



St Augustine's Catholic Academy
Maths Intent



Year 1	Place Value (3 weeks) Addition and Subtraction (3 weeks)
National Curriculum	<p>Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.</p> <p>Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>Read and write numbers from 1 to 20 in numerals and words</p> <p>Given a number, identify 1 more and 1 less</p> <p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</p> <p>Add and subtract 1-digit and 2-digit numbers to 20, including zero</p> <p>Represent and use number bonds and related subtraction facts within 20</p> <p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$</p>
Core Knowledge	<p>To count to and within 20.</p> <p>To develop an understanding of ten (ten ones and bonds)</p> <p>To develop an understanding of 11,12 and 13</p> <p>understanding of 14,15 and 16</p> <p>To develop an understanding of 17,18 and 19</p> <p>To develop an understanding of 20</p> <p>To find one more and one less</p> <p>To use a number line to count to and within 20</p> <p>To estimate position on a number line to and within 20.</p> <p>To compare numbers to 20</p> <p>To order numbers to 20</p> <p>To add by counting on within 20</p> <p>To add ones using number bonds</p> <p>To find and make number bonds to 20</p> <p>To find doubles and near doubles by adding</p> <p>To subtract ones using number bonds</p> <p>To subtract by counting back</p> <p>To subtract by finding the difference</p> <p>To explore and find related + and - facts</p>
Skills	<p>Counting forwards and backwards within 20</p> <p>Using a number line</p> <p>Using a tens frame</p> <p>Subitise using concrete objects</p>
Vocabulary	<p>Number ten frame count forwards backwards different tens ones numerals words part whole same different less more change represent mark number line start end greater less jump estimate compare greatest smallest notice number bonds doubles near doubles objects number sentence pattern</p>
Year 2	Money (2 Weeks) Multiplication and Division (4 Weeks)



St Augustine's Catholic Academy
Maths Intent

National Curriculum	<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p>
Core Knowledge	<p>To count money in pence To count money in pounds To count money in pounds in pence To choose notes and coins to make a total To make amounts in different ways To compare amounts of money To calculate with money To make a pound in different ways To find change To solve two step problems involving money</p> <p>To recognise and make equal and unequal groups To add equal groups To use arrays To understand and use the \times symbol to create arrays and groups To write multiplication sentences for arrays and equal groups To make equal groups by grouping or sharing To explore the two times table by counting or making groups of two To divide by two To double and halve a number To identify odd and even numbers To multiply and divide by 10 To multiply and divide by 5 To understand the relationship between the 5 and 10 times tables</p>
Skills	<p>Recognise the value of notes and coins Add and subtract two digit numbers Using a number lines Make equal groups Count objects Count forward and backwards in steps of 2, 5 and 10</p>
Vocabulary	<p>Coin note worth more less calculate total value altogether pence pound different compare how much more change fewest most spent difference</p> <p>Group equal unequal total altogether same different recognise Add multiply multiple multiplication addition sentence multiplication sentence repeated addition organise share counters represent shared equally array double halve odd even tens ones column</p>



St Augustine's Catholic Academy
Maths Intent



Year 3	Multiplication and Division B (3 Weeks) Length and Perimeter (3 Weeks)
National Curriculum	<p>Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods</p> <p>Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>Measure the perimeter of simple 2-D shapes</p>
Core Knowledge	<p>Calculate and identify multiples of ten</p> <p>To identify related multiplication problems.</p> <p>To compare multiplication sentences.</p> <p>To multiply a two digit number by a one digit number</p> <p>To make links between multiplication and division</p> <p>Divide a 2 digit number by a 1 digit number (including remainders)</p> <p>To multiply using 'scaling'</p> <p>To identify all possibilities for solving a problem</p> <p>To measure in mm, cm and m.</p> <p>To identify equivalent lengths (m to cm and mm to cm)</p> <p>To compare lengths</p> <p>To add and subtract lengths</p> <p>To measure and calculate perimeter</p>
Skills	<p>Make equal groups</p> <p>Group and share objects equally</p> <p>Use a bar model</p> <p>Count in repeated steps.</p> <p>To use a ruler/tape measure to measure in mm, cm and m</p>
Vocabulary	<p>Equal/equally unequal groups arrays altogether multiplication multiple lots before previous after odd even bar model multiply divide strategy relationship</p> <p>Place value chart calculation increase decrease partition tens ones flexibly</p> <p>partition divide division remainder possibilities combinations</p> <p>Measure ruler length millimetres centimetres metres equipment long measure height intervals partition convert equivalent units perimeter grid square sides equal</p>
Year 4	Multiplication and Division B (3 Weeks) Length and Perimeter (2 Weeks)



St Augustine's Catholic Academy
Maths Intent

<p style="text-align: center;">National Curriculum</p>	<p>Multiplication and division Recognise and use factor pairs and commutativity in mental calculations Recall multiplication and division facts for multiplication tables up to 12×12 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5) 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 Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers</p> <p>Length and Perimeter Convert between different units of measure [for example, kilometre to metre; hour to minute] Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p>
<p style="text-align: center;">Core Knowledge</p>	<p>Multiplication and division Identify, calculate and use factor pairs Multiply and divide by 10 and 100 Identify, calculate and use related multiplication facts (multiples of 10 and 100) Use formal methods for calculating 2 and 3 digit by 1 digit multiplications. Divide a 2 or 3 digit number by a one digit number, including questions with or without remainders. To use multiplication to solve correspondence problems. To use efficient methods for multiplication.</p> <p>Length and Perimeter To measure in km and m To identify and calculate equivalent lengths (km and m) To calculate perimeter using a grid To calculate the perimeter of rectangles, rectilinear shapes and polygons. To find missing lengths in rectilinear shapes.</p>
<p style="text-align: center;">Skills</p>	<p>Partitioning numbers Multiply a one digit number by a one digit number Use a place value chart Use a number line</p> <p>Use a ruler Identify fractions Identify regular and irregular shapes</p>
<p style="text-align: center;">Vocabulary</p>	<p>Multiply multiple factor factor pairs altogether whole number calculate equivalent calculation placeholder dividing division remainder one tenth one hundredth represent digit column ones tens hundreds exchange partition possibilities combinations</p> <p>Length kilometre metre greater than less than equivalent fraction convert conversion grid perimeter measure label rectangle rectilinear strategies horizontal vertical part whole equilateral triangle symmetrical pentagon hexagon octagon decagon</p>



St Augustine's Catholic Academy
Maths Intent



Year 5	Multiplication and Division (3 Weeks) Fractions B (2 Weeks)
National Curriculum	<p>Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers Divide up to four digits by a 1-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</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 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 (Y4)</p>
Core Knowledge	<p>Multiply a 4 digit number by a one 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 Divide a 4 digit number by a one digit number Divide with remainders Use efficient division methods Solve multiplication and division problems</p> <p>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 by a quantity Calculate a fraction of an amount Find the whole from a fraction of an amount Use fractions as operators</p>
Skills	<p>Use a place value chart Represent numbers with concrete objects Partition numbers</p> <p>Use a bar model Multiply and divide by one digit numbers</p>
Vocabulary	<p>Written method representation exchange multiply multiplication digit partition area model estimate calculate strategy divide remainder short division compare compared</p> <p>Multiplication repeated addition represent bar model integer mixed number improper fraction numerator denominator multiply bar model partition simplest form equal groups efficient method</p>
Year 6	Ratio (2 weeks) Algebra (2 Weeks) Decimals 2 Weeks



St Augustine's Catholic Academy
Maths Intent

National Curriculum	<p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found</p> <p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Use simple formulae</p> <p>Generate and describe linear number sequences</p> <p>Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables</p> <p>Express missing number problems algebraically</p> <p>Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables</p> <p>Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places</p> <p>Solve problems which require answers to be rounded to specified degrees of accuracy</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p> <p>Multiply 1-digit numbers with up to 2 decimal places by whole numbers</p> <p>Use written division methods in cases where the answer has up to 2 decimal places</p> <p>Use written division methods in cases where the answer has up to 2 decimal places</p> <p>Solve problems involving addition, subtraction, multiplication and division</p>
Core Knowledge	<p>Explore the relationship between numbers (additive and multiplicative)</p> <p>Use the language of ratio to describe two amounts</p> <p>To use the ratio symbol to describe two values</p> <p>To explore the relationship between ration and fractions</p> <p>To use knowledge of ratio to draw scale diagrams</p> <p>To calculate and solve problems using scale factors</p> <p>To explore the relationship between similar shapes (scale factors)</p> <p>To solve problems involving ratio</p> <p>To solve one and two step proportion problems</p> <p>Solve algebraic problems using function machines</p> <p>To form algebraic expressions</p> <p>To find values of expressions by substituting numbers</p> <p>To recognise the difference between formulae and expressions.</p> <p>To calculate using formulae and expressions</p> <p>To form equations from diagrams and descriptions</p> <p>To solve one step equations</p> <p>To solve two step equations</p> <p>To find pairs of values</p> <p>To solve problems with two unknowns</p> <p>To represent, identify and partition numbers with up to 3 decimal places.</p>



St Augustine's Catholic Academy
Maths Intent



	<p>To represent, identify and partition numbers with up to 3 decimal places (greater than 1)</p> <p>To round decimals to the nearest integer or one decimal place</p> <p>To add and subtract decimals with up to 3 decimal places</p> <p>To multiply numbers with up to 2 decimal places by 10, 100 or 1000</p> <p>To divide numbers with up to 3 decimal places by 10, 100 or 1000</p> <p>To multiply and divide decimals by integers</p> <p>To multiply and divide decimals in context</p>
Skills	<p>Using a number line</p> <p>Add, multiply, subtract and divide accurately</p> <p>Use a bar model</p> <p>Measure with a ruler</p> <p>Measure with a protractor</p> <p>To partition numbers using a place value chart</p> <p>To represent numbers using concrete objects</p>
Vocabulary	<p>Relationship addition multiplication additive multiplicative sequence size relate ratio rearrange common factor simpler simplest form fraction similar different parts altogether scale scale factor diagram represent enlargement dimensions shape angles corresponding orientation recipe amount ingredient</p> <p>Function machine input output difference inverse rule order represent expression substitute value formulae equation represent pairs possibilities</p> <p>Decimal represent tenths hundredths thousandths digit value greater less round integer multiple exchange counters</p>

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