2014 MATHEMATICS CURRICULUM - Year 2

Number - Number and place value

- Count in steps of 2, 3, 5 from 0, and in tens from any number, forwards and backwards
- Recognise the place value of each digit in a 2-digit number
- Identify, represent and estimate numbers using different representations, including the number line
- Compare and order numbers up to 100; use <, >, =
- Read and write numbers to at least 100 in numerals and words
- Use place value and number facts to solve problems
- Partition numbers in different ways - eg. 23 = 20 + 3 and 23 = 10 + 13)
- Recognise number patterns and represent them in different ways, including spatial representations
- Understand zero as a place holder
- Apply knowledge of numbers to reason, discuss and solve problems

Number - Addition and subtraction

- Solve problems with addition and subtraction, using concrete objects and pictorial representations, including numbers, quantities and measures
- Develop written and mental methods
- Recall and use addition and subtraction facts to 20
- Derive and use related facts to 100 such as 30 + 70 = 100
- Add and subtract a 2d number and one / 2d number and tens / two 2d numbers
- Add three 1d numbers
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- Recognise and use the inverse relationship between addition and subtraction
- Use inverses to check calculations and solve missing number problems
- Use language of sum and difference
- Record addition and subtraction in columns

Number - Multiplication and division

- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables
- Recognise odd and even numbers
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using x, ÷ and =
- Show that multiplication of two numbers can be done in any order (commutative) and division of one number from another cannot
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, multiplication and division facts and include problems in contexts
- Connect the 10x table to place value
- Connect the 5x table to the divisions on a clock face
- Use related division facts to perform written and mental calculations
- Relate multiplication and division to grouping and sharing discrete and continuous quantities, arrays and repeated addition
- Relate to fractions and measures
- Use commutativity and inverse relations to develop multiplicative reasoning (4 x 5 = 20 and 20 ÷ 5 = 4)

Number - Fractions

- Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity
- Write simple fractions eg. 1/2 of 6 = 3
- Recognise the equivalence of 2/4 and 1/2
- Solve fraction problems using shapes, objects and quantities
- Connect unit fractions to equal sharing and grouping, numbers when they can be calculated and measures
- Find fractions of lengths, quantities and sets of objects or shapes
- Know that 3/4 is the first example of a non-unit fraction
- Count in fractions up to 10, starting from any number
- Show the 2/4 and 1/2 equivalence on the number line
- Know that fractions can add up to more than one

Measurement

- Choose and use appropriate standard units to estimate and measure length / height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest unit using rulers, scales, thermometers and measuring vessels
- Compare and order lengths, mass, volume/capacity and record the results using >, < and =
- Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- Find different combinations of coins that equal the same amounts of money
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- Compare and sequence intervals of time
- Tell and write the time to five minutes, including quarter past / to the hour and draw the hands on a clock face to show these times
- Know the number of minutes in an hour and the number of hours in a day
- Use standards of measurement with increasing accuracy, using their knowledge of the number system
- Use the appropriate language and record using standard abbreviations
- Compare measures to include simple multiples such as 'half as high'; 'twice as wide'
- Become fluent in telling the time on analogue clocks and record it
- Become fluent in counting and recognising coins
- Read and say amounts of money confidently and use the £ and p accurately, recording pounds and pence separately

Geometry - Properties of shapes	Geometry - Position and direction	Statistics
• Identify and describe the properties of 2-D shapes, including the number of sides and lines of symmetry in a vertical line • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the surface of 3-D shapes, eg. a circle on a cylinder and a triangle on a pyramid • Compare and sort 2-D and 3-D shapes and everyday objects • Name a wide variety of common 2-D and 3-D shapes including quadrilaterals and polygons, cuboids, prisms and cones • Identify, compare and sort shapes on the basis of their properties • Use vocabulary precisely - eg. sides, edges, faces, vertices • Read and write names of shapes that are appropriate for their word reading and spelling • Draw lines and shapes using a straight edge	• Order and arrange combinations of mathematical objects in patterns and sequences • Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) • Work with patterns of shapes, including those in different orientations • Use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts - eg. themselves moving in turns, giving instructions to other pupils, and programming robots using instructions given in right angles	• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data • Record, interpret, collate, organise and compare information • Use many-to-one correspondence in pictograms with simple ratios of 2, 5 and 10