Stage 4 - Mathematics

Number, place value, approximation and estimation/rounding
•Count in multiples of 6, 7, 9, 25 and 1,000.
•Order and compare numbers beyond 1,000.
•Find 1,000 more or less than a given number.
•Recognise the place value of each digit in a 4-digit number.
•Read Roman numerals to 100 and know that over time the numeral system changed to include the concept of zero and place value.
•Identify, represent and estimate numbers using different representations.
•Round any number to the nearest 10, 100 or 1,000.
•Count backwards through zero to include negative numbers.
•Solve number and practical problems with the above (involving increasingly large numbers).

Calculations
•Add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction.
•Estimate and use inverse operations to check answers in a calculation.
•Solve addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.
•Recall multiplication and division facts up to 12x12.
•Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.
•Recognise and use factor pairs and commutativity in mental calculations.
•Multiply 2-digit numbers by a 1-digit number using formal written layout.
•Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions, decimals and percentages
•Count up and down in hundredths.
•Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
•Recognise and show using diagrams, families of common equivalent fractions.
•Add and subtract factions within the same denominator.
•Recognise and write decimal equivalents to 1/4, 1/2 and ¾.
•Recognise and write decimal equivalents of any number of tenths or hundredths.
•Round decimals with one decimal place to the nearest whole number.
•Compare numbers with the same number of decimal places up to 2 decimal places.
•Find the effect of dividing a 1-digit or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.
•Solve problems involving increasingly harder factions and fractions to divide quantities, including non-unit fractions where the answer is a whole number.
•Solve simple measure and money problems involving fractions and decimals to 2 decimal places.

Measurement
•Compare, estimate and calculate different measures, including money in £ and p.
•Read, write and convert time between analogue and digital 12 hour and 24 hour clocks.
•Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
•Convert between different units of measurements.
•Measure and calculate the perimeter of a rectilinear figure in cm and m.
•Find the area of rectilinear shapes by counting squares.
•Calculate different measures.

Geometry –properties of shapes
•Compare and classify geometric shapes, including quadrilateral and triangles based on their properties and sizes.
•Identify lines of symmetry in 2D shapes presented in different orientations.
•Complete a simple symmetric figure with respect to a specific line of symmetry,
•Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Geometry – position and direction
•Describe movements between positions as translations of a given unit to the left/right and up/down.
•Describe positions on a 2D grid as coordinates in the first quadrant.
•Plot specified points and draw sides to complete a given polygon.

Statistics
•Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
•Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.