



Domain	Autumn
NPV Addition and subtraction	<ul style="list-style-type: none"> • Y4: Add and subtract with numbers up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • Y4: Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • Y4: Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs • Y4: Convert between kilometres, metres, centimetres and millimetres • Y4: Estimate, compare and calculate with measures of length • Y4: Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Y4: Solve length problems involving fractions and decimals to two decimal places • Y4: Round decimals in the context of length to the nearest whole number • Y4: Compare lengths with the same number of decimal place (up to two decimal places) • Add and subtract mentally with increasingly large numbers e.g. $12,462 - 2300 = 10,162$ • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. • Measure and calculate the perimeter of composite rectilinear shapes in cm and m • Use all four operations to solve problems involving measure (length), using decimal notation. • Read, write, order and compare numbers to at least 100,000 and determine the value of each digit. • Identify, represent and estimate numbers using different representations including numberlines • Round any number to the nearest 10,100,1000, 10,000 and 100,000 (represent on a number line) • Add and subtract whole numbers with more than 4 digits. Represent solutions appropriately using informal and formal written methods.
Multiplication and division	<ul style="list-style-type: none"> • Y4: Recall 2/3/4/5/6/8 multiplication and division facts for multiplication tables up to 12×12 • Y4: multiplying three numbers together. • Y4: Recognise and use factor pairs and commutativity in mental calculations • Y4: Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • Y4: Solve problems involving multiplying and adding including using the distributive law to multiply two-digit numbers by one digit ($37 \times 8 = (30 \times 8) + (7 \times 8)$), the associative law ($(2 \times 3) \times 4 = 2 \times (3 \times 4)$). integer scaling problems (six times taller) and harder correspondence problems such as n objects are connected to m objects (e.g. the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children. • Y4: Find the effect of dividing a one-or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Represent multiplication and division facts as grid arrays, link to rectangular areas, identifying factors as whole number side lengths of rectangles.

	<ul style="list-style-type: none"> • Calculate and compare the area of rectangles, including squares, and including using standard units (cm² and m²) and estimate the area of irregular shapes. • Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. Know and use the vocabulary of prime numbers. • Use place value knowledge to multiply and divide whole numbers and those involving decimals by 10 and 100. • Use knowledge of multiples to estimate division calculations e.g. $1075 \div 25 \approx 40$ (since $4 \times 25 = 100$). • Understand division as grouping, moving on from sharing, to make efficient use of multiplication facts when dividing.
Fractions	<ul style="list-style-type: none"> • Y4: Add and subtract fractions with the same denominator • Y4: Recognise and show using diagrams, families of common equivalent fractions. • Y4: Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
Geometry	<ul style="list-style-type: none"> • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Compare and order fractions whose denominators are all multiples of the same number • Y4: Recognise and write decimal equivalents of any number of tenths or hundredths • Y4: Recognise and write decimal equivalents to $\frac{1}{2}$; $\frac{1}{2}$; $\frac{3}{4}$ • Y4: Read, write and convert between analogue and digital 12 and 24-hour clocks • Y4: Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days • Y4: plot specified points and draw sides to complete a given polygon. • Y4: compare and classify geometric shapes including quadrilaterals and triangles based on their properties and sides • Recognise mixed numbers and improper fractions and convert from one form to another. • Write mathematical statements >1 as a mixed number e.g. $\square\square + \square\square = \square\square = 1\square\square$ • Add and subtract fractions with the same denominator beyond 1 and multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Complete, read and interpret information in tables, including times tables • Solve problems involving converting between units of time. • Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • Identify angles at a point and one whole turn (360°), at a point on a straight line and half a turn (180°) and other multiples of 90°. Know that there are four right angles in a complete turn and two right angles in half a turn.
Measurement	<ul style="list-style-type: none"> • Y4: Convert between kilometres, metres, centimetres and millimetres • Y4: Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Y4: Solve length problems involving fractions and decimals to two decimal places • Y4: Round decimals in the context of length to the nearest whole number • Round decimals with two decimal places to the nearest whole number and to one decimal place • Convert between different units of metric measure (g/kg; ml/l) Link to place value understanding of scaling up and down by 1000 (x / ÷)

	<ul style="list-style-type: none">• Estimate capacity using standard units to measure liquid (l/ml) and read scales graded in different sized steps (e.g. 0,10,20,30.... 0 , 25 , 50 , 75.... 0, 20, 40,60...)
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