By the end of EYFS:
Count objects, actions and sounds
Subitise
Link the number symbol with the cardinal number value
Count beyond 10
Compare numbers
Understand the one more than and one less than relationship with consecutive numbers
Explore the composition of numbers to 10
Automatically recall number bonds 0 to 10
Select, rotate and manipulate shapes in order to develop spatial reasoning skills
Compose and decompose shapes
Continue, copy and create repeating patterns
Compare length, weight and capacity

By the end of KS1 pupils should be able to:

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- Compare and order numbers up to 100 and use < > = .
- Read and write all numbers to 100 in digits and words.
- Say 10 more / less than any number to 100.
- Count in steps of 2, 3 and 5 from zero and in 10s from any number (forwards and backwards).
- Recall and use multiplication and division facts for 2, 5 and 10 tables.
- Recall and use + / - facts to 20.

- Derive and use related facts to 100.
- Recognise place value of any 2-digit number.
- Add and subtract:
    - 2-digit numbers and ones;
    - 2-digit numbers and tens;
    - Two 2-digit numbers;
    - Three 1-digit numbers.
- Recognise and use inverse (+ /-).
- Calculate and write multiplication and division calculations using multiplication tables.
- Recognise, find, name and write 1/3; 1/4; 2/4; 3/4.
- Write and recognise equivalence of simple fractions.
- Tell time to five minutes, including quarter past / quarter to.

By the end of KS2 pupils should be able to:

- Use negative numbers in context and calculate intervals across zero.
- Compare and order numbers up to 10,000,000.
- Identify common factors, common multiples and prime numbers.
- Round any whole number to a required degree of accuracy.
- Identify the value of each digit to 3 decimal places.
- Use knowledge of order of operations to carry out calculations involving four operations.
- Multiply: 4-digit by 2-digit.
- Divide 4-digit by2-digit.
- Add and subtract fractions with different denominators and mixed numbers.

- Multiply simple pairs of proper fractions, writing the answer in the simplest form.
- Divide proper fractions by whole numbers.
- Calculate % of whole numbers.

By the end of KS3:

The curriculum at KS3 is designed to deepen and secure pupils' understanding and confidence when working with number and calculations. The concepts of shape and space are explored, as are the rules that underpin angles and 3D shapes. Generality is introduced by basic algebra, where pupils become proficient in the notation of algebra, before exploring substitution, simplification and solving of equations. Sequences, graphs and transformations are also introduced as the representation of algebraic expressions.

Through Key Stage 3 pupils develop knowledge that is relevant to the GCSE course and they develop a solid foundation for the skills required for the GCSE exams. Work completed as part of small groups or independently in the lower years creates an ethos among pupils of independent and supportive responsible learners. Pupils also work on developing their analytical skills and becoming more confident and competent in applying mathematics in other disciplines, which in turn supports their mathematical study at KS4.

By the end of KS4:

Our Key Stage 4 Mathematics curriculum is designed to build upon skills learnt at Key Stage 3. The curriculum is built upon the Edexcel GCSE Mathematics (9-1) specification which is the examination board used at KS4. There are two tiers of entry available to pupils: a Foundation tier (grades 1 – 5) and a Higher tier (grades 4 – 9) where there is some overlap to allow students to move between tiers where appropriate. The aims and objectives of this qualification are to enable pupils to develop and extend their knowledge gained in Key Stage 3 in Number, Algebra, Geometry and Measures, Ratio and Proportion, and Probability and Statistics. During KS4 we aim to improve the depth and breadth of pupil understanding, including knowledge of mathematics linked to real-life applications. This fosters a supportive bridge for a large proportion of pupils to pursue Mathematics at A-level and beyond. Pupils will adopt and apply the knowledge confidently in other subjects such as Science -this is embedded within our schemes of work as Mathematics is not an isolated discipline. The design of the curriculum encourages pupils to be more experienced in working systematically and solving complex, multistep mathematical problems through critical and analytical methods. It also urges students to develop and significantly improve their skills to communicate their findings and correct solutions in clear and sophisticated mathematical language.