

Ursuline Catholic Primary School

Year 5 Maths Curriculum



<u>Autumn</u>	<u>Objectives</u>
Place value of whole numbers	<ul style="list-style-type: none"> Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problems that involve all of the above
Place value of decimals	<ul style="list-style-type: none"> Read and write decimal numbers as fractions [for example, $0.71 = 71/100$] 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
Addition and Subtraction	<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers eg 5-digit – 4-digit multiple of 10 Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 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. Add and subtract decimals up to 2 decimal places including mixed decimal calculation
Perimeter	<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
Properties of number (and shape)	<ul style="list-style-type: none"> 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, prime factors, and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Identify 3-D shapes, including cubes and other cuboids, from 2-D representations
Multiply and divide powers of 10	<ul style="list-style-type: none"> Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Measure	<ul style="list-style-type: none"> Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
Known and related facts	<ul style="list-style-type: none"> Multiply and divide numbers mentally drawing upon known facts
Area Volume	<ul style="list-style-type: none"> Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]

<u>Spring</u>	<u>Objectives</u>
Place Value	<ul style="list-style-type: none"> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero Read Roman numerals to 1000 (M) and recognise years written in Roman numerals
Multiplication and Division	<ul style="list-style-type: none"> Multiply numbers up to 4 digits by a one Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
Fractions	<ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $2/5 + 4/5 = 1 \frac{1}{5}$] 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
Decimals	<ul style="list-style-type: none"> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Percentages	<ul style="list-style-type: none"> Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25.

Position and Direction	<ul style="list-style-type: none"> Identify, describe, and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
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<u>Summer</u>	<u>Objectives</u>
Multiplication and Division	<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 Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
Fractions	<ul style="list-style-type: none"> Add and subtract fractions with the same denominator and denominators that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
Geometry	<ul style="list-style-type: none"> 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 Draw given angles, and measure them in degrees (°) Identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90° Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. find unknown angles in any triangles, quadrilaterals, and regular polygons
Statistics	<ul style="list-style-type: none"> Solve comparison, sum, and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables.
Measurement - Time	<ul style="list-style-type: none"> Solve problems involving converting between units of time sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
Measurement	<ul style="list-style-type: none"> Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.