

Appendix 1 – Core Learning Objectives for each year group

In each year group, we have identified Core Learning Objectives that are fundamental in ensuring children have a mastery of the key skills required to progress effectively in maths

Year 3

Key Objectives

multiply and divide whole numbers by 10 & 100 and the effect on place value	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	divide numbers up to 2 digits using formal written methods	solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables
add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	multiply numbers up to 2 digits using formal written methods	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	

Expected Knowledge

- 2x, 5x, 10x Times Tables
- 3x, 4x, 8x Times Tables
- Recognise the place value of each digit in a three-digit number (hundreds, tens, and ones)
- Standard units of measure – m, cm, mm, kg, g, l, ml
- Perimeter
- Read time to the nearest minute; seconds, minutes, hours and o'clock; a.m./p.m., morning, afternoon, noon and midnight
- Know the number of seconds in a minute and the number of days in each month, year and leap year
- Name unit fractions e.g. one half, one quarter
- Common 2D and 3D shapes

Year 4

Key Objectives

multiply and divide numbers (inc. decimals) by 10/100/1000 and the effect on place value	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	recall multiplication and division facts for multiplication tables up to 12×12	divide two-digit and three-digit numbers by a one-digit number using formal written layout including giving remainders	add and subtract fractions with the same denominator

Expected Knowledge

- All Times Tables up to 12×12 and associated division facts
- Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- Roman numerals to 100
- Common measure conversions e.g. m in a km, minutes in an hour, days in a week
- Use the 12 and 24 hour clock
- Recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$

Year 5

Key Objectives

add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition & subtraction)	multiply numbers up to 4 digits by a 1 or 2-digit number using a formal written method, including long multiplication for 2-digit numbers	complete, read and interpret information in tables, including timetables	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	add and subtract fractions with the same denominator and multiples of the same number	read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places

Expected Knowledge

- Fraction, decimal and percentage equivalents for common unit fractions e.g. $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{10}$
- Percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 e.g. $\frac{1}{10}$
- Know that % is the percentage symbol and that it relates to 'parts per hundred'
- Square and cubed numbers
- Angles are measured in degrees
- Properties of rectangles
- Area (calculation) and volume (as a concept)

Year 6

Key Objectives

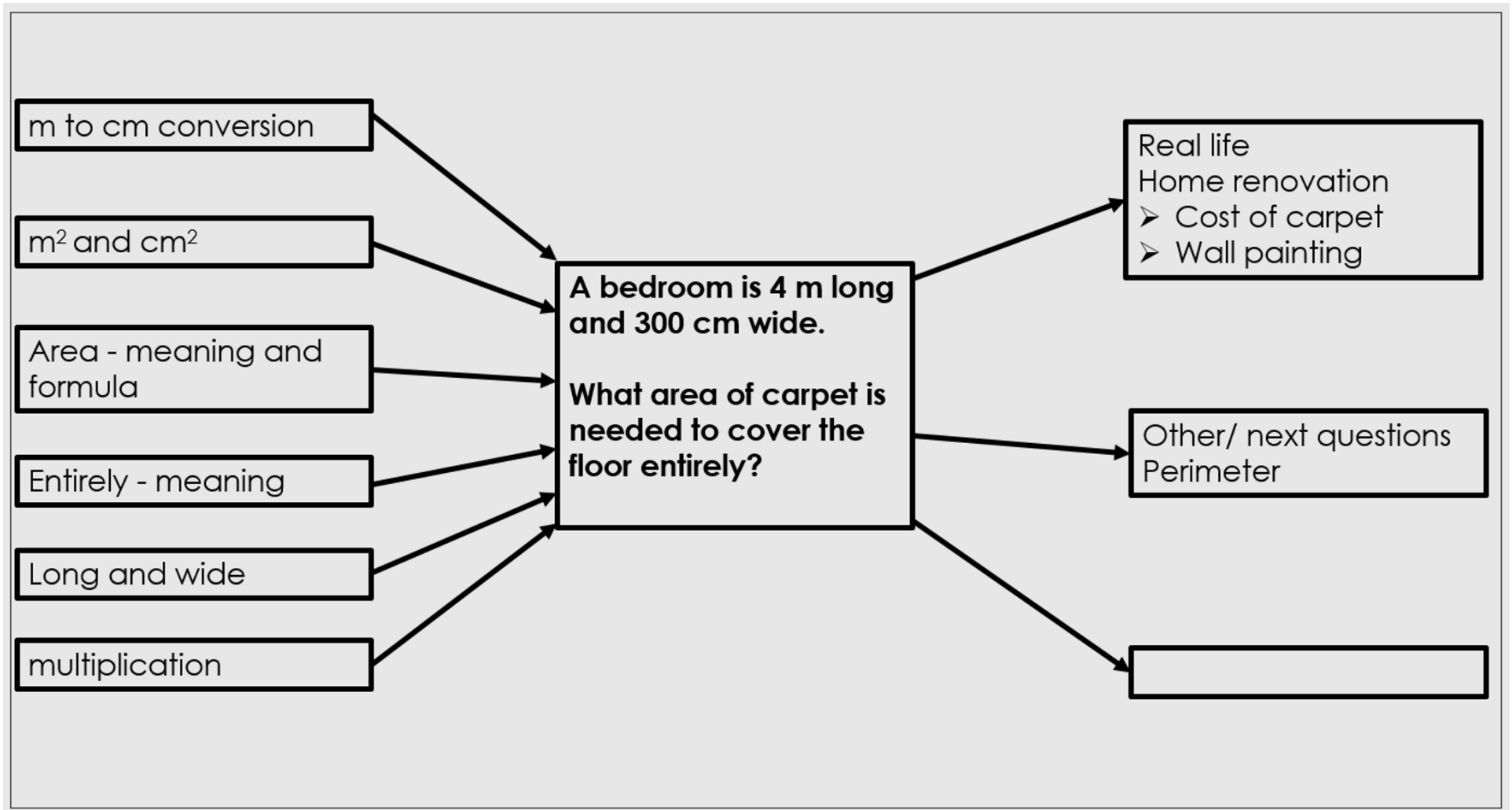
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	use their knowledge of the order of operations to carry out calculations involving the four operations	use simple formulae	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	

Expected Knowledge

- Recognise the place value of each digit in a six-digit number (Hundred thousands, ten thousands, thousands, hundreds, tens, and ones)
- Mean (calculation); identify median and mode averages
- Identify radius, diameter and circumference of a circle
- Kilometres to miles conversion rate and vice versa
- Cubic measures e.g. cm^3 , m^3

APPENDIX 2 - Thinking Tools in Maths

Example of how a Multi-Flow map is used to develop metacognition around solving a multi-step worded problem



APPENDIX 3 - Curriculum Objectives by stage

Objectives highlighted in green denote core objectives as identified by Oaklands Junior School

Stage 1 Objectives	
NUMBER	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
	count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
	given a number, identify one more and one less
	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
	read and write numbers from 1 to 20 in numerals and words
CALCULATION	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
	represent and use number bonds and related subtraction facts within 20
	add and subtract one-digit and two-digit numbers to 20, including zero
	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 \ominus = 9$
	solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support
MEASUREMENT	compare, describe and solve practical problems for: lengths and heights (<i>e.g. long/short, longer/shorter, tall/short, double/half</i>); mass or weight (<i>e.g. heavy/light, heavier than, lighter than</i>); capacity/volume (<i>full/empty, more than, less than, quarter</i>); time (<i>quicker, slower, earlier, later</i>)
	measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time (hours, minutes, seconds)
	recognise and know the value of different denominations of coins and notes
	sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening
	recognise and use language relating to dates, including days of the week, weeks, months and years
	tell the time to the hour and half past the hour and draw the hands on a clock face to show these times
FRACTIONS	recognise, find and name a half as one of two equal parts of an object, shape or quantity
	recognise, find and name a quarter as one of four equal parts of an object, shape or quantity
GEOMETRY	recognise and name common 2-D and 3-D shapes, including: 2-D shapes (<i>e.g. rectangles (including squares), circles and triangles</i>) and 3-D shapes (<i>e.g. cuboids (including cubes), pyramids and spheres</i>)

	describe position, directions and movements, including half, quarter and three-quarter turns
U & A	Use mathematics as an integral part of classroom activities with support
	Represent their work with objects or pictures
	Discuss their work with support
	Draw simple conclusions from their work with support
	Recognise and use a simple pattern or relationship with support

Stage 2 Objectives

NUMBER	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward
	recognise the place value of each digit in a two-digit number (tens, ones)
	identify, represent and estimate numbers using different representations, including the number line
	compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs
	read and write numbers to at least 100 in numerals and in words
	use place value and number facts to solve problems
CALCULATION	solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental & written methods
	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers
	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems
	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs
	show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
MEASUREMENT	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$ C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
	compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$
	recognise and use symbols for pounds (\pounds) and pence (p); combine amounts to make a particular value
	find different combinations of coins that equal the same amounts of money
	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
	compare and sequence intervals of time
	tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
FRACTIONS	recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
	write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$

GEOMETRY	identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line
	identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
	identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid
	compare and sort common 2-D and 3-D shapes and everyday objects
	order and arrange combinations of mathematical objects in patterns
	use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line
U & A	Select the mathematics they choose to use in some classroom activities with support
	Discuss their work using mathematical language with support
	Begin to represent their work using symbols and simple diagrams with support
	Predict what comes next in a simple number, shape or special pattern or sequence and give reasons for their opinions

Stage 3 Objectives

NUMBER	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
	compare and order numbers up to 1000
	identify, represent and estimate numbers using different representations and diagrams
	read and write numbers up to 1000 in numerals and in words
	multiply and divide whole numbers by 10 & 100 and the effect on place value
	solve number problems and practical problems involving these ideas
CALCULATION	add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds
	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
	estimate the answer to a calculation and use inverse operations to check answers
	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
	multiply numbers up to 2 digits using formal written methods
	divide numbers up to 2 digits using formal written methods
solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects	
STATISTICS	interpret and present data using bar charts, pictograms and tables
	solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables
MEASUREMENT	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
	measure the perimeter of simple 2-D shapes
	add and subtract amounts of money to give change, using both £ and p in practical contexts
	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, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight
	know the number of seconds in a minute and the number of days in each month, year and leap year
	compare durations of events, for example to calculate the time taken by particular events or tasks
FRACTIONS	count up and down in tenths; 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
	recognise and show, using diagrams, equivalent fractions with small denominators

	add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)
	compare and order unit fractions, and fractions with the same denominators
	solve problems that involve all of the above
GEOMETRY	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
	recognise that angles are a property of shape or a description of a turn
	identify whether angles are greater than or less than a right angle
	identify horizontal and vertical lines and pairs of perpendicular and parallel lines
U & A	Begin to organise their work and review their results through self-assessment
	Discuss their mathematical work and begin to explain their thinking

Stage 4 Objectives	
NUMBER	count in multiples of 6, 7, 9, 25 and 1000
	find 1000 more or less than a given number
	count backwards through zero to include negative numbers
	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
	order and compare numbers beyond 1000
	identify, represent and estimate numbers using different representations
	round any number to the nearest 10, 100 or 1000
	multiply and divide numbers (inc. decimals) by 10/100/1000 and the effect on place value
	solve number and practical problems that involve all of the above and with increasingly large positive numbers
	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
CALCULATION	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
	recall 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
	recognise and use factor pairs and commutativity in mental calculations
	multiply two-digit and three-digit numbers by a one-digit number using formal written layout
	divide two-digit and three-digit numbers by a one-digit number using formal written layout including giving remainders
	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
	Convert between different units of measure (e.g. kilometre to metre; hour to minute)
MEASUREMENT	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
	find the area of rectilinear shapes by counting squares
	estimate, compare and calculate different measures, including money in pounds and pence
	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
	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
STATISTICS	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
	recognise and show, using diagrams, families of common equivalent fractions
FRACTIONS	count up and down in hundredths; recognise that hundredths arise when dividing an object by a 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

	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 units, 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
GEOMETRY	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
	identify acute and obtuse angles and compare and order angles up to two right angles by size
	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
	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
USING & APPLYING	Begin to organise their work and check their results
	Discuss their mathematical work and begin to explain their thinking
	Use and interpret mathematical symbols and diagrams
	Understand a general statement by finding particular examples that match it
	Review their work and reasoning

Stage 5 Objectives

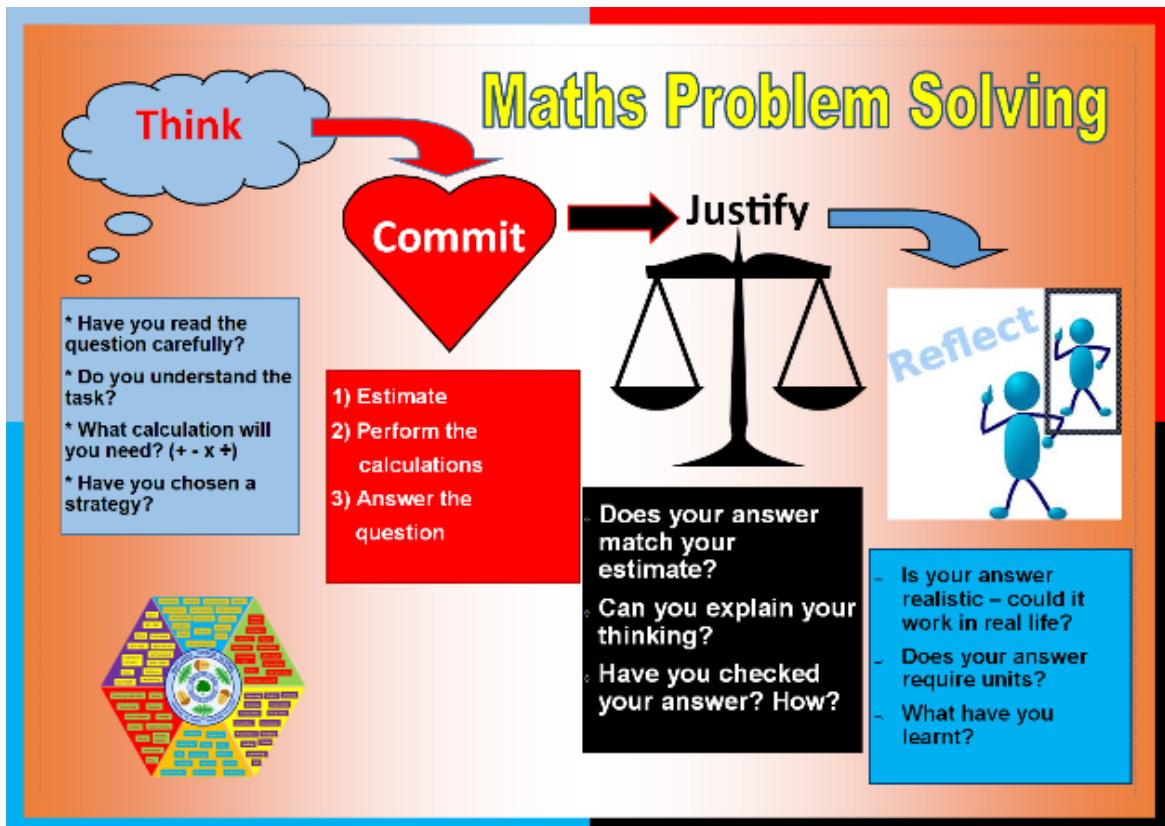
NUMBER	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
	count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero
	round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
	solve number problems and practical problems that involve all of above
	read Roman numerals to 1000 (M); recognise years written in Roman numerals
CALCULATION	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition & subtraction)
	add and subtract numbers mentally with increasingly large numbers
	use rounding, inverse and plausibility to check answers to calculations and determine, in the context of a problem, levels of accuracy
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
	solve problems involving multiplication, division and factor knowledge where larger numbers are used by decomposing them into their factors
	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
	establish whether a number up to 100 is prime and recall prime numbers up to 19
	multiply numbers up to 4 digits by a 1 or 2-digit number using a formal written method, including long multiplication for 2-digit numbers
	multiply and divide numbers mentally drawing upon known facts
	divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
	recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
	solve problems involving scaling by simple fractions and problems involving ratio and proportion
	STATISTICS
complete, read and interpret information in tables, including timetables	
FRACTIONS, DECIMALS & PERCENTAGES	compare and order fractions whose denominators are all multiples of same number
	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
	recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $2/5 + 4/5 = 6/5 = 11/5$)
	add and subtract fractions with the same denominator and multiples of the same number
	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
	read and write decimal numbers as fractions (e.g. $0.71 = 71/100$)
recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	

	round decimals with two decimal places to the nearest whole number and to one decimal place
	read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places
	recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal
	solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25
GEOMETRY	identify 3-D shapes, including cubes and other cuboids, from 2-D representations
	know angles are measured in degrees: estimate and compare acute, obtuse, reflex
	draw given angles, and measure them in degrees (o)
	identify angles at a point and one whole turn (total 360o); on a straight line and $\frac{1}{2}$ a turn (total 180o); at a point; other multiples of 90o
	use the properties of rectangles to deduce related facts & find missing lengths & angles
	distinguish between regular and irregular polygons based on reasoning about equal sides and angles
	identify, describe & represent the position of a shape following a reflection or translation, using appropriate language, and know that the shape has not changed
MEASUREMENT	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints
	measure and calculate the perimeter of composite rectilinear shapes in cm & metres
	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm ²) and square metres (m ²)
	estimate the area of irregular shapes
	estimate volume (e.g. using 1cm cubes) and capacity (e.g. using water)
	solve problems involving converting between units of time
	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling
U A	Present information and results in a clear and organised way
	Search for a solution by trying out ideas of their own

Stage 6 Objectives	
NUMBER	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
	round any whole number to a required degree of accuracy
	use negative numbers in context, and calculate intervals across zero
	solve number and practical problems that involve all of the above
CALCULATION	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders
	perform mental calculations, including with mixed operations and large numbers
	identify common factors, common multiples and prime numbers
	use their knowledge of the order of operations to carry out calculations involving the four operations
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
STATISTICS	interpret and construct pie charts and line graphs and use these to solve problems
	calculate and interpret the mean as an average; identify median and mode
ALGEBRA	use simple formulae
	generate and describe linear number sequences
	express missing number problems algebraically
	find pairs of numbers that satisfy an equation with two unknowns
	enumerate possibilities of combinations of two variables
RATIO & PROPORTION	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
	solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
	solve problems involving similar shapes where the scale factor is known or can be found
	solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
FRACTIONS, DECIMALS & PERCENTAGES	use common factors to simplify fractions; use common multiples to express fractions in the same denomination
	compare and order fractions, including fractions >1
	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $1/4 \times 1/2 = 1/8$)
	divide proper fractions by whole numbers (e.g. $1/3 \div 2 = 1/6$)
	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $3/8$)
	identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
	multiply one-digit numbers with up to two decimal places by whole numbers
	use written division methods in cases where the answer has up to two dp
	solve problems which require answers to be rounded to specified degrees of accuracy

	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
GEOMETRY	draw 2-D shapes using given dimensions and angles
	recognise, describe and build simple 3-D shapes, including making nets
	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
	describe positions on the full coordinate grid (all four quadrants)
	draw and translate simple shapes on the coordinate plane, and reflect them in the axes
MEASUREMENT	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
	use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
	convert between miles and kilometres
	recognise that shapes with the same areas can have different perimeters and vice versa
	recognise when it is possible to use formulae for area and volume of shapes
	calculate the area of parallelograms and triangles
	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm ³) and cubic metres (m ³), and extending to other units such as mm ³ and km ³
UA	Show understanding of situations by describing them mathematically using symbols, words and diagrams
	Draw simple conclusions of their own and give an explanation of their reasoning

Appendix 4 – Approach to problem solving using P4C approach of ‘Think. Commit. Justify. Reflect’



Appendix 5 – Key pillars of learning in maths

