

Maths planning document

Teagues Bridge Primary school

– Year 5



This document supported by the Numbersense maths program providing teaching and consolidation of mental strategies for mathematics and the white rose small steps for teaching sequences. Weeks are a guideline and should be adapted for the needs of the children. Time for consolidation is designed for recapping of previous units to ensure learning in committed to the long-term memory. This can also be used to teach areas of misconceptions.

Mathematics Intent

At Teagues Bridge, our intention is **ambitious**. We aim to create strong mathematicians who have the necessary skills and understanding to tackle mathematical challenges in varying contexts, including the ability to reason and apply their knowledge to solving problems. This should mean that children are able to apply their knowledge to everyday life and can **aspire** to achieve anything that they want. We want our pupils to have strong mental manipulation and to use written strategies when appropriate.

Our philosophy for mathematics is replacing an idea that maths is lots of rules and numbers with a study of patterns and connected ideas. In early years they will build a foundation of number understanding and representation through mainly concrete and pictorial representations. The approach will be supported by in depth questioning, throughout the school to develop mastery.

Use of CPA is encouraged to ensure the curriculum is accessible for all children and that they all have the **opportunity** and are able to demonstrate their understanding in a variety of ways. This will enable them to have a good understanding of maths and not just the ability to follow a procedure. We want to **empower** them to want to ask questions and want to find the answers.

Aims: The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

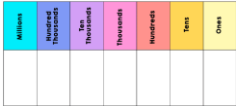


The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

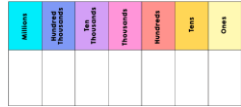
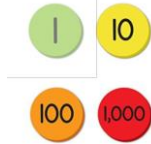
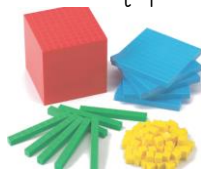
Our lessons are structured to enable all children to achieve and have an **opportunity** to make progress with their learning. Each lesson begins with a **CLIC maths** activity, where they have chance to develop their mental strategies, secure number facts and number manipulation. They then **develop** their mathematical fluency with the teacher modelling and explaining before they have a go themselves. Children then have a **reasoning/ problem solving** activity which is a variation of the previous work to demonstrate they have mastered the objective. Children who are ready can then **challenge** themselves with a task that requires applying the learning to a greater depth. We have our own programme of study which is supported with schemes like White Rose to support.

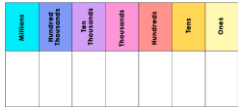

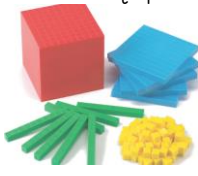
Year 5 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Autumn	Number and place value Counting, reading, writing and partitioning		Addition and subtraction Whole numbers 4+ digits and inverse		Multiplication and division – multiples, factors, primes, square and cubed Multiplying and dividing by 10,100 and 1000			Fractions :converting, adding and subtracting			Multiplication : short and long multiplication		Measurement: Perimeter and area	
Spring	Number and place value : comparing/ordering and rounding		Addition and subtraction Multi-step problems/ missing numbers		Fractions: adding and subtracting mixed numbers		Number : negative numbers	Multiplication – long multiplication (revisit) and short division		Fractions: multiplying and fractions of amounts		Decimals : tenths, hundredths and thousandths		
Summer	4 methods of calculation (including inverse)		Geometry : angles		Decimals : addition and subtraction Multiplying and dividing by 10,100 and 1000			Measurement : Converting units		Geometry : Position and direction		Statistics		Measure ment : Volume



Year 5: Autumn term







National curriculum objectives	Prior knowledge from year 4	Learning outcomes (including WR steps)	Mathematical aspect	Vocabulary	Manipulatives	Problem solving resources
<p><i>Lessons cover both objectives together</i></p> <ul style="list-style-type: none"> Count forwards or backwards in steps of 10 for any given number up to 1,000,000 To read, write, numbers at least to 1,000,000 and determine the value of each digit. 	<p>Knows the properties of place value for four-digit numbers.</p>	<p>Maths resources for teachers White Rose Maths</p> <p>Steps 2 – 9 LO: I know the place value of numbers upto 10,000</p> <p>LO I know the place value of numbers upto 100,000</p> <p>Lo: I know the place value of numbers to 1,000,000</p> <p>Lo I know to read and write numbers to 1,000,000</p> <p>Lo I know powers of 10.</p> <p>Lo I know finding more or less of 10/100/1,000/10,000 and 100,000</p>	<p>Place Value</p>	<p>ones (1s) tens (10s) hundreds (100s) thousands (1,000s) ten thousands (10,000s) place value partition estimate round compare order equivalent greater than (>) less than (<)</p>	<p>Place value charts</p>  <p>Place value counters</p>  <p>Base ten equipment</p> 	<p>Counting forwards and backward</p> <p>Space Distances *</p>

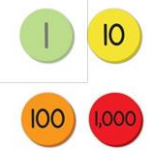
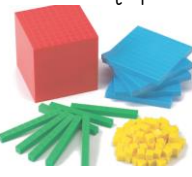
		Lo I know partitioning numbers to 1,000,000 Lo I know locating numbers to 1,000,000 on a number line.				
<ul style="list-style-type: none"> Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals 		Step 1 Lo I know to read roman numerals to 1,000	Place value: Roman Numerals	roman numerals x = 10 v = 5 I = 1 C = 100 D = 500 M = 1000		Roman numerals Roman Numerals *
<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers 	Knows efficient methods for addition and subtraction up to and including four-digit numbers.	Maths resources for teachers White Rose Maths Step 1 Lo I know mental strategies to add and subtract	Addition and Subtraction: mental calculation methods	add subtract ones (1s) tens (10s) hundreds (100s) thousands (1,000s) ten thousands (10,000s) mentally inverse round estimate	Place value charts  Place value counters  Base ten equipment  Numicon	Maze 100 ** Reach 100 ***

<ul style="list-style-type: none"> Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) 	<p>Knows the efficient written algorithms for addition and subtraction with increasing fluency for large numbers.</p>	<p>Maths resources for teachers White Rose Maths</p> <p>Steps 2-5</p> <p>Lo I know to add whole numbers with more than 4 digits.</p> <p>Lo I know to subtract whole numbers more than 4 digits</p> <p>Lo I know to check answers using rounding</p> <p>Lo I know using the inverse operation.</p>	<p>Addition and Subtraction calculation methods</p>	<p>add subtract ones (1s) tens (10s) hundreds (100s) thousands (1,000s) ten thousands (10,000s) inverse round estimate</p>	<p>Place value charts</p>  <p>Place value counters</p>  <p>Base ten equipment</p>  <p>Numicon</p>	<p>Twenty Divided Into Six **</p> <p>Six Ten Total ** </p> <p>Six Numbered Cubes **</p> <p>Subtraction Surprise *</p>
<ul style="list-style-type: none"> Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers 	<p>Knows how to find factor pairs.</p>	<p>Maths resources for teachers White Rose Maths</p> <p>Steps 1-4</p> <p>Lo: I know multiples</p> <p>Lo : I know how to find common multiples</p>	<p>Multiplication and division</p>	<p>prime number composite number square number cube number square (2) cube (3) inverse operation multiply divide</p>		<p>Which Is Quicker? *</p> <p>Multiplication Squares * </p> <p>Factors and Multiples Game * G</p>

		<p>Lo: I know factors</p> <p>Lo : I know common factors</p> <p>Lo I know how to calculate square numbers</p> <p>Lo: I know how to calculate cube numbers</p>		<p>multiple factor</p> <p>prime factor</p>		
<ul style="list-style-type: none"> 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 		<p>Maths resources for teachers White Rose Maths</p> <p>Steps 5</p> <p>Lo: I know what prime numbers are.</p> <p>Lo I know to identify prime numbers to 100.</p>	Prime numbers			<p>Abundant Numbers</p> <p>* </p>
<ul style="list-style-type: none"> Recognise and use square numbers and cube numbers, 	Knows how to solve integer scaling problems and harder correspondence problems.	<p>Maths resources for teachers White Rose Maths</p> <p>Steps 6 and 7</p>	<p>multiplication and division</p> <p>Square and cubed numbers</p>	<p>square number</p> <p>cube number</p> <p>square (2)</p> <p>cube (3)</p>		<p>Sweets in a Box * </p>




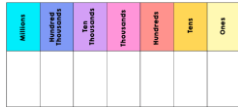
and the notation for squared (2) and cubed (3)		Lo I know how to calculate square numbers Lo: I know how to calculate cube numbers				
<ul style="list-style-type: none"> Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 	Knows and applies table facts for recall of multiplication and division facts when calculating.	Steps 8 to 10 Lo I know to multiply by 10,100 and 1000 Lo I know to divide by 10, 100 and 1000 Lo I know to calculate multiples of 10, 100 and 1000.	Multiplication and division 10,100 and 1000	inverse operation multiply divide multiple factor		
<ul style="list-style-type: none"> Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths 		Steps 1 to 3 LO I know to find fractions equivalent to a non-unit fraction Lo I know to find fractions equivalent to a unit fraction LO I know to recognise equivalent fractions	Fractions : Converting, adding and subtracting	equivalent numerator denominator whole fraction simplify expand division improper mixed number	Fraction tiles  Cuisenaire rods 	<u>Tumbling Down</u> <u>Balance of Halves</u>





					<p>Fractions circles</p>  <p>Numicon</p> 	
<ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number 	<p>Knows how to add and subtract fractions with the same denominator.</p>	<p>Steps 4- 5</p> <p>Lo I know to convert improper fractions to mixed numbers</p> <p>Lo I know to convert mixed numbers to improper fractions</p>	<p>Fractions: improper and mixed numbers</p>	<p>equivalent numerator denominator whole fraction simplify expand division improper mixed number</p>	<p>Fraction tiles</p>  <p>Cuisenaire rods</p>  <p>Fractions circles</p>  <p>Numicon</p> 	<p>A4 Fraction Addition *</p> <p>A4 Fraction Subtraction *</p> <p>Linked Chains</p>







<ul style="list-style-type: none"> Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers 	<p>To multiply 3 x 1 digit numbers and recall all multiplication facts with speed and accuracy.</p>	<p>Steps 1 -6</p> <p>Lo I know how to multiply a 4 digit number by a 1 digit number</p> <p>Lo I know how to multiply a 2 digit number by a 2 digit number</p> <p>Lo I know how to multiply a 3 digit number by a 2 digit number</p> <p>Lo I know how to multiply a 4 by 2 digit number</p> <p>Lo I know how to apply my methods to solve problems</p>	<p>Multiplication – short and long multiplication</p>	<p>inverse operation multiply divide multiple factor</p>	<p>Place value counters</p>  <p>Base ten equipment</p> 	<p>All the Digits **</p> <p>Trebling *</p>
<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes 	<p>Calculating perimeters by counting the length of sides</p>	<p>Steps 1- 6</p> <p>Lo To know how to find the perimeter of rectangles</p>	<p>Area and perimeter</p>	<p>Length, Side, Perimeter Area, Rectangle, rectilinear, Area</p>	<p>Ruler</p>	<p>Shaping It * </p> <p>Brush Loads * </p> <p>Cubes * </p>

<p>in centimetres and metres</p>		<p>Lo To know how to find the perimeter of rectilinear shapes</p> <p>Lo To know how to find the perimeter of regular polygons</p> <p>Lo To know how to find the area of rectangles</p> <p>Lo To know how to find the area of compound shapes.</p> <p>Lo To estimate the area of different shapes.</p>		<p>Polygon Compound shape Regular shape Irregular shape</p>		<p>Numerically Equal **</p> <p>Making Boxes ** </p> <p>Ribbon Squares ***</p> <p>Fitted ***</p>
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Year 5 Spring term





National curriculum objectives	Prior knowledge from year 4	Learning outcomes (including WR steps)	Mathematical aspect	Vocabulary	Manipulatives	Problem solving resources
<p>Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit</p>	<p>Knows the properties of place value for four-digit numbers.</p> <p>Knows the rules of rounding.</p>	<p>Y5-autumn-block-1-solutions/10-11/</p> <p>Step 10 – 11</p> <p>Lo I know to order and compare numbers to 100,000</p> <p>Lo I know to order and compare numbers to 1,000,000</p>	<p>Place value : ordering</p>	<p>ones (1s) tens (10s) hundreds (100s) thousands (1,000s) ten thousands (10,000s) place value partition estimate round compare order equivalent greater than (>) less than (<) convert</p>	<p>Place value charts</p>  <p>Place value counters</p>  <p>Base ten equipment</p> 	<p>Space Distances *</p>
<p>Round any number up to 1,000,000 to the nearest 10, 100,</p>	<p>Knows the rules of rounding.</p>	<p>Lo I know to round to the nearest 10</p>	<p>Place Value : rounding</p>	<p>ones (1s) tens (10s) hundreds (100s) thousands (1,000s)</p>	<p>Place value charts</p> 	<p>Space Distances *</p>

<p>1,000, 10,000 and 100,000</p>		<p>Lo I know to round to the nearest 100</p> <p>Lo I know to round to the nearest 1000</p> <p>Lo I know to round to the nearest 10, 100 and 1000</p> <p>Lo I know to round within 100,000</p> <p>Lo I know to round within 1,000,000</p>		<p>ten thousands (10,000s)</p> <p>place value</p> <p>partition</p> <p>estimate</p> <p>round</p> <p>compare</p> <p>order</p> <p>equivalent</p> <p>greater than (>)</p> <p>less than (<)</p> <p>convert</p>	<p>Place value counters</p>  <p>Base ten equipment</p> 	
<ul style="list-style-type: none"> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<p>Knows how to check the accuracy of addition and subtraction calculations.</p>	<p>Maths resources for teachers White Rose Maths</p> <p>Steps 6 – 8</p> <p>Lo I know how to solve multi-step addition and subtraction problems</p> <p>Lo I know to complete calculations using the inverse</p>		<p>add</p> <p>subtract</p> <p>ones (1s)</p> <p>tens (10s)</p> <p>hundreds (100s)</p> <p>thousands (1,000s)</p> <p>ten thousands (10,000s)</p> <p>inverse</p> <p>round</p> <p>estimate</p>	<p>Place value charts</p>  <p>Place value counters</p>  <p>Base ten equipment</p>	<p>Twenty Divided Into Six **</p> <p>Maze 100 **</p> <p>Six Ten Total ** </p> <p>Six Numbered Cubes **</p> <p>Reach 100 ***</p> <p>Subtraction Surprise *</p>

		LO - I know how to find missing numbers			  Numicon	
<ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>$ $$ as a mixed number 	Knows how to add and subtract fractions with the same denominator.	Maths resources for teachers White Rose Maths (whiteroseeducation.com) Fractions A Steps 12 -17 LO I know to add to a mixed number LO I know to add two mixed numbers together LO I know to subtract fractions LO I know to subtract from a mixed number	Fractions ; Calculating with mixed numbers	equivalent numerator denominator whole fraction simplify expand division improper mixed number convert sequence order greater than ($>$) less than ($<$) equal to ($=$)	Fraction tiles  Cuisenaire rods  Fractions circles  Numicon 	Tumbling Down Balance of Halves * A4 Fraction Addition * A4 Fraction Subtraction * Linked Chains *

		<p>LO I know to subtract from a mixed number (Partitioning the whole)</p> <p>LO I know to subtract two mixed numbers.</p>				
<ul style="list-style-type: none"> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero 	<p>Knows the number system from zero into negative numbers.</p>	<p>Maths resources for teachers White Rose Maths (whiteroseeducation.com)</p> <p>Steps 1 – 4</p> <p>LO I know how negative numbers work</p> <p>LO I know to count through zero in 1's</p> <p>LO I know to count through zero in multiples</p> <p>LO I know to compare and order negative numbers</p>	<p>Number: Negative numbers</p>	<p>place value</p> <p>partition</p> <p>estimate</p> <p>round</p> <p>compare</p> <p>order</p> <p>equivalent</p> <p>greater than (>)</p> <p>less than (<)</p> <p>negative numbers</p> <p>less than zero</p> <p>zero</p>	<p>Place value charts</p>  <p>Place value counters</p>  <p>Base ten equipment</p> 	<p>Tug Harder! * G</p> <p>Swimming Pool!*</p> <p>Sea Level! * I</p>

<ul style="list-style-type: none"> 		<p>Maths resources for teachers White Rose Maths (whiteroseeducation.com)</p> <p>Step 5 LO I know to multiply 4 by 2 digit numbers</p> <p>LO I know to solve</p>	<p>Calculation: multiplication and division</p>			
<ul style="list-style-type: none"> Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers 	<p>Multiplying 2×2 and 3×2</p>	<p>Step 5 -6 Lo I know how to multiply a 4 by 2 digit number</p> <p>Lo I know how to apply my methods to solve problems</p>	<p>Calculation: multiplication and division</p>	<p>inverse operation multiply divide multiple factor</p>	<p>Place value counters</p>  <p>Base ten equipment</p> 	<p>All the Digits **</p> <p>Trebling *</p>
<ul style="list-style-type: none"> Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context 	<p>Division facts to 12</p>	<p>Step 7 I know how to divide 3 by 1 digit numbers</p> <p>Step 8 I know how to divide 4 by 1 digit numbers</p> <p>Step 9 I know how to divide with remainders</p>	<p>Calculation: multiplication and division</p>	<p>inverse operation multiply divide multiple factor remainder</p>	<p>Place value counters</p>  <p>Base ten equipment</p> 	<p>Division Rules * </p>

		<p>Step 10 – I know how to use efficient methods of division</p> <p>Step 11 I know how to solve problems using multiplication and division</p>				
<ul style="list-style-type: none"> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<p>Adding and subtracting fractions</p>	<p>Step 1 – 3 I know how to multiply a unit fraction by an integer</p> <p>I know how to multiply a non unit fraction by an integer</p> <p>I know how to multiply a mixed number by an integer</p> <p>I know how to find fractions of an amount</p> <p>I know how to find the whole</p> <p>I know how to use fractions as operations</p>	<p>Fractions – multiplication</p>	<p>Mixed number Numerator Denominator Integer</p>	<p>Fraction tiles</p>  <p>Cuisenaire rods</p>  <p>Fractions circles</p>  <p>Numicon</p> 	<p><u>Balance of Halves</u> *</p>

Read, write, order and compare numbers with up to 3 decimal places

Read and write decimal numbers as fractions

- Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- 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

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

- Read, write, order and compare numbers with up to 3 decimal places

Steps 1 – 15

I know the place value of decimals upto 2 dp

I know equivalent decimals and fractions (tenths)

I know equivalent fractions and decimals (hundredths)

I know equivalent fractions and decimals

I know thousands as decimals and fractions

I know how to use thousandths on a place value chart

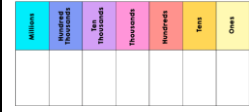
I know how to order and compare decimals of the same number of decimal places

I know how to order and compare any decimal numbers to 3 decimal places

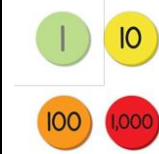
Number : decimals

Thousandths
Hundredths
Tenths
Percentage
Whole
Part of a whole
100 percent

Place value charts



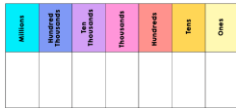
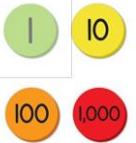
Place value counters




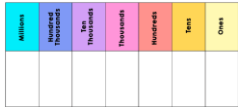

- [Round the Dice Decimals 2](#) *
- [Greater Than or Less Than?](#) * I
- [Spiralling Decimals](#) *** G
- [Route Product](#) ** I
- [Forgot the Numbers](#) ** I
- [Matching Fractions, Decimals and Percentages](#) * G

		I know how to round decimals to the nearest whole number				
		I know how to round decimals to the nearest 1 decimal place				
		I know how to express a decimal as a percentage				
		I know how to express a fraction as a percentage				

Year 5 Summer term

National curriculum objectives	Prior knowledge from year 4	Learning outcomes (including WR steps)	Mathematical aspect	Vocabulary	Manipulatives	Problem solving resources
Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers	Short multiplication	Recap Step 5 – multiplication Step 8 and 9 Division Step 11 solving word problems with multiplication and division • Review addition and subtraction if needed from spring assessment analysis	Calculation – 4 operations	Add Subtract Product Multiply Division Remainder	Place value charts  Place value counters 	Highest and Lowest * Make 100 ** Four Goodness Sake ***
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Know angles are expressed in degrees	Step 1 I know how to use and understand degrees Step 2	Geometry :angles	Acute Obtuse Reflex Right angle		The Numbers Give the Design * Six Places to Visit *


		<p>I know how to classify angles</p> <p>Step 3 I know how to estimate angles</p>				<p>How Safe Are You? *</p> <p>Olympic Turns ***</p>
<ul style="list-style-type: none"> Draw given angles, and measure them in degrees ($^{\circ}$) 		<p>Step 4 I know how to measure angles to upto 180 degrees</p> <p>Step 5 I know how to measure and draw angles accurately</p>		<p>Angles Degrees Accuracy Estimate</p>	<p>Protractor</p> 	<p>Olympic Turns ***</p>
<p>Identify angles at a point and 1 whole turn (total 360°) and on a straight line (180 degrees in total)</p>		<p>Step 6 I know how to calculate angles around a point</p> <p>Step 7 I know how to calculate angles on a straight line</p> <p>Step 8</p>				

		I know how to calculate lengths and angles in shapes				
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles		Step 9 I know the difference between regular and irregular polygons				
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations		Step 10 I know the properties of 3D shapes				
<ul style="list-style-type: none"> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving number up to 3 decimal places 	The place value of decimals	<p>Step 1 I know how to add and subtract decimals within one</p> <p>Step 2 I know how to find complements to 1 using decimals</p> <p>Step 3 I know how to add and subtract decimals across one</p> <p>Step 4</p>	Decimals : calculating	Decimal place Tenths Hundredths Thousandths Add Subtract	Place value charts  Place value counters 	

		<p>I know to add decimals with the same number of decimal places</p> <p>Step 5 I know to subtract decimals with the same number of decimal places</p> <p>Step 6 I know to add decimals with different number of decimal places</p> <p>Step 7 I know to subtract decimals with different number of decimal places</p> <p>Step 8 and 9 I can find decimal sequences</p>				
<ul style="list-style-type: none"> • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 		<p>Step 10 I know to multiply by 10, 100 and 1000</p> <p>Step 11</p>	Decimals : multiplying and dividing	<p>Multiply</p> <p>Divide</p> <p>Decimal place</p> <p>Tenths</p> <p>Hundredths</p> <p>Thousandths</p>		

		<p>I know how to divide by 10, 100 and 1000</p> <p>Step 12 I know how to find missing values using the inverse</p>				
<p>Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]</p>	<p>Different units for measure length, capacity and mass</p>	<p>Step 1 to 6</p> <p>I know how to convert kilometres and kilograms into different units of measure</p> <p>I know how to convert between millimetres and millilitres and different units of measure</p> <p>I know how to convert between different units of length</p> <p>I know how to convert between metric and imperial measures</p>	<p>Measurement Converting units</p>	<p>Millimetre Centimetre Metre Kilometre Miles</p> <p>Milligrams Kilograms Pounds Ounces</p> <p>Litres Millilitres Pints</p>	<p>Measuring apparatus</p> <p>Ruler Scales Metre rule Measure jugs</p>	<p>Olympic Starters * I</p> <p>Car Journey * I</p> <p>Oh! Harry! **</p>
<p>Solve problems involving converting between units of time</p>		<p>I know how to convert between different units of time</p>	<p>Measurement : time</p>	<p>Seconds Minutes Hours Days</p>		

		I know how to apply conversions of time to timetables		Months Years		
Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	To reflect in the x and y axis	<p>Steps 1 – 6</p> <p>I know how to read and plot co-ordinates</p> <p>I know how to solve problems using co-ordinates</p> <p>I know how to translate a shape</p> <p>I know how to translate a shape using coordinates</p> <p>I know how to find a line of symmetry</p> <p>I know how to reflect a shape horizontally and vertically</p>	Geometry : position and direction	<p>X axis</p> <p>Y axis</p> <p>Translate</p> <p>Reflect</p> <p>Horizontal</p> <p>Vertical</p>	<p>Mirror</p> <p>Co-ordinates grid</p>	<p>Transformations on a Pegboard *</p> <p>More Transformations on a Pegboard ** </p>
Solve comparison, sum and difference problems using information	Drawing and interpreting a bar graph	<p>Step one</p> <p>I know how to draw a line graph</p>	Statistics	<p>Line graph</p> <p>Bar graph</p> <p>X axis</p> <p>Y axis</p> <p>Timetable</p>		Real Statistics ***

presented in a line graph		Step two I know how to interpret lines graphs		Destination		
<ul style="list-style-type: none"> Complete, read and interpret information in tables, including timetables 		Step three I know how to draw and interpret tables Step four I know how to interpret two way tables I know how to read and interpret time tables				
Estimate volume [for example, using 1 cm ³ blocks to build cuboids (including cubes)] and capacity	To calculate area	Step one I know how to count cubic centimetres Step two I know how to compare volume Step three I know how to estimate volume Step four I know how to estimate capacity	Volume : measurement	Volume Cubic centimetres Estimate Capacity	Cubes – multilink 	<u>Pouring Problem</u> **

