.

Finally, children are taught to read, write, and compare numbers to 10,000,000, knowing the place value of each digit. Children will also be taught how to read Roman numerals to 1000. Children will be shown how to count forward and backwards in powers of 10 and negative numbers and use negative numbers to calculate across 0. Additionally, children will be taught simple formulae and will generate and explain linear number sequences and find possible values in equations with unknowns.

# MATHS

## 4 Operations



Children explore number bonds to 10 and then to 20.

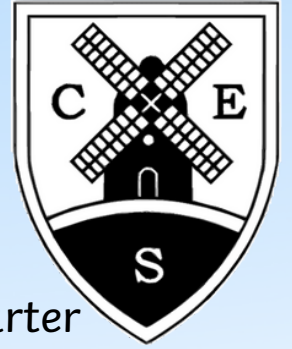
Children will be taught to add and subtract 1-digit and 2-digit numbers to 20. Children will be taught how to solve 1-step addition and subtraction problems and begin to solve multiplication and division problems. Children will be taught to use multiplication and division facts for the 2-, 5- and 10-times tables. Children will be taught which operations can be done in any order. Children will also explore odd and even numbers.

As children progress, they will also be taught how to add and subtract 3- and 4-digit numbers using columns, checking their answers by estimating and using inverse operations. Children will be taught to recall and use multiplication and division facts for all times tables up to 12. Children will be taught short multiplication and division written methods, in which they will need to mentally multiply and divide 1- and 2- digit numbers. Children will also be shown how to multiply 3 numbers together. Children will explore solving 2 step number problems, choosing appropriate operations.

Finally, children are taught to use long multiplication and long and short division, up to 4 digits, and use rounding and estimation to check answers. Children will be shown how to add and subtract large numbers in columns. Children will be taught how to identify common factors and multiples and will be taught prime, square and cube numbers. Children will be taught how to solve multi-step problems using all four operations in the correct order using brackets appropriately.

# MATHS

## Fractions



Firstly, children will explore finding a half and a quarter of a shape, object, and quantity, before exploring thirds and three-quarters. They will also be taught how to count in fractions to 10. They will use this knowledge to solve simple problems.

As children progress children will be shown how to count forward and backwards in tenths and hundredths. Children will be taught how to divide 1- and 2-digit numbers by 10 and 100. Additionally, children will be taught how to recognise, find, and write fractions of objects, unit fractions and non-unit fractions. Children will also be taught how to compare and order fractions and decimals and how to add and subtract fractions with the same denominator. Children will explore rounding decimals to nearest whole number and be taught the decimal equivalents of all relevant fractions. Children will be taught how to solve fraction problems to 1 and 2 decimal places.

Finally, children are taught to compare and order complex fractions. Children will also be taught how to convert between mixed numbers and improper fractions, work out equivalent fractions, calculate decimal fraction equivalents and use common factors to simplify and common multiples for equivalence. Children will be shown how to add and subtract fractions and decimals. Children will be taught how to times fractions by whole numbers. Children will also look at percentages. Additionally, children will use simple ratio and proportion to solve problems and solve problems involving scale.

# MATHS

## Measurement



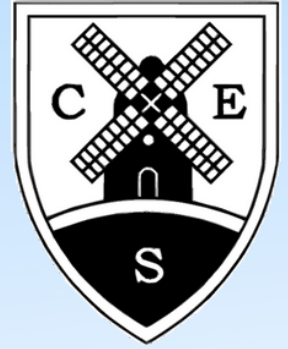
Firstly, children will explore measuring, recording, estimating, and comparing length, height, weight, mass, capacity, volume, temperature, and time. Children will also be taught how to solve practical problems involving measurement. Children will also explore the value of pounds and pence. Using this knowledge children will combine coins to make equal amounts of money and solve money problems including giving change. Children will also be taught about time, including sequencing events, days of the week and months of the year, and clock hands.

As children progress, they will be taught how to measure, compare, add, and subtract, length, mass, and capacity; as well as how to convert units of measure. Children will be shown how to calculate perimeter and count squares to find area. Children will practice adding and subtracting money to give change using pounds and pence. Children will be taught how to tell the time from an analogue and digital clock, including clocks with roman numerals. They will look at reading time to the nearest minute. Children will be taught how to solve time problems, including conversion of time.

Finally, children will be taught how to measure and calculate perimeter of composite shapes and area of rectangles. Children will also be taught how to estimate area of irregular shapes and volume. children will use, read, write, and convert standard units of measure up to 3 decimal places. Children will be shown how to solve measure problems involving calculation and conversion of units of measure.

# MATHS

## Geometry



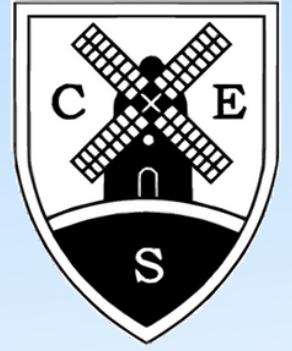
Firstly, children explore common 2D and 3D shapes. They will be taught the shape names and properties including faces. They will also be shown how to identify vertical lines of symmetry. Children will also explore ordering and arranging patterns and sequences. Children will also be taught how to use maths vocabulary to describe position, direction, and movement.

As children progress, they will make models of 3D shapes and describe more properties. Additionally, Children will be taught about angles, they will look at; angles in shapes and as a measure of turn; acute, right, and obtuse angles; and comparing and ordering angles. Children will compare and classify geometric shapes including all triangles and quadrilaterals. Children will also be taught about vertical, horizontal, diagonal, perpendicular, parallel lines, and lines of symmetry. Children will be shown how to complete simple symmetric figures. In addition, children will be taught how to read, write, and use co-ordinates to plot and translate.

Finally, children will be taught how to draw 2D shapes with given dimensions and angles and recognise and build 2D shapes from nets. They will also look at estimating, measuring, and drawing angles in degrees. Children will solve problems with missing lengths and unknown angles. Children will be taught about regular and irregular polygons and will look at comparing and classifying geometric shapes. Children will also use all 4 quadrants to translate and reflect. Additionally, children will be taught about parts of a circle.

# MATHS

## Statistics



Children will first be taught how to interpret and construct simple pictograms, tally charts, tables, and block diagrams. Children will ask and answer questions about data by counting, sorting, totalling, and comparing.

As children progress, they will be taught how to interpret and present discrete and continuous data in bar charts, pictograms, tables, and time graphs. Children will also be shown how to use simple scales. They will be taught how to solve 1- and 2- step data problems including problems involving comparison, sum and difference.

Finally, children will be taught how to interpret and construct line graphs. They will also be taught how to use line graphs and pie charts to solve problems. Children will also be shown how to calculate and interpret the mean.

