Reception: Mathematics

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall number bonds to 5 and some to 10 including doubling facts.
- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising greater than, less then or the same as the other quantity.
- Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Year 1: Mathematics

- Count to and across 100, forwards & backwards from any number.
- Read and write numbers to 100 in numerals and words.
- Say 1 more/less to 100.
- Count in multiples of 2, 5 & 10.
- Use bonds and subtraction facts to 20.
- Add & subtract 1 digit & 2-digit numbers to 20, including zero.
- Solve one-step multiplication and division using objects, pictorial representation and arrays.
- Recognise half and quarter of object, shape or quantity.
- Compare, describe and solve practical problems for length/height, mass/weight, capacity/volume and time.
- Sequence events of day, week, month and year.
- Tell time to hour & half past.
- Recognise and name common 2-D and 3-D shapes.

Year 2: Mathematics

- Compare and order numbers up to 100 and use < > =
- Count in steps of 2, 3 & 5 from zero and in 10's from any number (forwards and backwards).
- Recall and use multiplication & division facts for 2, 5 & 10 tables, including recognising odd and even numbers.
- Recall and use +/- facts to 20.
- Derive and use related facts to 100.
- Recognise place value of any 2-digit number and number facts to solve problems.
- Solve problems with addition and subtraction by using concrete objects and pictorial representations and applying increasing knowledge of mental and written methods.
- Solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and facts, including problems in context.
- Recognise, find, name and write 1/3; 1/4; 2/4; 3/4
- Solve simple problems in practical context involving +/- of money of the same unit including giving change.
- Compare and sorts common 2-D and 2-D shapes.
- Use math vocabulary to describe position, direction and movement. Distinguish between rotation as a turn and in terms of right angles for $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ turns (clockwise and anti-clockwise)
- Ask and answer questions about totalling and comparing data.

Year 3: Mathematics

- Count from 0 in multiples of 4, 8, 50 and 100.
- Find 10 or 100 greater/less than a given number.
- Recognise place value of any 3-digit number (HTO)
- Solve number and practical problems involving the above.
- Add and subtract numbers mentally:
    - 3-digit numbers and ones
    - 3-digit numbers and tens
    - 3-digit numbers and hundreds
- Recall & use multiplication & division facts for 3, 4, 8 tables.
- Write and calculates mathematical statements for x/÷ using tables that are known including two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Count up/down in tenths.
- Recognise, find and write fractions of a discrete set of objects; unit and non-unit fractions with small denominators.
- Recognise and show, using diagrams equivalent fractions with small denominators.
- Measure, compare, add and subtract lengths, mass, volume/capacity.
- Add/subtract amounts of money to give change. £&p
- Tell the time from an analogue clock 12/24 hour.
- Identify right angles, link to turns and identify whether angles are < > than a right angle.
- Interpret and present data using bar charts, pictograms and tables.

Year 4: Mathematics

- Count in multiples of 6, 7, 9, 25 and 100.
- Count backwards through zero to include negative numbers.
- Compare and order numbers beyond 1000.
- Round any number to the nearest 10, 100 or 1000.
- Solves +/- two-step problems in context, deciding which operations and methods to use and why.
- Recall and use x and ÷ facts all tables to 12x12.
- Recognise and show families of common equivalent fractions.
- Count up/down in hundredths.
- Round decimals with 1 decimal place to nearest whole number.
- Solve simple measure and money problems involving fractions and decimals to two decimal places.
- Convert between different units of measure e.g. km/m or hr/min.
- Compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes.
- Identify lines of symmetry in 2-D shapes presented in different orientations.
- Plot specific points and draw sides to complete a given polygon.
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Year 5: Mathematics

- Read, write, order and compare numbers to 1,000,000 and know the value of each digit.
- Count forwards and backwards with positive and negative numbers through zero.
- +/- whole numbers with more than 4 digits, using formal written methods.
- Calculate mentally with increasing large numbers e.g. 12,462-2,300
- Identify all multiples and factors, including finding all factor pairs and common factors of two numbers.
- Solve x/÷ problems including using knowledge of factors, multiples, squares and cubes.
- Solve x/÷ problems including scaling by simple fractions and problems involving simple rates.
- Compare and order fractions whose denominators are all multiples of the same number.
- Read and write decimal numbers as fractions.
- Read, write, order and compare numbers up to 3 decimal places.
- Solve problems which require knowledge of percentage and decimal equivalents of 1/2, 1/4, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.
- Converts between different units of metric measure.
- Measure and calculate the perimeter of composite rectilinear shapes in cm/m
- Calculate and compare the area of rectangles, use standard units cm2 m2
- Draw given angles and measure in degrees.
- Distinguish between regular and irregular polygons.
- Completes, reads and interprets information in tables, including timetables.

Year 6: Mathematics

- Round any whole number to a required degree of accuracy.
- Use negative numbers in context and calculate intervals across zero.
- Multiply 4-digit numbers by 2-digit numbers (formal method of long multiplication).
- Divide 4-digit numbers by 2-digit numbers (short division and interpret remainders).
- Solve +/- multi-step problems in contexts.
- Use estimation to check answers.
- Use written division methods in cases where an answer has up to 2 decimal places.
- Solve problems where answers need to be rounded to specified degrees of accuracy.
- Recall and use equivalences between simple fractions, decimals and percentages in contexts.
- Solve problems involving percentages.
- Solve problems involving unequal sharing and grouping of fractions and multiples.
- Use simple formulae.
- Use, read, write, convert between standard units of measure. Use decimal notation up to 3 places.
- Compare and classify geometric shapes based on their properties and size. Find unknown angles in triangles, quadrilaterals and polygons.
- Draw and translate simple shapes on a coordinate plane and reflect them in the axes.
- Interpret pie charts and line graphs and use these to solve problems.
- Calculate and interpret the mean as an average.

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