Topic Vocabulary, Skills and Knowledge

Subject……Maths …… Year……4…… Curriculum lead…Damian Moore

Vocabulary

I understand and can use these words:

Number	odd	even	digit	numeral
	consecutive	sequence	sort	classify
	property	predict	ascending	descending
	application	reasoning	problem solving	mastery
Place Value	ones	tenths	hundredths	thousandths
	decimal	place holder	positive	negative
	integers	Roman Numerals	partition	compare
	decrease	increase	represent	estimate
	count through zero	round	place holder	column
Methods	written method	mental calculation	column method	bus stop
	compact method	extended method	operation	inverse
	commutative	recall	equals	sign/symbol
	carry over	ones/tens/hundreds boundary		
Addition and Subtraction	add	addition	more	plus
	increase	total	sum	altogether
	subtract	subtraction	minus	less
	decrease	take away	fewer	leave
	difference			
Multiplication and division	multiply	product	multiples	scale
	multiplication facts	times	double	
	divide	share	half	share equally
	remainder	groups of		
Measurement	measure	convert	unit of measure	measurement
	compare	scale	estimate	approximately
	length	width	height	depth
	breadth	wide	narrow	deep
	shallow	long/longer/longest	short/shorter/shortest	far/further/furthest
	perimeter	area	edge	ruler
	metre stick	tape measure	metre	kilometre
	millimetre	centimetre	mile	distance apart / between / to / from
	money	pounds	pence	coin/note
	price	cost	spend/spent	change
	more/most expensive	less/least expensive	cheaper	value/worth
	hour	minute	second	years
	month	week	day	fortnight

Topic Vocabulary, Skills and Knowledge

Subject.....Maths ..... Year.....4..... Curriculum lead...Damian Moore

	leap year	millennium	century	seasons
	calendar	morning	afternoon	evening
	night	earliest	latest	timetable
	arrive	depart	schedule	quickest
	slowest	clock	watch	hands
	analogue	digital	12 hour clock	24 hour clock
Geometry	regular	irregular	geometric	radius
	diameter	angle	right angle	acute
	reflex	obtuse	symmetrical	symmetry
	mirror line	reflection	translation	round
	curved	straight		
	2 dimensional	corner	side	perimeter
	centre	diameter	radius	area
	circle	circular	semi-circle	triangle/triangular
	isosceles	scalene	equilateral	square
	rectangle/rectangular	oblong	pentagon/pentagonal	hexagon/hexagonal
	heptagon/heptagonal	octagon/octagonal	quadrilateral	polygon
	3 dimensional	net	hollow	solid
	vertex/vertices	surface	edge	base
	cube	cuboid	pyramid	cone
	sphere	hemi-sphere	spherical	cylinder
	prism	tetrahedron	polyhedron	
	position	direction	row	column
	axis	coordinates	clockwise	anti-clockwise
	compass points	N, E, S, W	NE, NW, SE, SW	opposite
	movement	horizontal	vertical	diagonal
	whole/ half/ quarter turn	rotate	degree	origin
Fractions and Decimals	part	equal parts	numerator	denominator
	whole	half	third	quarter
	fifth	sixth	eighth	tenth
	twentieth	hundredth	equivalent	simplify
	proper fraction	improper fraction	unit fraction	non-unit fraction
	percentage	percent	decimal point	decimal place
Statistics	data	tally	sort	collect
	survey	questionnaire	graph	block graph
	pictogram	represent	group	set
	bar/tally chart	frequency	Carroll diagram	Venn diagram
	label	title	axis/axes	most/ least popular

Topic Vocabulary, Skills and Knowledge

Subject……Maths …… Year……4…… Curriculum lead…Damian Moore

	most/ least common	findings	analyse	

Skills

I can:

Place Value		
Count in multiples of 6, 7, 9. 25 **and** 1000.	Find 1000 more or less than a given number.	Order and compare numbers beyond 1000
Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones)	Identify, represent and estimate numbers using different representations.	Solve number and practical problems that involve all of the above and with increasingly large positive numbers.
Count backwards through zero to include negative numbers.	Read Roman numerals to 100 (I to C)	Round any number to the nearest 10, 100 or 1000
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 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.
Multiplication and Division		
Recall and use multiplication and division facts for multiplication tables up to 12 × 12.	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.	Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit
Measurement – length, perimeter and area		
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	Find the area of rectilinear shapes by counting squares.
Measurement- Money		
Convert between pounds and pence.	Estimate, compare and calculate different amounts of money in pounds and pence.	Solve simple money problems involving fractions and decimals to two decimal places.
Measurement – Time		
Convert between hours and minutes	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		

Topic Vocabulary, Skills and Knowledge

Subject……Maths …… Year……4…… Curriculum lead…Damian Moore

Identify acute and obtuse angles and compare and order angles up to two right angles by size.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	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.	Describe positions on a 2-D grid as coordinates in the first quadrant	Plot specified points and draw sides to complete a given polygon.
Describe movements between positions as translations of a given unit to the left/ right and up/ down.		
Fractions and Decimals		
Recognise and show, using diagrams, families of common equivalent fractions.	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	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.	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 write decimal equivalents to ¼ ½ and $^2/_4$.	Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	Recognise and write decimal equivalents of any number of tenths or hundredths.
Statistics		
Pose a question, carry out research, present and interpret findings.	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.

Topic Vocabulary, Skills and Knowledge

Subject……Maths …… Year……4…… Curriculum lead…Damian Moore

Knowledge

I know:

That over time, the numeral system changed from Roman Numerals to include the concept of zero and place value.	I know when my birthday is, including my date of birth.	How many days are in a week and a year including a leap year.
How many months are in a year.	How to write the date in long and short form.	How to describe events using the words, today, yesterday, the day before yesterday, tomorrow, the day after tomorrow.
When to use a written or mental method.	Why we use different units of measure.	How many hours are in half a day and a whole day.
The different points of a compass.	The different vocabulary used for addition, subtraction, multiplication and division.	That my learning in maths links to all areas of the curriculum, for example, position and direction work links to geography.
What application, reasoning and problem solving mean.	How to work in Greater Depth.	That Fluent in 5 is helping me with my fluency.