



Year 5 Spring Maths

Prior Learning

Learning in year 4

Multiplication & Division: multiply and divide tables facts to x12. Multiply and dividing 2 & 3 digit numbers by a single digit.

Fractions-partition, compare and order Mixed numbers . Understand improper fractions, convert improper fractions to Mixed numbers. (yr5 autumn term -equivqlent fractions addition and subtraction of fractions)

Decimals and Percentages-children recognise that tenths are made when dividing an object by 10 and hundredths are made when dividing an object by 100

Perimeter & Area -find perimeters of grids, rectangles and rectilinear shapes; find the area of rectilinear shapes by counting squares.

Key vocabulary for this unit

<u>Multiplication and Division</u>	<u>Fractions</u>	<u>Decimals and Percentage</u>	<u>Perimeter & Area</u>
Multiply	Multiply	decimal	perimeter
Times	proper fraction	decimal place	distance
Divide	improper fraction	one decimal place	area
Share	mixed number	two decimal places	space
Remainder	whole(s)	tenth	length
Factor	equal parts	hundredth	width
Multiple	divide	thousandth	centimetre
Product	fraction of an amount	decimal point	square centimetre (cm ²)
Regroup	operator	place value	metre
Place holder	numerator	digit	square metre (m ²)
	denominator	fraction	scale
	convert	per cent (%)	compare
		percentage	formula

Learning Sequence

Multiplication and Division

- Multiply up to a 4-digit number by a 1-digit number
- Multiply a 2-digit number by a 2-digit number
- Multiply a 3-digit number by a 2-digit number
- Multiply a 4-digit number by a 2-digit number
- Solve problems with multiplication
- Short division
- Divide a 4-digit number by a 1-digit number
- Divide with remainders
- Solve problems with division

Fractions

- Multiply a unit fraction by an integer
- Multiply a non-unit fraction by an integer
- Multiply a mixed number by an integer
- Calculate a fraction of a quantity
- Fraction of an amount
- Find the whole
- Use fractions as operators

Decimals and Percentage

- Decimals up to 2 decimal places
- Equivalent fractions and decimals (tenths)
- Equivalent fractions and decimals (hundredths)
- Equivalent fractions and decimals
- Thousandths as fractions

	<ul style="list-style-type: none"> • Thousandths as decimals • Thousandths on a place value chart • Order and compare decimals (same number of decimal places) • Order and compare any decimals with up to 3 decimal places • Round to the nearest whole number • Round to 1 decimal place • Understand percentages • Percentages as fractions • Percentages as decimals • Equivalent fractions, decimals and percentages
<p><u>Perimeter & Area</u></p>	<ul style="list-style-type: none"> • Perimeter of rectangles • Perimeter of rectilinear shapes • Perimeter of polygons • Area of rectangles • Area of compound shapes • Estimate area
<p>Assessment milestones</p>	
<p>Mathematical skills:</p> <p>Multiplication and Division</p> <ul style="list-style-type: none"> • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers 	<p>Mathematical knowledge:</p> <p>Multiplication and Division</p> <ul style="list-style-type: none"> • interpret remainders as whole numbers, decimals and simple fractions and begin to choose the best way to express remainders, depending on the context of the problem;

<ul style="list-style-type: none"> • divide numbers up to 4 digits by a one-digit number using the formal written method of short division <p>Fractions</p> <ul style="list-style-type: none"> • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other. • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<ul style="list-style-type: none"> • multiply and divide numbers mentally drawing upon known facts <p>Fractions</p> <ul style="list-style-type: none"> • answer reasoning and problem solving questions to demonstrate understanding • solve a range of multiplication and division problems, applying their mental and written methods
<p><u>Decimals and Percentage</u></p> <ul style="list-style-type: none"> • read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, • write percentages as a fraction with denominator 100, and as a decimal 	<p><u>Decimals and Percentage</u></p> <ul style="list-style-type: none"> • say, read and write decimal fractions and related tenths, hundredths and thousandths accurately and are increasingly confident in checking the reasonableness of their answers to problems. • make connections between percentages, fractions and decimals (100% represents a whole quantity and 1% is $\frac{1}{100}$, 50% is $\frac{50}{100}$, 25% is $\frac{25}{100}$) • solve problems which require knowing percentage and decimal equivalents of those fractions with a denominator of a multiple of 10 or 25.
<p><u>Perimeter & Area</u></p> <ul style="list-style-type: none"> • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres 	<ul style="list-style-type: none"> • calculate the perimeter of rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths.

- calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²)
- estimate the area of irregular shapes

- convert between different units of metric measure