St. Mark's Maths Medium Term Planning

Year 4 Yearly Overview

Red objectives are essential; these should prioritised within planning and revisited throughout the year. They are core learning on which next year's curriculum is based. All objectives need to be taught and, where possible, combine objectives so that application is stressed, e.g. fractions of measures

Number: Number and Place Value

Counting			Identifying, representing & estimating	Comparing numbers	Understanding place value	Reading and writing numbers	Rounding	Problem solving
Count in multiples of 6, 7, 9, 25 and 1000	**Find 1000 more or less than a given number**	Count backward through zero to include negative numbers	Identify, represent and estimate numbers using different representations	**Order and compare numbers beyond 1000**	**Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)**	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.	**Round any number to the nearest 10, 100 and 1000**	**Solve number and practical problems that involve all of the above and with increasingly large positive numbers**

Number: Addition and Subtraction

Written Calculation	Inverse, estimating & checking answers	Problem solving
Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate *(expanded then compact column addition/ subtraction)*	**Estimate** and use inverse operations to check answers to a calculation	**Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why**

Number: Multiplication and Division

Mental and Written calculation		Multiplication & division facts		Properties of numbers	Inverse, estimating & checking answers	Problem solving
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	**Multiply 2-digit and 3-digit numbers by a one-digit number using formal written layout** *(Grid method)*	*count in multiples of 6, 7, 9, 25 and 1 000*	**recall multiplication and division facts for tables up to 12×12**	**recognise and use factor pairs and commutativity in mental calculations**	**Estimate** and use inverse operations to check **answers to a calculation**	**Solve problems involving multiplying & adding**, including using the distributive law to multiply 2-digit nos by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Number: Fractions

Counting	Recognising fractions	Comparing decimals	Rounding	Equivalence	
Count up and down in hundredths	**recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten**	**Compare numbers with the same number of decimal places up to two decimal places**	**Round decimals with one decimal place to the nearest whole number**	**Recognise and show, using diagrams, families of common equivalent fractions**	**Recognise and write decimal equivalents of any number of tenths or hundredths**
				Recognise and write decimal equivalents to ¼ ½ ¾	

Addition and subtraction	Multiplication and division	Problem solving	
Add and subtract fractions with the same denominator	**Find effect of dividing a one- or two-digit no. by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths**	**Solve simple measure and money problems involving fractions and decimals to two decimal places**	**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

Measurement					
Comparing & estimating	**Measuring and calculating**			**Telling the time**	
estimate, compare and calculate different measures, including money in pounds and pence	find the area of rectilinear shapes by counting squares	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Convert between different units of measure [for example, kilometre to metre; hour to minute]	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

Geometry: Properties of Shape				Geometry: Position and Direction	
Identifying properties	**Comparing and classifying**	**Drawing & constructing**	**Angles**	**Position, direction and movement**	
Identify lines of symmetry in 2-D shapes presented in different orientations	Compare/classify geometric shapes, incl. quadrilaterals and triangles, based on their properties/ sizes	Complete a simple symmetric figure with respect to a specific line of symmetry	Identify acute and obtuse angles and compare and order angles up to two right angles by size	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 |

Statistics
Interpreting, constructing and representing data

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 and other graphs

Examples of what each objective looks like are available on NCETM's website, (National Centre for the excellence of teaching in maths), www. ncetm.org.uk. *Click on: New National Curriculum 2014 blue box – National Curriculum Resource Tool - select appropriate year group and area – click on exemplification.*

Suggested Yearly Pacer
Year 4

Measurement should be viewed as applied number and calculation. All opportunities to use number in real life contexts should be exploited. Links between fractions, division and multiplication should be made.
Please take all opportunities to draw objectives together rather than teach discretely. The aims of fluency, reasoning and problem solving should be embedded in all teaching.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 2	Summer 2
Number		**Number**		**Number**	
Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value
Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction
Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division
Fractions	Fractions	Fractions	Fractions	Fractions	Fractions
Measurement		**Measurement**		**Measurement**	
Time Length Perimeter	Money Capacity	Mass Area Time	Money Volume	Time Length, Mass, Capacity and Volume	Money Perimeter and Area
Geometry/Statistics		**Geometry/Statistics**		**Geometry/Statistics**	
Shape	Statistics	Shape	Statistics	Position and Direction	Shape