St. Teresa's Catholic Primary School Maths Skills Progression Class 6

<table>
<tr><th>Term</th><th colspan="3">Maths Topics and Learning Objectives</th></tr>
<tr><td rowspan="2">Autumn</td><td><u>Number, Place Value and Rounding Time and Statistics</u>
• Count from 0 in multiples of 50 and 100; find 10 or 100 more or less than a given number.
• count in multiples of, 25 and 1000
• find 1000 more or less than a given number – any number
• Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s).
• recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
• Compare and order numbers up to 1,000.
• order and compare numbers beyond 1000
• Identify, represent and estimate numbers using different representations.
• identify, represent and estimate numbers (as above) using different representations
• Read and write numbers up to 1,000 in numerals and in words.
• Solve number problems and practical problems involving these ideas.
• solve number and practical problems that involve all of the above and with increasingly large positive numbers
• round any number to the nearest 10, 100 or 1000</td><td><u>Calculations</u>
<u>(Addition and Subtraction)</u>
• Add and subtract numbers mentally (Basic skills), including:
- a three-digit number and 1s
- a three-digit number and 10s
- a three-digit number and 100s.
• Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.
• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
• Estimate the answer to a calculation and use inverse operations to check answers.
• estimate and use inverse operations to check answers to a calculation
• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</td><td rowspan="2"><u>Geometry – Properties of Shapes</u>
<u>(Double maths day)</u>
• Describe and draw 2D shapes, using their properties
• recognise 3-D shapes in different orientations and describe them.
• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes (e.g. parallelogram, rhombus and trapezium)
• identify lines of symmetry in 2-D shapes presented in different orientations
• complete a simple symmetric figure with respect to a specific line of symmetry.
• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

• Recognise angles as a property of shape or a description of a turn.
• Identify right angles.
• Recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn.
• Identify whether angles are greater than or less than a right angle.
• identify acute and obtuse angles and compare and order angles up to two right angles by size</td></tr>
<tr><td><u>Measurement: Time</u>
• read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. (just Y4) – Number and Place value link
• Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.
• Estimate and read time with increasing accuracy to the nearest minute.
• Record and compare time in terms of seconds, minutes and hours.
• Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.</td><td><u>Measurement: Length and Perimeter</u>
• Measure, compare, add and subtract:
• lengths (m/cm/mm)
• Measure the perimeter of simple 2-D shapes.
• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
• find the area of rectilinear shapes by counting squares</td></tr>
</table>

	• Know: • the number of seconds in a minute • the number of minutes in an hour • the number of hours in a day • Know the number of days in each month, year and leap year. • Compare durations of events **Statistics** • Interpret and present data using bar charts, pictograms and tables. • **interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. -** *using a greater range of scales*		
Spring	**Calculations (Multiplication and Division)** • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables**.** • **recall multiplication and division facts for multiplication tables up to 12 × 12** • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods**.** • **multiply two-digit and three-digit numbers by a one-digit number using formal written layout** • 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. • **solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.** • **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**	**Fractions** • Count up and down in tenths • **count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.** • Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • **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** • add and subtract fractions with the same denominator within one whole • **add and subtract fractions with the same denominator** *through a variety of increasingly complex problems* • Recognise and show, using diagrams, equivalent fractions with small denominators. • **recognise and show, using diagrams, families of common equivalent fractions** • Compare and order unit fractions, and fractions with the same denominators. • Solve problems that involve all of the above.	**Geometry: Position and Direction** • **describe positions on a 2-D grid as coordinates in the first quadrant** • **describe movements between positions as translations of a given unit to the left/right and up/down** • **plot specified points and draw sides to complete a given polygon.**

<table>
<tr><td></td><td><u>Measurement: Mass and capacity</u>
• I can measure and compare mass and capacity using:
• mass (kg/g)
• volume/capacity (l/ml).
• convert between different units of measure
• I can add and subtract mass using kg and g
I can add and subtract volume/capacity using l and ml</td><td><u>Measurement: Money</u>
• Add and subtract amounts of money to give change, using both £ and p in practical contexts.
• estimate, compare and calculate different measures, including money in pounds and pence</td><td><u>Statistics</u>
<u>(Double maths day)</u>
• Solve one-step and two-step questions using information presented in:-
- scaled bar charts
- pictograms
- tables.
• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</td></tr>
<tr><td rowspan="2">Summer</td><td><u>Number, Place Value and Rounding</u>
Consolidate year 3 objectives as necessary
• Count from 0 in multiples of 4, 8
• count in multiples of 6, 7, 9,
• find 1000 more or less than a given number – any number
• read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. (just Y4)
• count backwards through zero to include negative numbers
• round any number to the nearest 10, 100 or 1000
• Solve number problems and practical problems involving these ideas.
• solve number and practical problems that involve all of the above and with increasingly large positive numbers</td><td><u>Measurement: Length, Perimeter and Area</u>
Consolidation of objectives below that need more practice
• Measure, compare, add and subtract:
• lengths (m/cm/mm)
• Measure the perimeter of simple 2-D shapes.
• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
• find the area of rectilinear shapes by counting squares</td><td rowspan="2"><u>Revision of Shape, Mass and Capacity</u>
• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.
• identify acute and obtuse angles and compare and order angles up to two right angles by size
• convert between different units of measure</td></tr>
<tr><td><u>Calculations</u>
<u>(Addition and Subtraction)</u>
Practice and consolidate objectives below
• Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.
• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
• Estimate the answer to a calculation and use inverse operations to check answers.
• estimate and use inverse operations to check answers to a calculation
• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
• count backwards through zero to include negative numbers (link with measurement)</td><td><u>Fractions and Decimals</u>
Year 3 consolidation
• recognise and write decimal equivalents of any number of tenths or hundredths
• recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
• find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
• round decimals with one decimal place to the nearest whole number
• compare numbers with the same number of decimal places up to two decimal places
• solve simple measure and money problems involving fractions and decimals to two decimal places.</td></tr>
</table>

	Calculations **(Multiplication and Division)** **Consolidate** • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables**.** • **recall multiplication and division facts for multiplication tables up to 12 × 12** • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods**.** • **multiply two-digit and three-digit numbers by a one-digit number using formal written layout** • 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. • **solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.**	**Measurement: Time** Year 3 consolidation • **read, write and convert time between analogue and digital 12 and 24 hour clocks** • **solve problems involving converting from:** - **hours to minutes** - **minutes to seconds** - **years to months** - **weeks to days** -	

Bold type denotes year four curriculum objectives