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

Term	Maths Topics and Learning Objectives NB: bold italic text denotes Y3 objectives; other objectives Y4.			

Autumn	**Number, Place Value and Rounding**
	
	• ***Read and write numbers to 1,000 in numerals and words.***
	• Identify, represent and estimate numbers using different representations. Recognise the place value of each digit in a ***3-digit number***; 4-digit number.
	• Order and compare numbers ***up to*** beyond 1,000.
	• Round any number to the ***nearest 10, 100*** or 1,000.
	• Can count backwards through zero to include negative numbers.
	• ***Solve number and practical problems with the above*** (involving increasingly large numbers).
	• Read Roman numerals to 100 and know that over time the numeral system changed to include the concept of zero and place value.
		**Calculations
		(Addition and Subtraction)**
		
		• I can solve:
		  - ***missing number problems***
		  - ***problems involving multiplication and division***
		  - ***including integer scaling problems***
		  - *estimate the answer to a calculation and use inverse operation to check answers*
		• addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.
			**Measurement:
			Perimeter and Area**
			
			• ***measure and compare lengths using m, cm & mm***
			• ***measure the perimeter of simple 2D shapes***
			• Measure and calculate the perimeter of a rectilinear figure in cm and m.
			• Find the area of rectilinear shapes by counting squares.
				**Geometry – Properties of Shapes
				(Double Maths Day)**
				
				• ***describe and draw 2D shapes, using their properties.***
				• ***recognise that two right angles make a half-turn & three make a three quarter turn.***
				• ***identify horizontal, vertical lines and pairs of perpendicular and parallel lines.***
				• ***identify right angles.***
				• ***know angles are properties of a shape***
				• Compare and classify geometric shapes, including quadrilateral and triangles based on their properties and sizes.
				• Complete a simple symmetric figure with respect to a specific line of symmetry.
				• Identify lines of symmetry in 2D shapes presented in different orientations.
				• Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Autumn: Basic Skills and Arithmetic Practice

- Recall how to subitise amounts
- *Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward*
- Count from 0 in multiples of 4, 8, 50 and 100
- *Recall how to identify odd and even numbers*
- *Double and halve 2-digit numbers mentally*
- *Recall and use multiplication and division facts for the 2, 5 and 10 times tables*
- *Recall and use multiplication and division facts for the 3, 4 and 8 times tables*
- Use place value, known and derived facts to multiply and divide mentally
- *Find 10 or 100 more or less than a given number*
- Find 1000 more or less than a given number
- *Add and subtract mentally: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; three one-digit numbers*
- *Add and subtract numbers with up to three digits, using a formal written method*
- Add and subtract numbers with up to four digits, using a formal written method
- Count up and down in tenths and hundredths

Autumn Term 1 KIRFs:

Year 4: Know multiplication and division facts for 7 x table.

Year 3: Know all addition and subtraction facts for multiples of 10 to 100.

Autumn Term 2 KIRFs:

Year 4: Know multiplication and division facts for the 12 x table.

Year 3: Know multiplication and division facts for the 4 x table.

Ongoing KIRF: Tell the time to the nearest 5 minutes.

Distributed daily practice of these basic skills and arithmetic skills to be informed by AfL; the revisiting of stated objectives through recall activities is informed by teacher AfL.

	Calculations applied to reasoning and problem solving: (Multiplication and Division)	Fractions	Measurement: Conversion of Length, Mass and Capacity	Geometry – Position and Direction
Spring	• Solve problems involving multiplying and adding, including: ➢ *using the distributive law to multiply 2-digit numbers by 1-digit e.g. 49 x 6 = 40 x 6 + 9 x 6 = 240 + 54 = 294* ➢ integer scaling problems ➢ harder correspondence problems such as n objects are connected to m objects. • Estimate and use inverse operations to check answers in a calculation.	• *compare and order unit fractions and factions with the same denominators.* • *add and subtract factions with the same denominator within one whole.* • *recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10.* • *recognise and can find and write factions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.* • Recognise and show using diagrams, families of common equivalent fractions. • Solve problems involving increasingly harder factions and fractions to divide quantities, including non-unit fractions where the answer is a whole number. • Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.	• *measure and compare volume/capacity using l & ml.* • *add and subtract mass using kg & g.* • I can convert between different units of measurements. (kg and ml) • Convert between different units of measurements. (length)	• *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. • Describe positions on a 2D grid as coordinates in the first quadrant.

Spring: Basic Skills and Arithmetic Practice

- Count in multiples of 6, 7, 9, 25 and 1000
- Recall and use multiplication and division facts for the 6, 7, 9, 11 and 12 times tables
- *Multiply two-digit numbers by a one-digit number, using a formal written method for calculating*
- *Multiply one-digit and two-digit numbers by 10*
- *Multiply one-digit and two-digit numbers by 0 and 1*
- *Multiply three numbers together*
- *Divide by 1*
- Recognise and use factor pairs and commutativity in mental calculations.
- Add and subtract fractions with the same denominator within one whole
- Count up and down in tenths and hundredths
- RECALL OF PREVIOUSLY TAUGHT BASIC SKILLS AND ARITHMEITC CALCULATIONS INFORMED BY REGULAR AfL.

Spring Term 1 KIRFs:

Year 4: Know multiplication and division facts for all times tables up to 12 x 12.

Year 3: Know multiplication and division facts for the 6 times table.

Spring Term 2 KIRFs:

Year 4: Know multiplication and division facts for all times tables up to 12 x 12.

Year 3: Know multiplication and division facts for the 9 times table.

Ongoing KIRF: Tell the time to the nearest 5 minutes.

Distributed daily practice of these basic skills and arithmetic skills to be informed by AfL; the revisiting of stated objectives through recall activities is informed by teacher AfL; sustained practice of these skill from both Spring and Autumn term applied to SATs style arithmetic papers to support and develop experience with answering a range of questions in a given time frame.

	Place value: Decimals	Measurement: Time	Measurement: Money	Statistics	Revision and Consolidation

Summer	**Find the effect of dividing a 1-digit or 2-digit number by 10** and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.
	• Compare numbers with the same number of decimal places up to 2 decimal places.
	• Round decimals with one decimal place to the nearest whole number.
	
	Decimals: Fraction equivalents
	
	• Recognise and write decimal equivalents of any number of tenths or hundredths.
	• Recognise and write decimal equivalents to 1/4, 1/2 and ¾.
		• *I can tell and write the time from an analogue clock (12 hour clock).*
		• *I can tell and write the time from a digital clock (24 hour clock).*
		• *I can estimate and read time with increasing accuracy to the nearest minute.*
		• *I can compare the duration of events.*
		• *I can tell and write the time from an analogue clock (Roman numerals).*
		• *I can use the following vocabulary: o'clock, am, pm, morning, afternoon, noon & midnight.*
		• *I know the number of: seconds in a minute; minutes in an hour; hours in a day.*
		• *I know the number of days in each month, year and leap year.*
		• read, write and convert time between analogue and digital 12 hour clocks.
		• read, write and convert time between analogue and digital 24 hour clocks.
		
		• solve problems involving:
		
		  ➢ converting from hours to minutes
		  ➢ minutes to seconds
		  ➢ years to months
		  ➢ weeks to days.
			• *add and subtract amounts of money to give change, using both £ and p in a practical context.*
			• *compare different measures, including money in £ and p.*
			• estimate different measures, including money in £ and p.
			• calculate different measures. Including money in £ and p.
			• Solve simple money problems involving decimals to 2 decimal places.
				• *interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.*
				• solve comparison, sum and difference problems using information presented in:
				  ➢ bar charts
				  ➢ pictograms
				  ➢ tables
				  ➢ other graphs	

- Recall times table facts up to 12 x 12 – MTC preparation
- ***Tell and write the time from an analogue clock, including Roman numerals, and 12-hour and 24-hour clocks***
- Convert time between analogue and digital clocks
- ***Recall vocabulary am and pm***
- Recall number of seconds in a minute, days in a given month, year and leap year
- ***Convert basic units of metric measure***

Summer Term 1 KIRFs:

Year 4: Find 10, 100 and 1000 more or less than a given number.

Year 3: Know multiplication and division facts for the 8 times table.

Summer Term 2 KIRFs:

Year 4: Know decimal number bonds to 1: e.g. 0.3 + 0.7 = 1

Year 3: Know number bonds to 100 (any given number)

Ongoing KIRF: Tell the time to the nearest 5 minutes.

<u>Distributed daily practice of these basic skills and arithmetic skills to be informed by AfL; the revisiting of stated objectives through recall activities is informed by teacher AfL.</u>