End of Year 3 expectations - Maths

The National Curriculum for mathematics aims to ensure that all pupils:
- *Become fluent in the fundamentals of mathematics, so that pupils have conceptual understanding and can recall and apply their knowledge rapidly and accurately to problems*
- *Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument or proof using mathematical language*
- *Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.*

Number and Place Value
- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.
- Recognise the place value of each digit in a three-digit number.
- Compare and order numbers up to 1000 and read and write numbers up to 1000 in numerals and words.
- Identify, represent and estimate numbers using different representations .
- Solve number problems and practical problems involving these ideas.

Addition and Subtraction
- Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens ; a three-digit number and hundreds .
- Add numbers with up to three digits, using formal written methods of columnar addition.
- Subtract numbers with up to three digits, using informal written methods, starting to use columnar method *if your child is ready*.
- Estimate the answer to a calculation and use inverse operations to check answers .
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Multiplication and Division
- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables (2, 5 and 10 covered in Year 2).
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods *if your child is ready*.
- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Fractions
- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 .
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Recognise and show, using diagrams, equivalent fractions with small denominators.
- Add and subtract fractions with the same denominator within one whole .
- Compare and order unit fractions, and fractions with the same denominators.
- Solve problems that involve all of the above.

Measurement
- Measure, compare, add and subtract: lengths
- (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- Measure the perimeter of simple 2-D shapes.
- Add and subtract amounts of money to give change, using both £ and p in practical contexts
- Tell and write the time from an analogue clock and 12-hour and 24-hour clocks.
- Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight .
- Know the number of seconds in a minute and the number of days in each month, year and leap year.
- Compare durations of events.

Geometry: Property of Shape
- Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.
- Recognise angles as a property of shape or a description of a turn.
- Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Statistics
- Interpret and present data using bar charts, pictograms and tables.
- Solve one-step and two-step using information presented in scaled bar charts and pictograms and tables.