Code used	Bold font – Programme of study Non-bold font – Non-statutory guidance Italics – Gateshead guidance
Number and place value	• **Read and write numbers to at least 100 in numerals and words** • **Compare and order numbers from 0 up to 100; use , q and = signs** • **Identify, represent and estimate numbers using different representations, including the number line** and spatial representations • **Recognise the place value of each digit in a two-digit number (tens, ones)** • Begin to understand zero as a place holder • Partition numbers in different ways e.g. 23 = 20 + 3 and 23 = 10 = 13 to support subtraction • **Use place value and number facts to solve problems** • *Apply understanding of the number system to solve problems and puzzles involving numbers, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbol* • **Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and back** • Recognize patterns in numbers to and beyond 100 • *Recognise and extend number sequences formed by counting from any number in steps of constant size* • *Apply understanding of number properties to solve routine and non-routine problems and puzzles involving numbers, money or measure.* • *Explore and discuss patterns, properties and relationships that arise in the number system using appropriate mathematical vocabulary.* • *Develop lines of enquiry through conjecturing relationships and generalisations and testing ideas. Identify examples for which a statement is true or not*
Number – addition and subtraction	• **Recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100** e.g. use 3 + 7 = 10; 10 -7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 - 30 • **Add and subtract numbers using concrete objects, pictorial representations and mentally, including:** • **two-digit number and ones** • **two-digit number and tens** • **two two-digit numbers** • **adding three one-digit numbers** • **Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot** • Check calculations e.g. by adding to check subtraction and adding nu7mbers in a different order to check addition e.g. 5 + 2 +1 = 1 + 5 + 2 = 1 + 2 + 5. This establishes commutativity and associativity of addition. • **Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems** • Continue to extend understanding of language of addition and subtraction to include sum and difference • **Solve problems with addition and subtraction** • **using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying increasing knowledge of mental and written methods** • *Use and explain a range of mental strategies appropriate to the numbers involved, sometimes supporting explanations with jottings or informal recording* • *Solve calculation problems using information from a range of pictograms, tally charts, block diagrams and simple tables* • *Apply understanding of number operations to solve number puzzles and non-routine problems and explain reasoning* • Use and explain the equals sign to indicate equivalence, including in missing number problems (e.g. 4+ 6 = 5 + 5; 17 = 19 - Δ)
Number – multiplication and division	• **Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognizing odd and even numbers** • Connect the 2, 5 and 10 multiplication tables to each other. Connect the 10 multiplication table to place value and the 5 multiplication table to the divisions on a clock face.

	- *Draw and describe arrays connecting them to multiplication and division* - **Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs** - **Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot** - **Solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts** - *Use a variety of language to describe multiplication and division*
Number – fractions	- Use fractions as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities - Connect unit fractions to equal sharing and grouping, to numbers when they can be calculated and to measures, finding fractions of lengths, quantities, sets of objects and shapes - **Recognise, find, name and write fractions 1/3 , ¼, 2/4, and ¾ of a length, shape and set of objects or quantity** - **Write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of 2/4 and ½** - Count in fractions up to 10 starting at any number and using the ½ and 2/4 equivalence on the number line e.g. 1 ¼ , 1 2/4, (or 1 ½) 1 ¾ , 2. Reinforce the concept of fractions as numbers and that they can add up to more than one. - *Apply understanding of fractions to solve routine and non-routine problems and puzzles involving numbers, shapes, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbols*
Measurement	- **Choose and use appropriate standard units to estimate and measure,** with increasing accuracy, **length/height in any direction (m/cm); mass (kg/g); temperature (ºC); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels** - Use appropriate language for measuring and record using standard abbreviations - **Compare and order lengths, mass, volume/capacity and record the results using G, q and =** - Compare using simple multiples such as 'half as high', 'twice as wide' - Become fluent in counting and recognizing coins. Read and say amounts of money confidently. - **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 all four operations to solve problems including scaling problems involving measure (e.g. length, mass, volume, money). Information required to solve a problem is often drawn from tables, and charts* - *Apply measuring skills to an appropriate degree of accuracy , alongside the skills of thinking mathematically to solve problems. These should include practical problems and might involve construction of shapes or artefacts, often in a cross curricular context* - *Make and explain connections between number, measures and shape*
Geometry – properties of shapes	- **Identify and describe the properties of 2-D shapes, including the number of sides and line 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, [for example, a circle on a cylinder and a triangle on a pyramid]** - **Compare and sort common 2-D and 3-D shapes and everyday objects** on the basis of their properties and use vocabulary precisely. - Read and write names of shapes appropriate to their word reading and spelling - Draw lines and shapes using a straight edge - *Solve problems, involving reasoning about shapes and their properties. Explain solutions orally or using writing, drawings or practical materials.*
Geometry – position and direction	- **Order and arrange combinations of mathematical objects in patterns and sequences** including the use of shapes in different orientations - **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).**

	• Use the language of angles in practical contexts e.g. pupils moving in turns, instructing others to do so and programming robots using instructions given in right angles
Statistics	• **Interpret and construct simple pictograms, tally charts, block diagrams and simple tables** • Use many-to-one correspondence in pictograms with simple ratios 2, 5, 10. • **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.** • *Pose their own questions that can be answered using information presented in different pictograms, tally charts, block diagrams and simple tables* • *Understand and use Venn and Carroll diagrams to support reasoning about numbers or shapes* • *Apply the skills of collecting, representing and interpreting statistical data across the curriculum within and beyond mathematic, sometimes in response to an enquiry of interest to and suggested by pupils.* • Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data • Sort objects and represent them in a Venn/Carroll diagram using more than one criterion.