



Curriculum Handbook  
Key Stage 1 and Key Stage 2  
Maths

# Curriculum Statement

## Intent

Mathematics is important in everyday life and, with this in mind, the purpose of Mathematics at Eynsham Community Primary School is to develop fluent mathematicians who not only have a passion for the subject, but also have the ability to solve problems, to reason, to think logically and to work systematically and accurately. At our school, all children are challenged and encouraged to excel in Maths. To achieve this, new mathematical concepts are introduced using a 'Concrete, Pictorial and Abstract' approach; enabling all children to experience hands-on learning when discovering new mathematical topics, as well as allowing them to have clear models and images to aid their understanding. Arithmetic and basic maths skills are practised daily to ensure key mathematical concepts are embedded and that children are able to recall facts fluently. Therefore, children will be able to make links between mathematical concepts across all year groups, as well as apply this knowledge within the wider curriculum.

## Implementation

At the beginning of every maths lesson, the children in KS1 and KS2 practise a range of fluency questions for 5-10 minutes, working on skills that they have been previously taught throughout the year. During this time, children will also be given the opportunity to closely work with an adult for a session of pre-teaching. These children will be identified from classroom assessment, as well as the teacher's extensive knowledge and relationships with the pupils within their class. This pre-

teaching session aims to recap the previous learning intention, or will provide a head start for less confident mathematicians that may require additional modelling and scaffolding before the new small step is introduced that day.

In every lesson, children are sat in mixed ability pairings throughout for an inclusive environment. This will promote the opportunity for mathematical discussions and give children the chance to explain concepts to other children and therefore, deepen their understanding. At the beginning of each Maths lesson, children undertake the '5 a day' - five fluency questions which will recap small steps previously taught throughout the year. Similarly, this segment of the learning journey can also focus on counting out loud, working on key skills such as 'number bonds to 10' through a tens frame or practising times table and division-facts. In KS1, the beginning of the lesson may also provide an opportunity for 'Mastering Number' sessions to be delivered. These sessions, planned by the NCETM, are a sequence of lessons designed to develop fluent mathematicians. 'Mastering Number' is used as the core curriculum for EYFS, and then used as additional fluency practice for a minimum of three times a week in Year 1 and Year 2.

Across KS1 and KS2, teachers have access to a more personalised curriculum, as each lesson will be based around one of the small steps from the White Rose progression document, as well as the NCETM progression documents. In particular, NCETM now features more prominently in KS1, with KS2 classes adopting these resources over the next four academic years. These objectives will then be adapted and implemented for increased depth throughout the

lesson. To determine what the children need to know in order to achieve the learning intention, teachers will be encouraged to look at the Eynsham progression document to assess which small steps the children have already experienced. This will form the basis for the 'Link it' phase of the lesson, where the children will recap prior learning that links to the lesson objective.

Each lesson will then involve the teacher delivering a new skill to all of the children. The 'Learn it' section of this lesson will involve stem sentences which will be repeated orally or recorded in books to promote the use of mathematical vocabulary and structures. All learners will also use manipulatives or pictorial representations where appropriate to explore and develop their understanding of new mathematical concepts. During this 'guided' segment of the lesson, teachers will follow the 'I do. We do. You do.' approach. Here, teachers will model new learning, provide verbal feedback, and provide children with the chance to demonstrate their understanding within their book or on white boards. At this point, teachers will be monitoring and assessing children's understanding of the teaching throughout, using techniques such as: live marking, hinge questions, mathematical conversations, peer marking or white boards. Each guided activity will also involve a 'star challenge' question that promotes a deeper level of thinking for the concept being taught, challenging all learners.

If the class requires more time to practise the learning intention, there is a chance that some children, who the teacher knows has a good understanding of the concept, can go and complete an investigation related to the teaching. This will challenge confident children to deepen their understanding, as well as provide less

confident children the chance to have additional practice of a learning intention with additional scaffolding or adult support.

Before the independent task, the children will be given a chance to deepen their understanding of the learning intention during the 'Build on it' segment of the lesson. This will introduce a reasoning or problem solving element for the class that will introduce misconceptions, worded problems using real life contexts or a chance to explain a concept or calculation in more detail.

After the 'Build on it' segment of the lesson, the children will work on an independent task that showcases their learning. On many occasions, independent tasks may be seen earlier in the lesson so that all children are able to make progress and practise new concepts. However, once children are finished with the 'guided' segment of the learning journey, there will be an independent task for all which will be completed in books. These tasks are organised into subheadings known as the 'Do it' (Fluency), 'Reason it' (Reasoning) and 'Solve it' (Problem Solving). These Independent tasks will involve a range of fluency, reasoning and problem solving questions which will have 'real life' connotations, providing all learners, regardless of their ability, with the opportunity to make progress and achieve within their maths lesson. In addition, when the children are completing the independent work, teachers will be questioning and providing verbal feedback for children. Moreover, where necessary, teachers will also introduce mini plenaries to provide additional support for children who are unsure of how to succeed. In particular, children who have misconceptions from the lesson's input will

be supported by the teacher, using modelling and scaffolding to help them access the independent task. At the end of the lesson, teachers use this time of the lesson to review the learning, with children peer marking their work and self-assessing their progress against the learning objective.

## Impact

At Eynsham, we want to create a community of confident, engaged and enthusiastic mathematicians who can all make progress across the curriculum.

Firstly, from designing a coherent curriculum that is mapped out into smaller, more achievable steps, all learners are challenged and able to make progress, as well as having a deeper, conceptual understanding of Maths. This is supported by high quality whole class teaching, as well as the use of concrete, pictorial and abstract methods consistently throughout the school.

Secondly, with the implementation of constant recall sessions, pre-teaching, regular consolidation and structured and scaffolded whole class teaching, all learners will be challenged and given the opportunity to make progress. This is further underpinned by the use of manipulatives and ethos of mastery, as children will be able to become more independent learners and gain the confidence to have mathematical conversations with their peers.

In addition, with carefully structured lessons, the variation of questioning and opportunity to attempt fluency, reasoning and problem solving tasks, children will become confident, fluent, deep thinking mathematicians.

## Recording

Across the school, daily recording takes place in pupils' personalised Maths books. Work is set out daily on a new page, under a single learning objective for the lesson, and with a margin and short date. High quality presentation is encouraged throughout the school and a consistent approach of one number per box and use of rulers is evident in all books to ensure neat and tidy presentation. Our aim is to ensure presentation does not affect mathematical calculations and allows any 'errors' to be easily identified and edited accordingly. Pupils are encouraged to consciously structure their recordings so it becomes part of the thinking process. Our pupils take pride in the presentation of their work and, by encouraging our children to organise their findings, they become a problem-solving tool in itself as the children use their books for reference when returning to mathematical concepts. For example, during the '5 a day' a child might look back in their book to revise a particular concept that they cannot recall confidently or find challenging.



When pupils are recording in their Maths books, showing all mathematical thinking is encouraged. A wide variety of recording from concrete to abstract will be evident in books including photographs, pictorial models, representations, jottings and in-depth problem solving and justified reasoning in writing. We believe that recording pictorial representations, alongside abstract ones, ensures that those pupils who find recording difficult can still prove their mathematical understanding and provides an opportunity to practise the elements of recording the pupil is finding hard.

In the classroom, each class has a Maths working wall and Maths help desk to support children on a daily basis. Through models on working walls and providing scaffolds and stem sentences, pupils can be reminded of a range of concepts that they have learnt in previous lessons. Moreover, pupils have the opportunity to reinforce their understanding, make new links and develop independence. Working walls can also:

- Encourage pupils to record alongside concrete models.
- Encourage pupils to see the link between pictorial representations and abstract methods.
- Develop depth of understanding through encouraging multiple representations
- Encourage and model to pupils how to prove their thinking.
- Support pupils to develop independence in recording
- Provide children with mathematical vocabulary.

- Give pupils the language to communicate mathematically

The ability to use mathematical language and for the children to reason clearly is crucial at Eynsham. Hence, 'Stem Sentences' and scaffolded sentences are integral for children to embed new learning. Maths talk has value in itself and will not always be recorded. However, the same speaking frames used to support mathematical conversations can be used as writing frames where appropriate. In addition, talk can be captured where this is purposeful. In EYFS/KS1, we achieve this by using post-it-notes or stickers stuck into books, or by recording directly into a student's Maths book.



## Assessment

At Eynsham, we use PiXL as our end of term summative assessments. These are used from Year 1-6 and cover the main strands of the mathematics

curriculum with a focus on arithmetic, reasoning and problem solving. This gives us a snapshot of the children's attainment and the areas that need to be addressed further.

In KS1, children are also assessed on their mathematical fluency skills at the end of each assessment point. Similar to the multiplication check in Year 4, KS1 children will be required to mentally recall core addition and subtraction facts to determine whether they are fluent with mental calculations. This model will also be used in Year 2 and Year 3 to determine whether the children are fluent with their 2, 5, 10, 3, 4, and 8 multiplication and division facts.

Summative assessment can also be seen at the end of each lesson, with teacher's making a final judgement by marking against a single tiered learning objective. This is done by giving one tick for each learning objective if they are working towards the lesson's objective, and with two ticks if the child is secure with the new learning intention.

Formative assessment happens throughout each Maths lesson, with teachers using a range of assessment for learning (AFL) strategies. Predominantly, teachers use questioning, hinge questions and live marking to assess a child's understanding of the new learning intention, as well as determining when to stretch and challenge individual children, or whether a particular learning intention needs to be redelivered and adapted in order for all children to make progress. This can be identified through the child's ability to self-assess their learning. At the end of each lesson, children will sort their work according to their level of confidence. The teacher will then be able to identify which children can be challenged with 'Green to Grows' and which children will require additional input (consolidation).

An AfL focus also forms the basis for pre-teaching opportunities in preparation for the next small step the children will undertake.

## Inclusion

Inclusion is such an important aspect of our Maths curriculum and can be seen in a multitude of ways. Primarily, whole class teaching drives the message that children of all ability levels will be able to achieve in Maths. To accomplish this, class teachers carefully select models, images and manipulatives that assist the children's understanding and visualisation of a mathematical concept. These are used by all children, promoting a positive ethos in the classroom.

Furthermore, in the classroom, the children are organised in mixed attainment seating - focusing on personalities and the dynamics of a class, rather than being organised solely on their confidence in mathematics. This promotes independence and increases the chance for meaningful, mathematical conversations that encourage the children to help and learn from each other. For those children who are lacking in confidence, they can seek assistance from their peers, whereas those with a greater understanding of a concept are challenged by helping the others around them, enhancing their reasoning skills.

However, when the children find a specific learning objective challenging, teachers will use their knowledge of formal assessment to implement 'fluid groupings.' These groups will be formed during lessons to provide additional scaffolding for those requiring additional support. Fluid groupings can also be used during pre-teaching sessions. These sessions are undertaken before class input, providing

opportunities for teachers to prepare children for an upcoming lesson or for consolidation.

To further support SEN children and challenge all learners, the design of a lesson is pivotal to make sure every child is able to achieve. Firstly, from organising the curriculum into smaller, more manageable objectives, the children are able to retain more information due to the reduction of cognitive load, as well as helping less confident learners to progress through a lesson at a pace that is more suitable for their individual needs. It is within this lesson, that teachers will also deepen and stretch more confident children's conceptual understanding with their use of questioning, task design, variance and a more explicit exploration of reasoning, problem solving and investigative, open ended challenges.



Secondly, task design is also a key aspect of our curriculum that aims to stretch and challenge all learners. It is our goal as a school to make sure that all children are exposed to fluency, reasoning and problem solving questions and that all children can achieve. Our independent tasks are given to all children but progressively become more challenging due to the variance of questioning. Therefore, children

are given the chance to experience fluency, reasoning and problem solving tasks, with teachers and teaching assistants providing scaffolding and support for less confident learners.

## Cultural Capital

Cultural Capital is the essential knowledge that children need to prepare them for their future successes in the world of work, in relationships forged throughout life and as a valued contributor to society. Through our curriculum, it is our firm belief that all children are given the chance to understand the importance and relevance of mathematics - learning essential mathematical knowledge and skills that will prepare them for their lives outside of the classroom. Therefore, the children at Eynsham are exposed to a range of mathematical concepts that link to the wider curriculum. Geography and Science provide children with the opportunity to use statistical data and to present their findings using a variety of graphs such as bar graphs, line graphs, pictograms and pie charts. In Art, the children use their knowledge of shape, symmetry and angles to produce sketches and individual pieces of artwork, while elements of problem solving, the number system and logic can be utilised in computing.

From EYFS to year 6, it is clear that many children arrive at school with different and sometimes more limited experiences than others. Therefore, by breaking down the curriculum into more manageable chunks, using manipulatives and pictorial representations, vocalising relevant vocabulary needed throughout their education and by giving children the opportunity to link maths to real-life contexts, the children at Eynsham will be able to apply these skills to future areas of their lives

# Progression documents

## Number and Place Value

COUNTING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Counting objects, actions and sounds.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			count backwards through zero to include negative numbers	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	use negative numbers in context, and calculate intervals across zero
Count beyond 10	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	count from 0 in multiples of 4, 8, 50 and 100;	count in multiples of 6, 7, 9, 25 and 1 000	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
Verbally count beyond 20, recognising the pattern of the counting system. (ELG)	Given a number, identify one more and one less		find 10 or 100 more or less than a given number	find 1 000 more or less than a given number		
COMPARING NUMBERS						
Compare numbers using objects.	use the language of: equal to, more than, less than (fewer), most, least	compare and order numbers from 0 up to 100; use <, > and = signs	compare and order numbers up to 1 000	order and compare numbers beyond 1 000 <i>compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)</i>	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)

**IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS**

<ul style="list-style-type: none"><li>• Subitise</li><li>• Link the number symbol (numeral) to its cardinal number value.</li></ul>	identify and represent numbers using objects and pictorial representations including the number line	identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations	identify, represent and estimate numbers using different representations		
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READING AND WRITING NUMBERS (including Roman Numerals)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To write numbers to 10 (ELG).	read and write numbers from 1 to 20 in numerals and words.	read and write numbers to at least 100 in numerals and in words	read and write numbers up to 1 000 in numerals and in words	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.	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Understanding Place Value)
			<i>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</i> (copied from Measurement)		read Roman numerals to 1 000 (M) and recognise years written in Roman numerals.	
UNDERSTANDING PLACE VALUE						
		recognise the place value of each digit in a two-digit number (tens, ones)	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
				<i>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</i> (copied from Fractions)	<i>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</i> (copied from Fractions)	<i>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1 000 where the answers are up to three decimal places</i> (copied from Fractions)

ROUNDING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			round any number to the nearest 10, 100 or 1 000	round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000	round any whole number to a required degree of accuracy
			<i>round decimals with one decimal place to the nearest whole number</i> (copied from Fractions)	<i>round decimals with two decimal places to the nearest whole number and to one decimal place</i> (copied from Fractions)	<i>solve problems which require answers to be rounded to specified degrees of accuracy</i> (copied from Fractions)
PROBLEM SOLVING					
	use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	solve number and practical problems that involve all of the above and with increasingly large positive numbers	solve number problems and practical problems that involve all of the above	solve number and practical problems that involve all of the above

## Number: Addition and Subtraction

NUMBER BONDS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore number bonds to 10 and number bonds to 5 (ELG)	represent and use number bonds and related subtraction facts within 20	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
MENTAL CALCULATION						
Recall addition and subtraction sentences without counting aid and rhymes.	add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>* a two-digit number and ones</li> <li>* a two-digit number and tens</li> <li>* two two-digit numbers</li> <li>* adding three one-digit numbers</li> </ul>	add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>* a three-digit number and ones</li> <li>* a three-digit number and tens</li> <li>* a three-digit number and hundreds</li> </ul>		add and subtract numbers mentally with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods)	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				use their knowledge of the order of operations to carry out calculations involving the four operations

WRITTEN METHODS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Starting to explore number sentences using the correct symbols and numerals.	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS						
		recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

WRITTEN METHODS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Starting to explore number sentences using the correct symbols and numerals.	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS						
		recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

**PROBLEM SOLVING**

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math></p>	<p>solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> <li>* using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>* applying their increasing knowledge of mental and written methods</li> </ul>	<p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p>	<p>solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>	<p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>
	<p><i>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)</i></p>				<p>Solve problems involving addition, subtraction, multiplication and division</p>

## Multiplication and Division

MULTIPLICATION & DIVISION FACTS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<i>To explore multiplication with arrays, manipulatives and objects.</i>	<i>count in multiples of twos, fives and tens (copied from Number and Place Value)</i>	<i>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value)</i>	<i>count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)</i>	<i>count in multiples of 6, 7, 9, 25 and 1 000 (copied from Number and Place Value)</i>	<i>count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)</i>	
To explore the concept of sharing using a range of equipment with divisible and non-divisible numbers.		recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	recall multiplication and division facts for multiplication tables up to $12 \times 12$		
MENTAL CALCULATION						
			write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Written Methods)	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 and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numbers
		show that multiplication of two numbers can be done in any order (commutative) and		recognise and use factor pairs and commutativity in mental calculations (appears also in	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	<i>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>\frac{3}{8}</math>) (copied from Fractions)</i>

		division of one number by another cannot		Properties of Numbers)		
<b>WRITTEN CALCULATION</b>						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods)	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	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 one-digit number using the formal written method of short division and interpret remainders appropriately for the context	divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
						<i>use written division methods in cases where the answer has up to two decimal places (copied from Fractions (including decimals)</i>

**PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<i>Explore odd and even numbers using a range of manipulatives and number squares.</i>				recognise and use factor pairs and commutativity in mental calculations (repeated)	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	identify common factors, common multiples and prime numbers
					know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	<i>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</i> (copied from Fractions)
					establish whether a number up to 100 is prime and recall prime numbers up to 19	
					recognise and use square numbers and cube numbers, and the notation for squared ( <sup>2</sup> ) and cubed ( <sup>3</sup> )	<i>calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units such as mm<sup>3</sup> and km<sup>3</sup></i> (copied from Measures)

ORDER OF OPERATIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						use their knowledge of the order of operations to carry out calculations involving the four operations
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS						
			<i>estimate the answer to a calculation and use inverse operations to check answers (copied from Addition and Subtraction)</i>	<i>estimate and use inverse operations to check answers to a calculation (copied from Addition and Subtraction)</i>		use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy

PROBLEM SOLVING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To explore problems in context using verbal reasoning and resources.	solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which $n$ objects are connected to $m$ objects	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	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	solve problems involving addition, subtraction, multiplication and division
					solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
					solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	<i>solve problems involving similar shapes where the scale factor is known or can be found (copied from Ratio and Proportion)</i>

## Fractions (including Decimals and Percentages)

COUNTING IN FRACTIONAL STEPS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<i>Pupils should count in fractions up to 10, starting from any number and using the <math>\frac{1}{2}</math> and <math>\frac{2}{4}</math> equivalence on the number line (Non Statutory Guidance)</i>	count up and down in tenths	count up and down in hundredths		
RECOGNISING FRACTIONS						
Recognise half of something using sharing.	Recognise, find and name a half as one of two equal parts of an object, shape or quantity	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	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence)	
			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 name a quarter as one of four equal parts of an object, shape or quantity			
COMPARING FRACTIONS						
			compare and order unit fractions, and fractions with the same denominators		compare and order fractions whose denominators are all multiples of the same number	compare and order fractions, including fractions $>1$

**COMPARING DECIMALS**

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			compare numbers with the same number of decimal places up to two decimal places	read, write, order and compare numbers with up to three decimal places	identify the value of each digit in numbers given to three decimal places

**ROUNDING INCLUDING DECIMALS**

			round decimals with one decimal place to the nearest whole number	round decimals with two decimal places to the nearest whole number and to one decimal place	solve problems which require answers to be rounded to specified degrees of accuracy
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**EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)**

	write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ .	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	use common factors to simplify fractions; use common multiples to express fractions in the same denomination
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			recognise and write decimal equivalents of any number of tenths or hundredths	read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$ )	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$ )
				recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	

			recognise and write decimal equivalents to $\frac{1}{4}$ ; $\frac{1}{2}$ ; $\frac{3}{4}$	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 as a decimal fraction	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
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**ADDITION AND SUBTRACTION OF FRACTIONS**

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ )	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and multiples of the same number	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
				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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ )	
<b>MULTIPLICATION AND DIVISION OF FRACTIONS</b>					
				multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ )
					multiply one-digit numbers with up to two decimal places by whole numbers
					divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$ )
<b>MULTIPLICATION AND DIVISION OF DECIMALS</b>					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					multiply one-digit numbers with up to two decimal places by whole numbers
			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 ones, tenths and hundredths		multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
					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

					associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$ )
					use written division methods in cases where the answer has up to two decimal places
<b>PROBLEM SOLVING</b>					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		solve problems that involve all of the above	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	solve problems involving numbers up to three decimal places	
			solve simple measure and money problems involving fractions and decimals to two decimal places.	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 with a denominator of a multiple of 10 or 25.	

## Measurement

COMPARING AND ESTIMATING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Making estimates using weight, capacity, length etc.	compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter]	compare and order lengths, mass, volume/capacity and record the results using $>$ , $<$ and $=$		estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)	calculate and compare the area of squares and rectangles including using standard units, square centimetres ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ ) and estimate the area of irregular shapes (also included in measuring)	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units such as $\text{mm}^3$ and $\text{km}^3$ .
Use mathematical language to compare amounts such as 'biggest, smallest'	* time [e.g. quicker, slower, earlier, later]				estimate volume (e.g. using $1 \text{ cm}^3$ blocks to build cubes and cuboids) and capacity (e.g. using water)	
	sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	compare and sequence intervals of time	compare durations of events, for example to calculate the time taken by particular events or tasks			
			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 (appears also in Telling the Time)			
MEASURING and CALCULATING						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

<p>Use a range of equipment to compare length, as well as using basic terminology.</p>	<p>measure and begin to record the following:</p> <ul style="list-style-type: none"> <li>* <b>lengths and heights</b></li> <li>* <b>mass/weight</b></li> <li>* <b>capacity and volume</b></li> <li>* <b>time</b> (hours, minutes, seconds)</li> </ul>	<p>choose and use appropriate standard units to estimate and measure <b>length/height</b> in any direction (m/cm); <b>mass</b> (kg/g); <b>temperature</b> (°C); <b>capacity</b> (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p>	<p>measure, compare, add and subtract: <b>lengths</b> (m/cm/mm); <b>mass</b> (kg/g); <b>volume/capacity</b> (l/ml)</p>	<p>estimate, compare and calculate <b>different measures</b>, including <b>money in pounds and pence</b> (appears also in Comparing)</p>	<p>use all four operations to solve problems involving measure (e.g. <b>length, mass, volume, money</b>) using decimal notation including scaling.</p>	<p>solve problems involving the calculation and conversion of <b>units of measure</b>, using decimal notation up to three decimal places where appropriate (appears also in Converting)</p>
			<p>measure the <b>perimeter</b> of simple 2-D shapes</p>	<p>measure and calculate the <b>perimeter</b> of a rectilinear figure (including squares) in centimetres and metres</p>	<p>measure and calculate the <b>perimeter</b> of composite rectilinear shapes in centimetres and metres</p>	<p>recognise that shapes with the same areas can have different <b>perimeters</b> and vice versa</p>

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	know the number of seconds in a minute and the number of days in each month, year and leap year	convert between different units of measure (e.g. kilometre to metre; hour to minute)	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	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
			read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)	solve problems involving converting between units of time	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating)
			solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	convert between miles and kilometres

## Geometry: Properties of Shapes

IDENTIFYING SHAPES AND THEIR PROPERTIES						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Using vocabulary to describe to describe shapes e.g. flat, round, big, small	Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		identify lines of symmetry in 2-D shapes presented in different orientations	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)
Start to explore terms such as edges, corners, faces and describing shapes with these terms.		identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces				illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
To name basic 2D and 3D shapes.		identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				
DRAWING AND CONSTRUCTING						
Use a range of construction materials and bricks to explore shape.			draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	complete a simple symmetric figure with respect to a specific line of symmetry	draw given angles, and measure them in degrees (°)	draw 2-D shapes using given dimensions and angles
To create structures for a purpose, using 3D shapes.						recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)

COMPARING AND CLASSIFYING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sorting 2D and 3D shapes by using the terms flat and solid, as well as 2D and 3D.		compare and sort common 2-D and 3-D shapes and everyday objects		compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	use the properties of rectangles to deduce related facts and find missing lengths and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
					distinguish between regular and irregular polygons based on reasoning about equal sides and angles	
ANGLES						
			recognise angles as a property of shape or a description of a turn		know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
			identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	identify acute and obtuse angles and compare and order angles up to two right angles by size	identify: <ul style="list-style-type: none"> <li>* angles at a point and one whole turn (total 360°)</li> <li>* angles at a point on a straight line and ½ a turn (total 180°)</li> <li>* other multiples of 90°</li> </ul>	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
			identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

## Position and Direction

POSITION, DIRECTION AND MOVEMENT						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To explore directional language such as forward and back.	Describe position, direction and movement, including half, quarter and three-quarter turns.	Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		describe positions on a 2-D grid as coordinates in the first quadrant	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	describe positions on the full coordinate grid (all four quadrants)
				describe movements between positions as translations of a given unit to the left/right and up/down		draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
				plot specified points and draw sides to complete a given polygon		
PATTERN						
Explore patterns by: <ul style="list-style-type: none"> <li>- Spotting errors in patterns</li> <li>- Identifying a unit of repeat</li> <li>- Creating and continuing patterns</li> </ul>		order and arrange combinations of mathematical objects in patterns and sequences				

# Statistics

INTERPRETING, CONSTRUCTING AND PRESENTING DATA						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	interpret and present data using bar charts, pictograms and tables	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	complete, read and interpret information in tables, including timetables	interpret and construct pie charts and line graphs and use these to solve problems
		ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity				
		ask and answer questions about totalling and comparing categorical data				
SOLVING PROBLEMS						
			solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	solve comparison, sum and difference problems using information presented in a line graph	calculate and interpret the mean as an average

# Algebra

EQUATIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><i>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and <b>missing number problems</b> such as <math>7 = \square - 9</math> (copied from Addition and Subtraction)</i></p>	<p><i>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and <b>missing number problems</b>. (copied from Addition and Subtraction)</i></p>	<p><i>solve problems, including <b>missing number</b> problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction)</i></p>		<p><i>use the properties of rectangles to deduce related facts and find <b>missing lengths and angles</b> (copied from Geometry: Properties of Shapes)</i></p>	<p><i>express missing number problems algebraically</i></p>
			<p><i>solve problems, including <b>missing number</b> problems, involving multiplication and division, including integer scaling (copied from Multiplication and Division)</i></p>			
		<p><i>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (copied from Addition and Subtraction)</i></p>				<p><i>find pairs of numbers that satisfy number sentences involving two unknowns</i></p>
	<p><i>represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)</i></p>					<p><i>enumerate all possibilities of combinations of two variables</i></p>

FORMULAE						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				<i>Perimeter can be expressed algebraically as <math>2(a + b)</math> where <math>a</math> and <math>b</math> are the dimensions in the same unit. (Copied from NSG measurement)</i>		use simple formulae
						<i>recognise when it is possible to use <b>formulae</b> for area and volume of shapes (copied from Measurement)</i>
SEQUENCES						
	<i>sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)</i>	<i>compare and sequence intervals of time (copied from Measurement)</i>				generate and describe linear number sequences
		<i>order and arrange combinations of mathematical objects in patterns (copied from Geometry: position and direction)</i>				

## Ratio and Proportion

Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division						
						Year 6
						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.

# Curriculum Overview - Maths Small Steps

Year 1 – Autumn Term (43 steps)				
Weeks 1 to 5		Weeks 6 to 8	Weeks 9-11	
<p><b>Number: Place Value</b> <b>Small Steps: 14</b></p> <p><u>1:1 Comparison of Quantities and Measures</u></p> <ul style="list-style-type: none"> <li>Pupils explain that items can be compared using length, height</li> <li>Pupils explain that items can be compared using weight/mass and volume/capacity</li> <li>Pupils count a set of objects</li> <li>Pupils compare sets of objects</li> <li>Pupils use equality and inequality symbols to compare sets of objects</li> <li>Pupils use equality and inequality symbols to compare expressions</li> </ul> <p><u>1:2 Introducing 'whole' and 'parts': part-part-whole</u></p> <ul style="list-style-type: none"> <li>Pupils explain what a whole is</li> <li>Pupils explain that a whole can be split into parts</li> <li>Pupils explain that a whole can represent a group of objects</li> <li>Pupils identify a part of a whole group</li> <li>Pupils explain what a part-whole model is</li> <li>Pupils use a part-whole model to represent a whole partitioned into two parts</li> <li>Pupils use a part-whole model to represent a whole partitioned into more than two parts</li> </ul>		<p><b>Number: Place Value</b> <b>Small Steps: 8</b></p> <p><u>1:3 Numbers 0-5</u></p> <ul style="list-style-type: none"> <li>Pupils explain that numbers can represent how many objects there are in a set</li> <li>Pupils explain that ordinal numbers show a position and not a set of objects</li> <li>Pupils partition numbers one to five in different ways</li> <li>Pupils partition the numbers one to five in a systematic way</li> <li>Pupils find a missing part when one part and the whole is known</li> <li>Pupils show one more and one less than a number using representations. Pupils describe this accurately.</li> <li>Pupils show one more and one less than a number using representations. Pupils describe this accurately.</li> <li>Pupils use a bar model to represent a whole partitioned into two parts</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li><i>Note: part-whole shows up in <u>1.2</u> which could be used before <u>1.3</u></i></li> </ul>	<p><b>Geometry - Shape</b> <b>Small Steps: 11</b></p> <p><u>Unit 4 - NCETM and W/R - Week 11</u></p> <ul style="list-style-type: none"> <li>Pupils compose pattern block images</li> <li>Pupils copy, extend and develop repeating and radiating pattern block patterns</li> <li>Pupils compose tangram images</li> <li>Pupils investigate tetromino and pentomino arrangements</li> <li>Pupils investigate ways that four cubes can be composed into different 3D models</li> <li>Pupils explore, discuss and compare 3D shapes</li> <li>Pupils identify 2D shapes within 3D shapes</li> <li>Pupils explore, discuss and compare 2D shapes</li> <li>Pupils explore, discuss and identify circles and shapes that are not circles from shape cut-outs</li> <li>Pupils explore, discuss and identify triangles and shapes that are not triangles from shape cut-outs</li> <li>Pupils explore, discuss and identify rectangles (including squares) from shape cut-outs</li> </ul>	<p><b>Place Value -Numbers - 0-10</b> <b>Small Steps: 10</b></p> <p><u>1:4</u></p> <ul style="list-style-type: none"> <li>Pupils count a set of objects and match the spoken number to the written numeral and number name</li> <li>Pupils represent the numbers 6 to 10 using a five and a bit structure</li> <li>Pupils identify the whole and parts of the numbers 6 to 10 using the five and a bit structure</li> <li>Pupils explore the numbers 6 to 10 using the part whole model and the five and a bit structure</li> <li>Pupils explain where 6, 7, 8 and 9 lie on a number line</li> <li>Pupils explain what odd and even numbers are and the difference between them</li> <li>Pupils explain how even and odd numbers can be partitioned</li> <li>Pupils partition numbers 6 to 10 in different ways</li> <li>Pupils partition the numbers 6 to 10 in a systematic way</li> <li>Pupils identify a missing part when a whole is partitioned into two parts</li> </ul>

**Year 1 – Spring Term (48 steps)**

Weeks 1 to 4		Weeks 5 to 7		Weeks 8 to 12	
<p><b>Number: Addition and Subtraction</b> <b>Small Steps: 8</b></p> <p><b><u>1:5 - Additive Structures</u></b></p> <ul style="list-style-type: none"> <li>● Pupils combine two or more parts to make a whole</li> <li>● Pupils explain that addends can be represented in any order. This is called the commutative law</li> <li>● Pupils explain that the = sign can be used to show that the whole and the sum of the parts are equal (1)</li> <li>● Pupils explain that the = sign can be used to show that the whole and the sum of the parts are equal (2)</li> <li>● Pupils add parts to find the value of the whole and write the equation</li> <li>● Pupils find the missing addend in an equation</li> <li>● Pupils partition a whole into two parts and express this with a subtraction equation</li> <li>● Pupils make addition and subtraction stories and write equations to match</li> </ul>	<p><b>Number: Addition and Subtraction</b> <b>Small Steps: 11</b></p> <p><b><u>1:6 Additive Structures Continued</u></b></p> <ul style="list-style-type: none"> <li>● Pupils represent ‘first, then, now’ stories with addition equations (1)</li> <li>● Pupils represent ‘first, then, now’ stories with addition equations (2)</li> <li>● Pupils represent ‘first, then, now’ stories with subtraction equations (1)</li> <li>● Pupils represent ‘first, then, now’ stories with subtraction equations (2)</li> <li>● Pupils represent different types of stories with subtraction calculations</li> <li>● Pupils make addition and subtraction stories, writing equations to match</li> <li>● Pupils work out the missing part of an addition story and equation if the other two parts are known</li> <li>● Pupils work out the missing part of a subtraction story and equation if the other two parts are known</li> <li>● Pupils explain that addition and subtraction are inverse operations (1)</li> <li>● Pupils explain that addition and subtraction are inverse operations (2)</li> <li>● Pupils use additive structures to think about addition and subtraction equations in different way</li> </ul>	<p><b>Number: Addition and Subtraction</b> <b>Small Steps: 14</b></p> <p><b><u>1:7 Addition and Subtraction Facts Within 10</u></b></p> <ul style="list-style-type: none"> <li>● Pupils explain that addition is commutative</li> <li>● Pupils find pairs of numbers to 10 (1)</li> <li>● Pupils find pairs of numbers to 10 (2)</li> <li>● Pupils add and subtract 1 from any number</li> <li>● Pupils explain what the difference is between consecutive numbers</li> <li>● Pupils explain what happens when 2 is added to or subtracted from odd and even numbers</li> <li>● Pupils explain what the difference is between consecutive odd and even numbers</li> <li>● Pupils explain what happens when zero is added to or subtracted from a number</li> <li>● Pupils explain what happens when a number is added to or subtracted from itself</li> <li>● Pupils double numbers and explain what doubling means</li> <li>● Pupils halve numbers and explain what halving means</li> <li>● Pupils use knowledge of doubles and halves to calculate near doubles and halves</li> <li>● Pupils represent different types of stories with subtraction calculations</li> <li>● Pupils use knowledge and strategies to add 5 and 3 and 6 and 3</li> </ul>	<p><b>Number: Place Value</b> <b>Small Steps: 15</b></p> <p><b><u>1:10 Numbers 0-20</u></b></p> <ul style="list-style-type: none"> <li>● Pupils explain that the digits in the numbers 11 to 19 express quantity</li> <li>● Pupils explain that the digits in the numbers 11 to 19 express position on a number line</li> <li>● Pupils identify the quantity shown in a representation of numbers 11 to 19</li> <li>● Pupils use knowledge of ‘10 and a bit’ to solve problems</li> <li>● Pupils use knowledge of ‘10 and a bit’ to solve problems</li> <li>● Pupils explore odd and even numbers within 20</li> <li>● Pupils double the numbers 6 to 9 and halve the result, explaining what doubling and halving is</li> <li>● Pupils use knowledge of addition facts within 10 to add within 20</li> <li>● Pupils use knowledge of subtraction facts within 10 to subtract within 20</li> <li>● Pupils use knowledge of addition and subtraction facts within 10 to add and subtract within 20</li> <li>● Pupils measure one object with different non-standard measures and record outcomes</li> <li>● Pupils measure items using individual cm cubes (Dienes)</li> <li>● Pupils measure length from zero cm using a ruler</li> <li>● Pupils estimate length in cm</li> <li>● Pupils estimate length, measure length and record these values in a table</li> </ul>		

**Year 1 – Summer Term (38 steps)**

Weeks 1 to 3	Weeks 4 - 8	Weeks 9 - 10	Weeks 11 to 12
<p align="center"><b><u>Number: Place Value</u></b> <b>Small Steps: 11</b></p> <p><b><u>Composition of numbers - multiples of 10 up to 100</u></b></p> <ul style="list-style-type: none"> <li>One ten is equivalent to ten ones.</li> <li>Multiples of ten can be represented using their names or using numerals. We can count in multiples of ten.</li> <li>Knowledge of the 0–10 number line can be used to estimate the position of multiples of ten on a 0–100 number line.</li> <li>Adding ten to a multiple of ten gives the next multiple of ten; subtracting ten from a multiple of ten gives the previous multiple of ten.</li> <li>Known facts for the numbers within ten can be used to add and subtract in multiples of ten by unitising.</li> </ul> <p><b><u>1:9 Composition of numbers - 20-100</u></b></p> <ul style="list-style-type: none"> <li>There is a set counting sequence for counting to 100 and beyond.</li> <li>Objects can be counted efficiently by making groups of ten. The digits in the numbers 20–99 tell us about their value.</li> <li>Each number on the 0–100 number line has a unique position.</li> <li>The relative size of two two-digit numbers can be determined by first examining the tens digits and then, if necessary, examining the ones digits, with reference to the cardinal or ordinal value of the numbers.</li> <li>Each two-digit number can be partitioned into a tens part and a ones part.</li> <li>The tens and ones structure of two-digit numbers can be used to support additive calculation.</li> </ul>	<p align="center"><b><u>Number: Place Value</u></b> <b>Small Steps: 16</b></p> <p><b><u>2:1 Counting, Unitising and Coins</u></b></p> <ul style="list-style-type: none"> <li>Pupils count efficiently in groups of two</li> <li>Pupils count efficiently in groups of ten</li> <li>Pupils count efficiently in group of five</li> <li>Pupils count efficiently by counting in groups of two, five and ten</li> <li>Pupils explain the value of a 1p coin in pence</li> <li>Pupils recognise and explain the value of 2p, 5p and 10p coins</li> <li>Pupils explain that a single coin can be worth several pennies</li> <li>Pupils use knowledge of the value of coins to solve problems</li> <li>Pupils calculate the total value of the coins in a set of 2p coins</li> <li>Pupils calculate the total value of the coins in a set of 5p coins</li> <li>Pupils calculate the total value of the coins in a set of 10p coins</li> <li>Pupils compare sets of 2p, 5p and 10p coins</li> <li>Pupils relate what they have learnt to a real-life context</li> <li>Pupils work out how many coins are needed to make a value of 10p</li> <li>Pupils work out how many coins are needed to make a total value of 20p</li> <li>Pupils use knowledge of the value of coins to solve problems</li> </ul>	<p align="center"><b><u>Position and Direction</u></b> <b>Small Steps: 5</b></p> <p><b><u>W/R</u></b></p> <ul style="list-style-type: none"> <li>Describe Turns</li> <li>Describe Position - Left and Right</li> <li>Describe Position - Forwards and backwards</li> <li>Describe Position - Above and Below</li> <li>Ordinal Numbers</li> </ul>	<p align="center"><b><u>Time</u></b> <b>Small Steps: 6</b></p> <p><b><u>W/R</u></b></p> <ul style="list-style-type: none"> <li>Before and after</li> <li>Days of the week</li> <li>Months of the year</li> <li>Hours, minutes and seconds</li> <li>Tell the time to the hour</li> <li>Tell the time to the half hour</li> </ul>

**Year 2 – Autumn (52 steps)**

Weeks 1 - 4	Weeks 5 -9	Weeks 10-12
<p align="center"><b>Number: Place Value, Addition and Subtraction</b> <b>Small Steps: 17</b></p> <p><u>1:8</u></p> <ul style="list-style-type: none"> <li>● Explain that one ten is equivalent to ten ones</li> <li>● Represent multiples of ten using their numerals</li> <li>● Represent multiples of ten using their numerals and names</li> <li>● Represent multiples of ten in an expression or an equation</li> <li>● Estimate the position of multiples of ten on a 0-100 number line</li> <li>● Explain what happens when you add and subtract ten to a multiple of ten</li> <li>● Use knowledge of facts and unitising to add and subtract multiples of ten</li> <li>● Add and subtract multiples of ten</li> <li>● Explore the counting sequence for counting to 100 and beyond</li> <li>● Count a large group of objects by counting groups of tens and the extra ones</li> <li>● Count a large group of objects by using knowledge of unitising by counting tens and ones</li> <li>● Represent a number from 20-99 in different ways</li> <li>● Explain and mark the position of numbers 20-99 on a number line</li> <li>● Explain that numbers 20-99 can be represented as a length</li> <li>● Compare two, two-digit numbers</li> <li>● Partition a two-digit number into tens and ones</li> <li>● Add two, two-digit numbers by partitioning into tens and ones</li> </ul>	<p align="center"><b>Number: Addition and Subtraction</b> <b>Small Steps: 15</b></p> <p><u>1.11</u></p> <ul style="list-style-type: none"> <li>● Add three addends</li> <li>● Use a ‘First... Then... Now’ story to add 3 addends</li> <li>● Explain that addends can be added in any order</li> <li>● Add 3 addends efficiently</li> <li>● Add 3 addends efficiently by finding two addends that total 10</li> <li>● Add two numbers that bridge through 10</li> <li>● Subtract two numbers that bridge through 10</li> <li>● Compare numbers and describe how many more or less there are in each set</li> </ul> <p><u>1.12</u></p> <ul style="list-style-type: none"> <li>● Calculate the difference</li> <li>● Use knowledge of subtraction to solve problems in a range of contexts</li> <li>● Explain what the difference is between consecutive numbers</li> <li>● Calculate difference when information is presented in a pictogram</li> <li>● Calculate difference when information is presented in a bar chart</li> </ul> <p><u>1.13</u></p> <ul style="list-style-type: none"> <li>● Demonstrate their fluency of addition and subtraction within ten</li> <li>● Practice addition and subtraction strategies as required</li> </ul>	<p align="center"><b>Number: Addition and Subtraction</b> <b>Small Steps: 20</b></p> <p><u>1:14</u></p> <ul style="list-style-type: none"> <li>● Add and subtract one to and from a two-digit number</li> <li>● Add and subtract one to and from a two-digit number that crosses a tens boundary</li> <li>● Add and subtract one from any two-digit number</li> <li>● Use number facts to add a single-digit number to a two-digit number</li> <li>● Use number facts to subtract a single-digit number from a two-digit number</li> <li>● Use a part-part-whole model to represent addition and subtraction</li> <li>● Use number bonds to ten to add a single-digit number to a two-digit number</li> <li>● Use number bonds to ten to subtract a single-digit number from a two-digit number</li> <li>● Use knowledge of ‘make ten’ to add a one-digit number to a two-digit number</li> <li>● Use knowledge of ‘make ten’ to subtract a multiple of ten or a single-digit from a two-digit number</li> <li>● Solve problems using knowledge of addition and subtraction</li> <li>● Find ten more or ten less than a two-digit number (1)</li> <li>● Find ten more or ten less than a two-digit number (2)</li> <li>● Add and subtract ten to/from a two-digit number</li> <li>● Explain the patterns when adding and subtracting ten</li> <li>● Use knowledge of adding and subtracting ten to solve problems</li> <li>● Use number facts to add a multiple of ten to a two-digit number</li> <li>● Use number facts to subtract a multiple of ten from a two-digit number</li> <li>● Partition a two-digit number into parts in different ways (two and three parts)</li> <li>● Use knowledge of adding and subtracting multiples of ten to solve problems</li> </ul>

Year 2 – Spring (57 small steps)

Weeks 1 -5	Weeks 6-8	Week 9-10	Week 11
<p style="text-align: center;"><b>Multiplication and Division</b></p> <p style="text-align: center;"><b>Small Steps: 26</b></p> <p><a href="#">2:3</a>    <a href="#">2:4</a>    <a href="#">2:5</a></p> <ul style="list-style-type: none"> <li>● Explain that objects can be grouped in different ways</li> <li>● Describe how objects have been grouped</li> <li>● Represent equal groups as repeated addition</li> <li>● Represent equal groups as repeated addition and multiplication</li> <li>● Represent equal groups as multiplication</li> <li>● Explain and represent multiplication when a group contains zero or one items</li> <li>● Identify and explain each part of a multiplication equation</li> <li>● Use knowledge of multiplication to calculate the product</li> <li>● Represent the two times table in different ways</li> <li>● Use knowledge of the two times table to solve problems</li> <li>● Explain the relationship between adjacent multiples of two</li> <li>● Explain that factor pairs can be written in any order</li> <li>● Represent counting in tens as the ten times table</li> <li>● Represent the ten times table in different ways</li> <li>● Explain the relationship between adjacent multiples of ten</li> <li>● Represent counting in fives as the five times table</li> <li>● Represent the five times table in different ways</li> <li>● Explain the relationship between adjacent multiples of five</li> <li>● Explain how groups of five and ten are related</li> <li>● Explain the relationship between multiples of five and ten</li> <li>● Use knowledge of the relationships between the five and ten times tables to solve problems</li> <li>● Explain how a factor of zero or one affect the product</li> <li>● Represent multiplication equations in different ways</li> <li>● Use knowledge of the two, five and ten times tables to solve problems</li> <li>● Explain what each factor represents in a multiplication story</li> <li>● Explain what each factor represents in a multiplication story when one of the factors is one</li> </ul>	<p style="text-align: center;"><b>Multiplication and Division</b></p> <p style="text-align: center;"><b>Small Steps: 18</b></p> <ul style="list-style-type: none"> <li>● Explain how a multiplication equation with two as a factor is related to doubling</li> <li>● Double two-digit numbers</li> <li>● Multiply efficiently when one of the factors is two</li> <li>● Explain how halving and doubling are related</li> <li>● Explain the relationship between factors and products</li> <li>● Halve two-digit numbers</li> <li>● Use knowledge of doubling, halving and the two times table to solve problems</li> <li>● Explain that objects can be grouped equally</li> <li>● Identify and explain when objects cannot be grouped equally</li> <li>● Explain the relationship between division expressions and division stories</li> <li>● Calculate the number of equal groups in a division story</li> <li>● Use their knowledge of skip counting and division to solve problems relating to measure</li> <li>● Skip count using the divisor to find the quotient</li> <li>● Use their knowledge of division to solve problems</li> <li>● Explain that objects can be shared equally</li> <li>● Use skip counting to solve a sharing problem</li> <li>● Skip count using the divisor to find the quotient</li> <li>● Solve a variety of division problems, explaining their understanding</li> </ul>	<p style="text-align: center;"><b>Shape</b></p> <p style="text-align: center;"><b>Small Steps: 8</b></p> <p><a href="#">W/R</a></p> <ul style="list-style-type: none"> <li>● Learn that a polygon is a 2D shape with straight sides that meet at vertices</li> <li>● Describe polygons and find different ways to sort them</li> <li>● Learn that polygons can be sorted and named according to the number of sides and vertices</li> <li>● Discuss, and compare by direct comparison, the shape and size of polygons</li> <li>● Discuss, and compare by direct comparison, the vertices of polygons</li> <li>● Investigate how polygons can be joined and folded to form 3-dimensional shapes</li> <li>● Describe 3-dimensional shapes and find different ways to sort them</li> <li>● Discuss, and compare by direct comparison, the shape and size of 3-dimensional shapes</li> </ul>	<p style="text-align: center;"><b>Geometry: Position and Direction</b></p> <p style="text-align: center;"><b>Small Steps: 5</b></p> <p><a href="#">W/R</a></p> <p style="text-align: center;"><b>NCETM Spine: N/A</b></p> <ul style="list-style-type: none"> <li>● Language of position</li> <li>● Describing movement.</li> <li>● Describing turns.</li> <li>● Describing movement and turns.</li> <li>● Making patterns with sha</li> </ul>

**Year 2 – Summer Term (60 small steps)**

Weeks 1 to 3	Weeks 4 - 6	Weeks 7-8	Weeks 9 - 10	Weeks 10-12
<p align="center"><b>Addition and Subtraction</b> <b>Small Steps: 12</b></p> <p><u>1:15</u> <u>1:16</u></p> <ul style="list-style-type: none"> <li>● Explain strategies used to add</li> <li>● Add a two-digit number to a two-digit number</li> <li>● Add a two-digit number to a two-digit number when not crossing ten (i)</li> <li>● Add a two-digit number to a two-digit number when not crossing ten (ii)</li> <li>● Add a two-digit number to a two-digit number when crossing ten</li> <li>● Explain strategies used to subtract</li> <li>● Subtract a two-digit number from a two-digit number</li> <li>● Partition the subtrahend to help with subtraction</li> <li>● Subtract a two-digit number from a two-digit number when not crossing ten (i)</li> <li>● Subtract a two-digit number from a two-digit number when not crossing ten (ii)</li> <li>● Subtract a two-digit number from a two-digit number when crossing ten</li> <li>● Subtract efficiently using knowledge of two-digit numbers</li> </ul>	<p align="center"><b>Multiplication and Division</b> <b>Small Steps: 16</b></p> <p><u>2:6</u></p> <ul style="list-style-type: none"> <li>● Pupils identify the patterns and relationships between the 5 and 10 times tables</li> <li>● Pupils explain the patterns and relationships between the 5 and 10 times tables</li> <li>● Pupils use their knowledge of the 5 and 10 times tables to solve problems</li> <li>● Pupils identify and explain relationships between the 5 and the 10 times tables</li> <li>● Pupils use their knowledge of the 5 and 10 times tables to solve problems</li> <li>● Pupils explain how times table facts can help to find the quotient (10 times table)</li> <li>● Pupils explain how times table facts can help to find the quotient (5 times table)</li> <li>● Pupils explain how times table facts can help to find the quotient (2 times table)</li> <li>● Pupils explain how a division equation with 2 as a divisor is related to halving</li> <li>● Pupils explain each part of a division equation and know how they can be interchanged</li> <li>● Pupils use knowledge of divisibility rules when the divisor is 2 to solve problems</li> <li>● Pupils use knowledge of divisibility rules when the divisor is 10 to solve problems</li> <li>● Pupils use knowledge of divisibility rules when the divisor is 5 to solve problems</li> <li>● Pupils explain how a dividend of zero affects the quotient</li> <li>● Pupils explain how the quotient is affected when the divisor is equal to the dividend</li> <li>● Pupils explain how a divisor of one affects the quotient</li> </ul>	<p align="center"><b>Number: Fractions</b> <b>Small Steps: 12</b> <b>NCETM Spine: <u>Key Stage 1</u></b> <b>Fractions</b></p> <p><u>W/R</u></p> <ul style="list-style-type: none"> <li>● Equal and unequal parts</li> <li>● Recognise half.</li> <li>● Find half.</li> <li>● Recognise quarter.</li> <li>● Find a quarter.</li> <li>● Recognise a third.</li> <li>● Find a third.</li> <li>● Unit fractions.</li> <li>● Non-unit fractions.</li> <li>● Equivalence of <math>\frac{1}{2}</math> and <math>\frac{2}{4}</math>.</li> <li>● Find three quarters.</li> <li>● Count in fractions.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Use a range of representations and bar models.</li> <li>- Use real life examples to make fractions relevant to the children.</li> <li>- Add more steps so children have opportunities to explore fractions.</li> </ul>	<p align="center"><b>Measurement: Time</b> <b>Small Steps: 9</b> <b>NCETM Spine: N/A</b></p> <p><u>W/R</u></p> <ul style="list-style-type: none"> <li>● <u>Telling time to the hour.</u></li> <li>● <u>Telling time to the half hour.</u></li> <li>● O'clock and half past.</li> <li>● Quarter past and quarter to *</li> <li>● Tell the time past the hour.</li> <li>● Tell the time to the hour.</li> <li>● Telling time to 5 minutes.</li> <li>● <u>Minutes in an hour</u></li> <li>● Hours in a day.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Teach analogue using two clock faces (Third Space Maths article)</li> <li>- *Teach 'past the hour' securely first. Then teach 'to the hour'.</li> </ul>	<p align="center"><b>Measurement: Mass, Capacity and Temperature</b> <b>Small Steps: 11</b> <b>NCETM Spine: N/A</b></p> <p><u>W/R</u></p> <ul style="list-style-type: none"> <li>● <u>Measure mass.</u></li> <li>● Compare mass.</li> <li>● Measure mass in grams.</li> <li>● Measure mass in kilograms.</li> <li>● Four operations with mass.</li> <li>● <u>Introduce capacity and volume.</u></li> <li>● Compare volume and capacity.</li> <li>● Measure in millilitres.</li> <li>● Measure in litres.</li> <li>● Four operations with volume and capacity.</li> <li>● Temperature.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Explore using scales, containers etc.</li> <li>- Link to real life contexts for relevance.</li> </ul>

Year 3 – Autumn (58 steps)

Weeks 1 - 3	Weeks 4 - 8	Weeks 9-12
<p style="text-align: center;"><b>Number: Place Value</b> <b>Small Steps: 16</b></p> <p><b>NCETM Spine: <a href="#">1.17</a> <a href="#">1.18</a></b></p> <ul style="list-style-type: none"> <li>● Represent numbers to 100.</li> <li>● Partition numbers to 100</li> <li>● <b>Flexible partitioning to 100.</b></li> <li>● Number line to 100.</li> <li>● Hundreds (<b>NCETM 1.17</b>)</li> <li>● Represent numbers to 1,000.</li> <li>● Partition numbers to 1,000.</li> <li>● Flexible partitioning of numbers to 1,000</li> <li>● 100s, 10s and 1s (1).</li> <li>● Find 1, 10, 100 more or less than a given number</li> <li>● Number line to 1,000.</li> <li>● Estimating on a number line to 1,000</li> <li>● Compare numbers to 1,000.</li> <li>● Order numbers.</li> <li>● Count in 50s.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>● Place value must be secure and focused on in depth. <ul style="list-style-type: none"> <li>- High importance on the composition of 100 and known facts.</li> <li>- Base 10, bead strings, part-whole models. Place value counter usage limited to understand the size of numbers.</li> <li>- Constant revision of core number facts required.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Number: Addition and Subtraction</b> <b>Small Steps: 24</b></p> <p><b>NCETM Spine: <a href="#">1.18</a> <a href="#">1.19</a> ,<a href="#">1.17</a> <a href="#">1.20</a> <a href="#">1.21</a></b></p> <ul style="list-style-type: none"> <li>● Apply number bonds within 10.</li> <li>● Add and subtract 1s.</li> <li>● Add and subtract 10s.</li> <li>● Add and subtract 100s.</li> <li>● Spot the pattern.</li> <li>● Add 1s across a 10.</li> <li>● Add 10s across a 100.</li> <li>● Subtract 1s across a 10.</li> <li>● Subtract 10s across a 100.</li> <li>● Make connections.</li> <li>● <b>Mental Strategies up to 999 (NCETM – 1.19)</b></li> <li>● Add two numbers (no exchange)</li> <li>● Subtract two numbers (no exchange)</li> <li>● Add two numbers (across a 10)</li> <li>● Add two numbers (across a 100)</li> <li>● Add 2-digit and 3-digit numbers.</li> <li>● Subtract two numbers (across a 10)</li> <li>● Subtract two numbers across a 100)</li> <li>● Subtract a 2-digit number from a 3-digit number.</li> <li>● Compliments to 100.</li> <li>● Estimate answers.</li> <li>● Inverse operations.</li> <li>● Make decisions.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- First steps before the written method (number lines, part-whole) are mental strategies for fluency.</li> <li>- NCETM has been added to guide this.</li> <li>- Physical resources important for the concept of subtraction</li> <li>- Worded problems and bar models introduced early and taught within the unit.</li> </ul>	<p style="text-align: center;"><b>Number: Multiplication and Division</b> <b>Small Steps: 18</b></p> <p><b>NCETM Spine: <a href="#">2.6</a> <a href="#">2.8</a> <a href="#">2.7</a></b></p> <ul style="list-style-type: none"> <li>● Multiplication – equal groups.</li> <li>● Use arrays</li> <li>● <b>Multiples of 2</b></li> <li>● <b>Divide by 2</b></li> <li>● Multiples of 5 and 10</li> <li>● Make equal groups – sharing</li> <li>● Make equal groups – grouping</li> <li>● <b>Divide by 10</b></li> <li>● Multiplying by 3.</li> <li>● Dividing by 3.</li> <li>● The 3 times-table.</li> <li>● Multiplying by 4.</li> <li>● Dividing by 4.</li> <li>● The 4 times-table.</li> <li>● Multiplying by 8.</li> <li>● Dividing by 8.</li> <li>● The 8 times-table.</li> <li>● The 2s, 4s and 8 times tables.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>· Explore lessons for arrays and the concept of multiplication and division.</li> <li>· Inverse relationships to be discussed with multiplication and division.</li> <li>· Division needs a physical resource approach (concrete to bar models)</li> <li>· 3,6,9 have been placed together (NCETM) and 2,4,8 to see the link and relationships.</li> <li>· This unit is able to move into Spring due to the number of steps.</li> </ul>

Year 3 – Spring (55 steps)

Weeks 1 - 4	Weeks 4 - 6	Weeks 7-10	Weeks 11-12
<p><b>Number: Multiplication and Division</b>  <b>Small Steps: 11</b>  <b>NCETM Spine: <a href="#">2.6</a> <a href="#">2.13</a> <a href="#">2.19</a> <a href="#">2.17</a> and <a href="#">2.8</a> <a href="#">2.14</a> <a href="#">2.15</a></b></p> <ul style="list-style-type: none"> <li>• Multiples of 10</li> <li>• Related calculations.</li> <li>• Reasoning about multiplication</li> <li>• Multiply 2-digits by 1-digit – no exchange</li> <li>• Multiply 2-digits by 1-digit – with exchange</li> <li>• Link multiplication and division</li> <li>• Divide 2-digits by 1-digit – no exchange</li> <li>• Divide 2-digits by 1-digit – flexible partitioning.</li> <li>• Divide 2-digits by 1-digit – with remainders</li> <li>• Scaling.</li> <li>• How many ways? (<b>Multiple steps</b>)</li> </ul> <p><b>Guidance</b></p> <ul style="list-style-type: none"> <li>· Multiple steps for times tables and statements – use exploration with arrays and concrete materials.</li> <li>· Multiple steps until children are secure with multiplication and division.</li> <li>· Reasoning and problem solving for HA.</li> <li>· Use base 10 before place value counters.</li> </ul>	<p><b>Measurement: Length and Perimeter</b>  <b>Small Steps: 16</b>  <b>NCETM Spine: <a href="#">2.16</a> (TP 1 to introduce)</b></p> <ul style="list-style-type: none"> <li>• Measure in centimetres</li> <li>• Draw accurately in centimetres.</li> <li>• Measure length (m)</li> <li>• Measure in millimetres</li> <li>• Draw accurately in millimetres</li> <li>• Measure in centimetres and millimetres</li> <li>• Draw accurately in centimetres and millimetres</li> <li>• Metres, centimetres and millimetres</li> <li>• Equivalent lengths – m &amp; cm.</li> <li>• Equivalent lengths – mm &amp; cm.</li> <li>• Compare lengths.</li> <li>• Add lengths.</li> <li>• Subtraction lengths.</li> <li>• What is perimeter?</li> <li>• Calculate perimeter.</li> <li>• Measure perimeter.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>· Convert measures in real life contexts and in multiple steps until children are secure.</li> <li>· Use mental methods for adding perimeter.</li> <li>· Multiple steps required until children are secure with perimeter.</li> <li>· Draw accurately (Summer 2) has been moved to this unit as it links to measure.</li> <li>-</li> </ul>	<p><b>Number: Fractions</b>  <b>Small Steps: 21</b>  <b>NCETM Spine: revisit <a href="#">Key Stage 1 - 3.1</a>, <a href="#">3.2</a> <a href="#">3.6</a> <a href="#">3.3</a> <a href="#">3.4</a> <a href="#">3.7</a></b></p> <ul style="list-style-type: none"> <li>• Wholes and parts</li> <li>• Make equal parts.</li> <li>• What is a fraction - unit fractions</li> <li>• Compare unit fractions</li> <li>• Order unit fractions</li> <li>• Non-unit fractions.</li> <li>• Understand the whole</li> <li>• Compare non-unit fractions.</li> <li>• Order non-unit fractions.</li> <li>• Fractions and scales</li> <li>• Fractions on a number line</li> <li>• Count in fractions.</li> <li>• Equivalent fractions</li> <li>• Equivalent fractions on a number line</li> <li>• Equivalent fractions as bar models.</li> <li>• Add fractions</li> <li>• Subtract fractions</li> <li>• <b>Partition the whole</b></li> <li>• <b>Unit fractions of a set of objects</b></li> <li>• <b>Non-unit fractions of a set of objects</b></li> <li>• <b>Reasoning with fractions of an amount.</b></li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Use a variety of representations to secure understanding of fractions.</li> <li>- Use manipulatives and bar models for fractions of an amount.</li> <li>- Steps involving tenths have been removed. These can be focused on in depth during year 4.</li> </ul>	<p><b>Measures: Money</b>  <b>Small Steps: 7</b>  <b>NCETM Spine: revisit <a href="#">2.1</a> <a href="#">1.25</a></b></p> <ul style="list-style-type: none"> <li>• Recognising coins</li> <li>• Count money in pence and pounds</li> <li>• Pounds and pence.</li> <li>• Converting pounds and pence.</li> <li>• Adding money.</li> <li>• Subtracting money.</li> <li>• Find change.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Explore with coins so the children are used to money.</li> <li>- Children to revise mental methods to add and subtract money.</li> <li>- Use plenty of real life contexts.</li> </ul>

**Year 3 – Summer (41 small steps)**

Weeks 1 - 3	Weeks 4 - 6	Weeks 7-9	Weeks 10-11	Week 12
<p align="center"><b>Measurement: Mass and Capacity</b>  <b>Small Steps: 10</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>● Use scales</li> <li>● Measure mass in grams.</li> <li>● Measure mass in kilograms and grams</li> <li>● Equivalent masses</li> <li>● Compare mass.</li> <li>● Add and subtract mass.</li> <li>● Compare volume.</li> <li>● Measure capacity and volume in millilitres</li> <li>● Measure capacity in litres and millilitres</li> <li>● Temperature</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Exploring lessons for real life contexts advised.</li> <li>- Possible links to science topics.</li> </ul>	<p align="center"><b>Measurement: Time</b>  <b>Small Steps: 12</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>● Months and years.</li> <li>● Days and hours</li> <li>● Telling the time recap</li> <li>● Telling the time to 5 minutes.</li> <li>● Telling the time to the minute.</li> <li>● Read time on a digital clock</li> <li>● Use AM/PM</li> <li>● Hours and minutes – use start and end times</li> <li>● Hours and minutes - use durations.</li> <li>● Minutes and seconds</li> <li>● Units of time</li> <li>● Problem solving with time.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Third Space Maths useful guide to telling time on an analogue clock.</li> <li>- Assess the children before the unit to determine levels of understanding.</li> <li>- Teachers advised to teach 'past the hour' first in order for a secure understanding of digital and 24-hour time.</li> </ul>	<p align="center"><b>Geometry: Properties of shape</b>  <b>Small Steps: 12</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>● Turns and angles</li> <li>● Right angles</li> <li>● Compare angles</li> <li>● Horizontal and vertical.</li> <li>● Parallel lines and Perpendicular lines</li> <li>● Symmetry</li> <li>● Recognise and describe 2D shapes.</li> <li>● Draw polygons</li> <li>● Recognise and describe 3D shapes. <b>(Multiple steps)</b></li> <li>● Make 3D shapes. <b>(Multiple steps)</b></li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Perpendicular lines taught explicitly after right angles.</li> <li>- Multiple steps required to remember the names and properties of 2D and 3D shapes.</li> </ul>	<p align="center"><b>Statistics</b>  <b>Small Steps: 7</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>● Make tally charts</li> <li>● Interpret pictograms</li> <li>● Draw pictograms</li> <li>● Interpret bar charts</li> <li>● Draw bar charts</li> <li>● Collect and represent data</li> <li>● Two-way tables</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- This unit is flexible but is advised to be taught during Spring 1 - linking to unit 4 in Science - data handling.</li> </ul>	<p align="center">Consolidation</p>

**Year 4 – Autumn (60 small steps)**

Weeks 1-4	Weeks 5 - 7	Week 8	Weeks 9 - 12
<p align="center"><b>Number: Place Value</b>  <b>Small Steps: 21</b>  <b>NCETM Spine: <a href="#">1.17</a> (count in 25s), <a href="#">1.22</a>, <a href="#">1.27</a> (negative numbers)</b></p> <ul style="list-style-type: none"> <li>Numbers to 1000</li> <li>Partition numbers to 1,000</li> <li>Flexible partitioning to 1,000</li> <li>Number line to 1000.</li> <li>Thousands</li> <li>Represent numbers to 10,000.</li> <li>Partitioning numbers to 10,000</li> <li>Flexible partitioning to 10,000</li> <li>Find 1, 10, 100 more or less.</li> <li>Count in 1,000s.</li> <li>1,000/10,000 more or less.</li> <li>Number line to 10,000 (2 steps)</li> <li>Compare numbers.</li> <li>Order numbers.</li> <li>Round to the nearest 10.</li> <li>Round to the nearest 100.</li> <li>Round to the nearest 1,000.</li> <li>Count in 25s.</li> <li>Roman numerals to 100. (2 lessons)</li> </ul> <p><b>Guidance</b></p> <ul style="list-style-type: none"> <li>Base 10/place value counters and chart/part-part whole models/bar models.</li> <li>Option to use bead strings for counting on a number line.</li> <li>Count in 25s to be taught either in starters or linked to fractions/decimals/scales.</li> <li>Depth and confidence of place value before moving on.</li> </ul>	<p align="center"><b>Number: Addition and Subtraction</b>  <b>Small Steps: 19</b>  <b>NCETM Spine: <a href="#">1.22</a> <a href="#">1.20</a> and <a href="#">1.21</a></b></p> <ul style="list-style-type: none"> <li>Add 1s, 10s, 100s and 1000s.</li> <li>Efficient methods (Estimate answers.)</li> <li>Add two 3-digit numbers – not crossing 10 or 100.</li> <li>Add two 4-digit numbers – no exchange.</li> <li>Add two 3-digit numbers – crossing 10/100</li> <li>Add two 4-digit numbers – one exchange.</li> <li>Add two 4-digit numbers – more than one exchange.</li> <li>Efficient methods.</li> <li>Problem solving (addition)</li> <li>Subtract 1s, 10s, 100s and 1000s.</li> <li>Efficient methods (Mental subtraction)</li> <li>Subtract a 3-digit number from a 3-digit number – no exchange.</li> <li>Subtract two 4-digit numbers – no exchange.</li> <li>Subtract 3-digit number from a 3-digit number – exchange.</li> <li>Subtract two 4-digit numbers – one exchange.</li> <li>Subtract two 4-digit numbers – more than one exchange.</li> <li>Efficient subtraction.</li> <li>Problem solving (subtraction)</li> <li>Checking strategies</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Mental strategies for first steps before using written methods. Efficient methods need to be explored throughout.</li> <li>Efficient methods for mental and written calculations discussed throughout.</li> <li>Estimation needs to be discussed throughout.</li> <li>Problem solving used in all lesson to provide contexts. Taught using part-part whole and bar models.</li> <li>Checking strategies – part whole relationships and the inverse.</li> <li>Base 10 and place value counters to be used. Lots of exploration required.</li> </ul>	<p align="center"><b>Measures: Area</b>  <b>Small Steps: 5</b>  <b>NCETM Spine: <a href="#">2.16</a></b></p> <ul style="list-style-type: none"> <li>What is area?</li> <li>Counting squares (2 steps)</li> <li>Comparing area.</li> <li>Making shapes</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Using area in real life contexts.</li> <li>Post-its useful to work out the area and make shapes.</li> <li>Geoboards for practical exploration.</li> </ul>	<p align="center"><b>Number: Multiplication and Division</b>  <b>Small Steps: 15</b>  <b>NCETM Spine: <a href="#">2.6</a> <a href="#">2.8</a> <a href="#">2.9</a> <a href="#">2.13</a></b></p> <ul style="list-style-type: none"> <li>6 times-table</li> <li>Dividing by 6 and related facts.</li> <li>Multiply by 9.</li> <li>Dividing by 9 and related facts.</li> <li>12 times tables.</li> <li>Dividing by 12 and related facts.</li> <li>Multiply by 7.</li> <li>Dividing by 7 and related facts.</li> <li>Multiply by 1 and 0.</li> <li>Divide by 1.</li> <li>Multiply by three numbers.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Scaling and word problems to be explored throughout the unit.</li> <li>Children must understand the concept of multiplication and division, using arrays, bar models, part-part wholes.</li> <li>Discuss that numbers are ten/one hundred times bigger or smaller (Avoid adding or taking away a zero).</li> </ul>

**Year 4 – Spring (61 Small Steps)**

Weeks 1 - 3	Week 4	Weeks 5 - 8	Weeks 9 - 12
<p><b>Number: Multiplication and Division</b>  <b>Small Steps: 18</b>                      NCETM Spine: <a href="#">2.10</a> (factor pairs), <a href="#">2.11</a> (11x, 12x &amp; efficient multiplication), <a href="#">2.14</a> (multiplication) <a href="#">2.15</a> (division) <a href="#">2.12</a> (remainders)</p> <ul style="list-style-type: none"> <li>Factor pairs</li> <li>Use factor pairs</li> <li>Multiply by 10</li> <li>Multiply by 100</li> <li>Divide by 10</li> <li>Divide by 100</li> <li>Related facts – multiplication and division</li> <li>Informal written methods for multiplication.</li> <li>Multiply 2-digits by 1 –digit.</li> <li>Multiply 3-digits by 1-digit.</li> <li><b>Problem Solving</b></li> <li><a href="#">Divide 2 digits by 1 digit (partitioning)</a></li> <li>Divide 2-digits by 1-digit (short division – no exchanges)</li> <li>Divide 2-digits by 1-digit (short division – exchanges)</li> <li>Divide 3-digits by 1-digit (short division – exchanges)</li> <li>Divide 3-digits by 1-digit (short division – remainders)</li> <li><b>Problem Solving (efficient methods)</b></li> <li>Correspondence problems</li> </ul> <p><b>Guidance</b></p> <ul style="list-style-type: none"> <li>Place value counters to explore the concept of short multiplication.</li> <li>Worded problems taught alongside bar models to increase understanding.</li> <li>Efficient methods must be discussed to avoid overusing written methods.</li> </ul>	<p><b>Measures: Length &amp; Perimeter</b>  <b>Small Steps: 11</b>                      NCETM Spine: <a href="#">2.16</a></p> <ul style="list-style-type: none"> <li>Equivalent lengths – m, cm, mm</li> <li>Kilometres.</li> <li>Equivalent lengths – km and m</li> <li><a href="#">Perimeter on a grid.</a></li> <li>Perimeter of a rectangle.</li> <li><a href="#">Add lengths</a></li> <li><a href="#">Subtract lengths</a></li> <li>Perimeter of rectilinear shapes.</li> <li>Find missing lengths in rectilinear shapes</li> <li>Calculate perimeter of rectilinear shapes</li> <li>Perimeter of regular polygons</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Explore perimeter using Cuisenaire rods.</li> <li>Secure knowledge of the properties of rectangles.</li> <li>Revision of multiplying and dividing by 10,100,1000.</li> </ul>	<p><b>Number: Fractions</b>  <b>Small Steps: 17</b>                      NCETM Spine: <a href="#">3.0</a> <a href="#">3.4</a> <a href="#">3.7</a> <a href="#">3.5</a></p> <ul style="list-style-type: none"> <li>Unit and non-unit fractions.</li> <li>Understand the whole</li> <li>Count in fractions beyond 1</li> <li>Partition a mixed number.</li> <li>Number lines with mixed numbers.</li> <li>Compare and order mixed numbers.</li> <li>Understanding improper fractions.</li> <li>Convert mixed numbers to improper fractions.</li> <li>Convert improper fractions to mixed numbers.</li> <li><a href="#">Equivalent Fractions</a></li> <li>Equivalent fractions on a number line</li> <li>Equivalent fraction families.</li> <li>Add 2 or more fractions.</li> <li>Subtract 2 fractions.</li> <li>Subtract from whole amounts.</li> <li>Subtract from mixed numbers.</li> <li><a href="#">Fractions of an amount (2 steps)</a></li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Use bar models to represent fractions but use other representations (circles, objects, food, etc.)</li> <li>Knowledge of equivalents needs to be secure. Use fraction walls, folding paper, bar models.</li> </ul>	<p><b>Number: Decimals</b>  <b>Small Steps: 15</b>                      NCETM Spine: <a href="#">(Revisit 2.13 1.23 , 1.24)</a></p> <ul style="list-style-type: none"> <li>Tenths as fractions</li> <li>Tenths as decimals.</li> <li>Tenths on a place value grid.</li> <li>Tenths on a number line.</li> <li>Make a whole with tenths</li> <li>Decimals greater than 1</li> <li>Partition decimals</li> <li>Flexibly partition decimals</li> <li>Compare decimals.</li> <li>Order decimals</li> <li>Round to the nearest whole (1.dp)</li> <li>Divide 1 digit by 10.</li> <li>Divide 2 digits by 10.</li> <li>Divide 1 digit by 100.</li> <li>Divide 2 digits by 100.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Hundredths can move into summer 1 if required.</li> <li>Refer to decimals as decimal-fractions.</li> <li>Bead strings for rounding to the nearest whole.</li> <li>PD materials advised for increased depth.</li> </ul>

Year 4 – Summer (41 small steps)

Weeks 1 – 2	Weeks 3 - 5	Weeks 6 - 9	Week 10	Weeks 11 - 12
<p><b>Measurement: Money</b>  <b>Small Steps: 11</b>                      NCETM Spine: <a href="#">1.22</a> (TP 4 estimate money) <a href="#">1.25</a></p> <ul style="list-style-type: none"> <li>Fractions as hundredths</li> <li>Hundredths as decimals</li> <li>Pounds and pence.</li> <li>Write money using decimals</li> <li>Convert pounds and pence</li> <li>Compare amounts of money</li> <li>Estimate with money</li> <li>Calculate with money</li> <li>Add money.</li> <li>Subtract money.</li> <li>Solve problems with money.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Add money using partitioning <b>not</b> column addition.</li> <li>Same for subtraction</li> <li>Reinforce mental methods</li> </ul>	<p><b>Measures: Time</b>  <b>Small Steps: 8</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>Hours, minutes and seconds.</li> <li>Years, months, weeks and days.</li> <li>Telling the time to 5 minutes.</li> <li>Telling the time to the minute (Multiple steps)</li> <li>Using a.m. and p.m.</li> <li>Analogue to digital – 12 hour (2 steps)</li> <li>24-hour clock</li> <li>Analogue to digital – 24 hour.</li> <li>Problem solving with time (Durations)</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Third Space maths article for analogue</li> <li>Analogue time past the hour to 59 in order to aid fluency and understanding of digital time and to avoid misconception.</li> </ul>	<p><b>Geometry: Properties of Shape</b>  <b>Small Steps: 13</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>Understand angles as turns</li> <li>Right angles</li> <li>Identify angles</li> <li>Compare angles.</li> <li>Order angles</li> <li>Symmetry</li> <li>Lines of symmetry.</li> <li>Complete a symmetrical figure.</li> <li>Parallel Lines and Perpendicular Lines</li> <li>Recognise and describe 2-D shapes.</li> <li>Triangles. (2 Steps)</li> <li>Quadrilaterals. (2 Steps)</li> <li>Polygons</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Identify angles – spend 1 lesson exploring, 1 lesson fluency and problem solving.</li> <li>Steps have been moved to revise properties of 2D shapes before introducing triangles and quadrilaterals.</li> </ul>	<p><b>Statistics</b>  <b>Small Steps: 4</b>                      NCETM Spine: N/A</p> <ul style="list-style-type: none"> <li>Interpret charts.</li> <li>Comparison, sum and difference.</li> <li>Introducing line graphs.</li> <li>Draw line graphs.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>This unit is flexible but is advised to be taught during Spring 1 - linking to unit 4 in Science - data handling.</li> </ul>	<p><b>Geometry: Position &amp; Direction</b>  <b>Small Steps: 5</b>                      NCETM Spine: <a href="#">1.27</a> TP 6</p> <ul style="list-style-type: none"> <li>Describe position using coordinates</li> <li>Plot coordinates</li> <li>Draw 2-D shapes on a grid.</li> <li>Translate on a grid.</li> <li>Describe translation on a grid.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>When drawing a coordinate on a grid, the number goes on the line and not in the box.</li> </ul>

**Year 5 – Autumn (62 steps)**

Weeks 1 to 3	Weeks 4 to 5	Weeks 6 to 8	Weeks 9-12
<p><b>Number: Place Value</b>  <b>Small Steps:</b> Minimum 15 <b>W/R</b>  <b>NCETM Spine:</b> <a href="#">1.26</a> (12)  <b>Negative numbers - 1.27</b> (6)</p> <ul style="list-style-type: none"> <li>• <b>1000s, 100s, 10s, 1s</b></li> <li>• Number to 10,000.</li> <li>• <b>Round to the nearest 10</b></li> <li>• <b>Round to the nearest 100</b></li> <li>• <b>Round to the nearest 1000.</b></li> <li>• Number to 100,000.</li> <li>• <b>Compare numbers to 100,000.</b></li> <li>• <b>Order numbers to 100,000.</b></li> <li>• Round numbers within 100,000.</li> <li>• Numbers to a million.</li> <li>• Counting in 10s, 100s, 1,000s, 10,000s and 100,000s.</li> <li>• Compare and order numbers to a million.</li> <li>• Round numbers to a million.</li> <li>• Negative numbers.</li> <li>• <b>Roman Numerals to 100</b></li> <li>• Roman numerals to 1,000.</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• Chn must be secure in 4-digit place value before unit starts (Ready to progress – Year 4 - PV)</li> <li>• Use PD materials for depth.</li> <li>• Many Steps require more than 1 lesson.</li> </ul> <p>Use Year 4 W/R + P.D materials if required.</p>	<p><b>Number: Addition and Subtraction</b>  <b>Small Steps:</b> Minimum 8 <b>W/R</b>  <b>NCETM Spine: Revisit</b> <a href="#">1.22</a> <a href="#">1.2</a> , <a href="#">1.21</a> <a href="#">1.29</a>: <a href="#">1.28</a></p> <ul style="list-style-type: none"> <li>• <b>Add two four-digit numbers</b></li> <li>• Add whole numbers with more than 4- digits (column method).</li> <li>• <b>Subtract two four-digit numbers</b></li> <li>• Subtract whole numbers with more than 4-digits (column method).</li> <li>• Round to estimate and approximate.</li> <li>• Inverse operations (addition and subtraction).</li> <li>• <b>Part-Part Whole Relationship - 1.28</b></li> <li>• Multi-step addition and subtraction problems</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• All chn need to be secure with written methods before 4 digits are attempted. Revisit and use depth if required.</li> <li>• Early steps/depth lessons can include efficient methods/mental methods to use so children aren't dependent on abstract.</li> <li>• Inverse - 1.29 useful for understanding equality.</li> <li>• 1.28 explores algebra and different bar models in preparation for M-S problems.</li> <li>• Good opportunity for <b>statistics</b>/perimeter/money revisiting/measure.</li> </ul>	<p><b>Number: Multiplication and Division</b>  <b>Small Steps:</b> Minimum 17 <b>WR</b>  <b>NCETM Spine:</b>  <a href="#">2.21</a> <a href="#">2.9</a> <a href="#">2.13</a> <a href="#">2.19</a> <a href="#">2.20</a> <a href="#">2.18</a></p> <ul style="list-style-type: none"> <li>• Multiples.</li> <li>• Factors.</li> <li>• Common factors.</li> <li>• Prime numbers.</li> <li>• Square numbers.</li> <li>• Cube numbers.</li> <li>• <b>Cubic centimetres</b></li> <li>• <b>Compare volume.</b></li> <li>• <b>Estimate volume.</b></li> <li>• <b>Estimate capacity</b></li> <li>• <b>Multiplying by 10</b></li> <li>• <b>Multiply by 100</b></li> <li>• Multiply by 1000.</li> <li>• <b>Dividing by 10</b></li> <li>• <b>Dividing by 100</b></li> <li>• Dividing by 1000.</li> <li>• Multiples of 10, 100 and 1000. (2 steps)</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• Spine 2.21 has great depth.</li> <li>• Volume can be linked to cubed numbers.</li> <li>• Multiple steps required for primes/factors etc.</li> </ul>	<p><b>Number: Fractions A</b>  <b>Small Steps:</b> Minimum 22 <b>W/R</b>  <b>NCETM Spine:</b> <a href="#">3.1</a> , <a href="#">3.2</a> , <a href="#">3.3</a> , <a href="#">3.4</a> <a href="#">3.7</a> <a href="#">3.8</a> <a href="#">3.5</a> <a href="#">3.6</a></p> <ul style="list-style-type: none"> <li>• <b>What is a fraction?</b></li> <li>• Unit fractions.</li> <li>• <b>Non-Unit fractions</b></li> <li>• <b>Equivalent fractions (yr4)</b></li> <li>• Equivalent fractions.</li> <li>• Simplifying Fractions (2/3 steps)</li> <li>• Improper fractions to mixed numbers.</li> <li>• Mixed numbers to improper fractions.</li> <li>• Number sequences.</li> <li>• <b>Compare fractions less than 1.</b></li> <li>• <b>Order fractions less than 1.</b></li> <li>• <b>Compare fractions greater than 1.</b></li> <li>• <b>Order fractions greater than 1.</b></li> <li>• Add and subtract fractions.</li> <li>• Add fractions within 1.</li> <li>• Add 3 or more fractions.</li> <li>• Add fractions.</li> <li>• Add mixed numbers.</li> <li>• Subtract fractions.</li> <li>• Subtract mixed numbers.</li> <li>• Subtract – breaking the whole.</li> <li>• Subtract 2 mixed numbers.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>• Expect these steps to run into the Spring term.</li> <li>• Children need strong understanding of what a fraction is. Recaps steps are key.</li> <li>• Bar models and a range of representations are vital.</li> </ul>

**Year 5 – Spring (50 small steps)**

Weeks 1 to 3	Weeks 4 to 5	Weeks 6 to 8	Weeks 9 and 10	Weeks 11 and 12
<p><b>Number: Multiplication and Division</b>  <b>Small Steps: Minimum 12 W/R</b>  <b>NCETM Spine: 2.23 2.15 2.14</b></p> <ul style="list-style-type: none"> <li>• Multiply 2 digit by 1 digit</li> <li>• Multiply 3 digits by 1 digit.</li> <li>• Multiply 4-digits by 1-digit.</li> <li>• Multiply 2-digits by 2-digit (area model).</li> <li>• Multiply 2-digits by 2-digits.</li> <li>• Multiply 3-digits by 2-digits.</li> <li>• Multiply 4-digits by 2-digits.</li> <li>• Divide 2 digits by 1 digit.</li> <li>• Divide 3 digits by 1 digit.</li> <li>• Divide 4-digits by 1-digit.</li> <li>• Divide with remainders.</li> <li>• Problem solving (Multiplication and division)</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• PD materials have a variety of division/multiplication strategies.</li> <li>• Smaller steps required if calculation is not secure.</li> <li>• Opportunities for depth: multi-step problems, area questions.</li> </ul>	<p><b>Number: Fractions B</b>  <b>Small Steps: Minimum 7 W/R</b>  <b>NCETM Spine: (3.1, 3.2, 3.3, 3.4 3.7 3.8 3.5 3.6)</b></p> <ul style="list-style-type: none"> <li>• Multiply unit fractions by an integer.</li> <li>• Multiply non-unit fractions by an integer.</li> <li>• Multiply mixed numbers by integers.</li> <li>• Fractions of a quantity.</li> <li>• Fraction of an amount.</li> <li>• Find the whole.</li> <li>• Using fractions as operators.</li> </ul>	<p><b>Number: Decimals and Percentages</b>  <b>Small Steps: Minimum 19 W/R W/R yr 4</b>  <b>NCETM Spine: 1.23 and 1.24 1.24 3.10</b></p> <ul style="list-style-type: none"> <li>• Tenths as decimal-fractions</li> <li>• Decimals greater than 1.</li> <li>• Hundredths as fractions</li> <li>• Hundredths as decimals</li> <li>• Decimals up to 2 decimal places.</li> <li>• Decimals greater than 1 (2 dp)</li> <li>• Order decimals</li> <li>• Compare decimals</li> <li>• Round to the nearest whole (1 dp)</li> <li>• Round to the nearest whole (2 dp)</li> <li>• Thousandths as fractions</li> <li>• Thousandths as decimals.</li> <li>• Thousandths on a place value chart.</li> <li>• Compare and order decimals</li> <li>• Understand percentages.</li> <li>• Percentages as fractions</li> <li>• Percentages as decimals.</li> <li>• Halves and quarters as decimals.</li> <li>• Equivalent F.D.P.</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• Many steps have been added from the P.D materials. These will not be required depending on secure knowledge of tenths.</li> <li>• P.D materials add depth needed to understand decimals and their function. Visuals and models from NCETM and W.R are vital, as well as the use of base 10 to represent the scale of tenths and hundredths.</li> </ul>	<p><b>Measurement: Perimeter and Area</b>  <b>Small Steps: Minimum 7 W/R</b>  <b>NCETM Spine: revisit 2.16</b></p> <ul style="list-style-type: none"> <li>• Perimeter of rectangles</li> <li>• Perimeter of rectilinear shapes</li> <li>• Perimeter of polygons</li> <li>• Counting squares</li> <li>• Area of rectangles.</li> <li>• Area of compound shapes.</li> <li>• Estimate areas.</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• Measure perimeter relies more on using a ruler. Moved to measurement unit.</li> </ul> <p>Rectilinear shapes require multiple lessons due to tricky concept.</p>	<p><b>Statistics</b>  <b>Small Steps: 5 W/R</b></p> <ul style="list-style-type: none"> <li>• Read and interpret line graphs.</li> <li>• Draw line graphs.</li> <li>• Read and interpret tables.</li> <li>• Two-way tables.</li> <li>• Timetables.</li> </ul> <p><b>NCETM Spine: some examples in 1.28 and 1.29</b></p> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>• This unit is flexible but is advised to be taught during Spring 1 - linking to unit 4 in Science - data handling.</li> <li>• Timetables can be moved to time unit (year 4)</li> </ul>

**Year 5 – Summer (49 small steps)**

Weeks 1 to 3	Weeks 4 to 5	Weeks 6 to 8	Week 9	Weeks 10 to 12
<p><b>Geometry: Properties of Shape</b>  <b>Small Steps: Minimum 13 W/R</b>                      NCETM Spine: N/A <a href="#">1.28</a> (some ideas in TP4)</p> <ul style="list-style-type: none"> <li>Identify angles, compare and order angles.</li> <li>Understand and use degrees.</li> <li>Classify angles</li> <li>Estimate angles</li> <li>Measure angles up to 180°</li> <li>Drawing lines and angles accurately.</li> <li>Calculating angles on a straight line.</li> <li>Calculating angles around a point.</li> <li>Lengths and angles in shapes.</li> <li><a href="#">Triangles</a></li> <li><a href="#">Quadrilaterals</a></li> <li>Regular and irregular polygons.</li> <li>3-D shapes.</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>Recap steps are included if required.</li> <li>Knowledge of quadrilaterals and triangles may need multiple steps.</li> </ul>	<p><b>Geometry: Position &amp; Direction</b>  <b>Small Steps: Minimum 7 W/R</b>                      NCETM Spine <a href="#">1.27</a> TP 6</p> <ul style="list-style-type: none"> <li>Read and plot coordinates.</li> <li>Problem-solving with coordinates.</li> <li>Translation</li> <li>Translation with coordinates</li> <li>Lines of symmetry</li> <li>Reflection in horizontal and vertical lines.</li> <li>Reflection with coordinates.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Use mirrors for symmetry</li> </ul>	<p><b>Number: Decimals</b>  <b>Small Steps: Minimum 11 W/R</b>                      NCETM Spine: ref back to <a href="#">1.23</a> TP 4 -6 <a href="#">1.24</a> (TP 4 &amp; 6) <a href="#">2.19</a> TP 2 and <a href="#">2.29</a> (decimals by 10,100,1000)</p> <ul style="list-style-type: none"> <li>Use known facts to add and subtract decimals within 1.</li> <li>Complements to 1.</li> <li>Adding decimals – crossing the whole.</li> <li>Subtracting decimals – crossing the whole</li> <li>Adding decimals with the same number of decimal places.</li> <li>Subtracting decimals with the same number of decimal places.</li> <li>Adding decimals with a different number of decimal places.</li> <li>Subtracting decimals with a different number of decimal places.</li> <li>Efficient strategies for adding and subtracting decimals.</li> <li>Decimal sequences.</li> <li>Multiply and divide decimals – missing values.</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>Revisits column addition and subtraction.</li> <li>Chance to revisit measures/conversions/perimeter</li> </ul>	<p><b>Number: Negative numbers</b>  <b>Small Steps: Minimum 5 W/R</b>                      NCETM Spine: <a href="#">1.26</a> (12)                      Negative numbers - <a href="#">1.27</a> (6)</p> <ul style="list-style-type: none"> <li>Understand negative numbers</li> <li>Count through zero in 1s</li> <li>Count through zero in multiples.</li> <li>Comparing and order negative numbers.</li> <li>Find the difference.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Steps have been moved later on in the year by White Rose.</li> <li>Steps included are based from NCETM 1.27.</li> </ul>	<p><b>Measurement: Converting Units</b>  <b>Small Steps: Minimum 13 W/R</b>                      NCETM Spine: <a href="#">1.24</a> (TP5)</p> <ul style="list-style-type: none"> <li>Kilograms and kilometres.</li> <li>Millimetres and millilitres.</li> <li>Convert units of length.</li> <li>Convert metric units.</li> <li>Convert imperial units.</li> <li>Convert units of time.</li> <li>Calculate with timetables.</li> </ul> <p>Time (<a href="#">W/R</a> – Yr4 Recaps)</p> <ul style="list-style-type: none"> <li><a href="#">Telling time to the minute</a></li> <li><a href="#">Using am/pm</a></li> <li><a href="#">24 hour clock</a></li> <li><a href="#">Analogue to digital</a></li> <li>Converting units of time.</li> <li>Timetables</li> </ul> <p><b>Prior knowledge and guidance:</b></p> <ul style="list-style-type: none"> <li>Multiplying and Dividing moved into measures to help with conversion.</li> <li>Multiple recaps of mm, cm, m, km etc.</li> <li>Measure perimeter moved to recap perimeter and measures in context.</li> <li>Time recaps are there for chn who are not secure with telling the time.</li> <li>Analogue time (Third Space Maths)</li> </ul>

**Year 6 – Autumn Term (57 Small Steps)**

Weeks 1 - 2	Weeks 3 - 7	Weeks 8-9	Weeks 10-11	Week 12
<p><b>Number: Place Value</b>  <b>Small Steps: 10</b>                      NCETM Spine: revisit y5 <a href="#">1.26</a>                      PV <a href="#">1.30</a> (mainly TP2 and TP3)  <a href="#">1.30</a> (TP 5 rounding)</p> <ul style="list-style-type: none"> <li>Numbers to 100,000</li> <li>Numbers to a million</li> <li>Numbers to ten million.</li> <li>Powers of 10</li> <li>Number line to 1,000,000</li> <li>Number line to 10,000,000</li> <li>Compare an order any integer.</li> <li>Round numbers to 10,100,1000</li> <li>Round any integer.</li> <li>Negative numbers.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Add in small steps from previous year groups to build depth.</li> <li>PD materials provide useful guide to recap previous steps from KS2.</li> <li>Place value grids used more extensively to reveal structure of number in 'groups of 3'.</li> <li>Number lines has more emphasis, focusing on 2,4,5 and 10 sections.</li> </ul>	<p><b>Number: The Four Operations</b>  <b>Small Steps: 24</b>                      NCETM Spine: <a href="#">1.30</a> <a href="#">1.20</a> and <a href="#">1.21</a> <a href="#">1.30</a> <a href="#">2.24</a> <a href="#">2.15</a> <a href="#">2.23</a> <a href="#">2.21</a> <a href="#">2.20</a> <a href="#">2.9</a> <a href="#">2.22</a> and <a href="#">2.28</a> <a href="#">2.25</a></p> <ul style="list-style-type: none"> <li>Add whole numbers with more than 4 digits</li> <li>Subtract whole numbers with more than 4 digits.</li> <li>Inverse operations.</li> <li>Multi-Step problems</li> <li>Add and subtract integers.</li> <li>Common factors.</li> <li>Common multiples.</li> <li>Rules of divisibility.</li> <li>Primes to 100.</li> <li><b>Square numbers</b></li> <li><b>Cube numbers</b></li> <li>Multiply 4 digits by 1 digit.</li> <li>Multiply 2 digits – (area model, two by two, three by two)</li> <li>Divide 4 digit by 1 digit.</li> <li>Divide with remainders.</li> <li>Factors</li> <li>Division using factors.</li> <li>Introduction to long division (<b>Multiple steps</b>)</li> <li>Long division with remainders.</li> <li>Solve problems with division.</li> <li>Solve multi-step problems. (<b>Multiple steps</b>)</li> <li>Order of operations.</li> <li>Mental calculations and estimation.</li> <li>Reasoning from known facts</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Teachers must assess gaps and provide extra steps before new learning.</li> <li>Bar models will support teaching of multi-step problems – See Barvember challenges for examples.</li> </ul>	<p><b>Number: Fractions A</b>  <b>Small Steps: 11</b>                      NCETM Spine: <a href="#">3.7</a> <a href="#">3.5</a> <a href="#">3.8</a> <a href="#">3.8</a> ) <a href="#">3.9</a></p> <ul style="list-style-type: none"> <li>Equivalent fractions (Multiple Steps if required)</li> <li>Simplify fractions.</li> <li>Equivalent fractions with simplifying.</li> <li>Compare &amp; order (denominator).</li> <li>Compare &amp; order (numerator).</li> <li>Add &amp; subtract simple fractions.</li> <li>Add &amp; subtract any 2 fractions.</li> <li>Convert mixed and improper fractions.</li> <li>Add mixed numbers.</li> <li>Subtract mixed numbers.</li> <li>Multi-step problems. (<b>Multiple steps</b>)</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Children to understand equivalents and the abstract to find common denominators.</li> <li>Revise steps from other year groups if children are not secure.</li> <li>Bar models used to support children.</li> </ul>	<p><b>Number: Fractions B</b>  <b>Small Steps: 7</b>                      Multiply, divide <a href="#">3.9</a> fractions of amounts                      TP1 - revisit <a href="#">3.6</a> TP 3</p> <ul style="list-style-type: none"> <li>Multiply fractions by integers.</li> <li>Multiply fractions by fractions.</li> <li>Divide fractions by integers.</li> <li>Divide any fractions by an integer.</li> <li>Mixed questions with fractions.</li> <li>Fraction of an amount.</li> <li>Fraction of an amount - finding the whole.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Use bar models to support new learning.</li> <li>Recap year 5 steps to support new learning.</li> </ul>	<p><b>Measures: Convert Units</b>  <b>Small Steps: 5</b>                      NCETM Spine: <a href="#">2.29</a> TP2 (metric only)</p> <ul style="list-style-type: none"> <li>Metric measures.</li> <li>Convert metric measures.</li> <li>Calculate with metric measures.</li> <li>Miles and kilometres.</li> <li>Imperial measures.</li> </ul>

**Year 6 – Spring Term (59 small steps)**

Weeks 1 to 2	Weeks 3 to 4	Weeks 5 to 6	Weeks 7 to 8	Weeks 9 to 10	Weeks 11 to 12
<p><b>Number: Ratio</b>  <b>Small Steps: 10</b>  <b>NCETM Spine: <a href="#">2.27</a></b></p> <ul style="list-style-type: none"> <li>Add or multiply</li> <li>Use ratio language</li> <li>Introducing the ratio symbol.</li> <li>Ratio and fractions.</li> <li>Scale drawing</li> <li>Using scale factors.</li> <li>Similar shapes</li> <li>Ratio problems.</li> <li>Proportion problems.</li> <li>Recipes.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>NCETM Spine useful for guidance.</li> <li>Use visuals and real-life representations.</li> </ul>	<p><b>Number: Algebra</b>  <b>Small Steps: 10</b>  <b>NCETM Spine: <a href="#">1.28</a>, <a href="#">1.31</a></b></p> <ul style="list-style-type: none"> <li>One step function machines</li> <li>Two-step function machines.</li> <li>Form expressions</li> <li>Substitution.</li> <li>Formulae.</li> <li>Form equations.</li> <li>Solve simple one step equations.</li> <li>Solve two step equations.</li> <li>Find pairs of values.</li> <li>Solve problems with two unknowns.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Use bar models and manipulatives to support learners.</li> </ul>	<p><b>Number: Decimals</b>  <b>Small Steps: 12</b>  <b>Spine: <a href="#">1.24</a> <a href="#">2.29</a> <a href="#">2.19</a> <a href="#">2.28</a> <a href="#">3.10</a></b></p> <ul style="list-style-type: none"> <li><a href="#">Decimals to 2 d.p.</a></li> <li><a href="#">Understand thousandths</a></li> <li>Place value within 1.</li> <li>Place value – integers and decimals.</li> <li>Round decimals</li> <li><b>Add decimals</b></li> <li><b>Subtract decimals</b></li> <li>Multiply by 10, 100 and 1,000.</li> <li>Divide by 10, 100 and 1,000.</li> <li>Multiply decimals by integers.</li> <li>Divide decimals by integers.</li> <li>Multiply and divide decimals in context</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Children need secure understanding of tenths, hundredths and thousandths.</li> <li>Use visuals (PD materials useful for this).</li> </ul>	<p><b>Number: Fractions, Decimals and Percentages</b>  <b>Small Steps: 9</b>  <b>NCETM Spine: <a href="#">3.10</a></b></p> <ul style="list-style-type: none"> <li>Decimal and fraction equivalents</li> <li>Fractions as division</li> <li><a href="#">Understand percentages</a></li> <li>Fractions to percentages.</li> <li>Equivalent FDP.</li> <li>Order FDP</li> <li>Percentage of an amount - step</li> <li>Percentage of an amount – multi-step</li> <li>Percentages – missing values.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Use one hundred squares as a pictorial representation.</li> <li>Children to use the term decimal-fractions.</li> </ul>	<p><b>Measurement: Perimeter, Area and Volume</b>  <b>Small Steps: 12</b>  <b>NCETM Spine: <a href="#">2.30</a> <a href="#">area perimeter (revisit <a href="#">2.16</a>)</a> <a href="#">2.20</a> <a href="#">volume</a></b></p> <ul style="list-style-type: none"> <li><b>Perimeter</b></li> <li><b>Perimeter of rectilinear shapes (Multiple steps)</b></li> <li>Shapes – same area.</li> <li>Area and perimeter</li> <li>Area of rectilinear shapes <b>(Multiple steps)</b></li> <li>Area of a triangle – counting squares</li> <li>Area of a right-angled triangle.</li> <li>Area of any triangle.</li> <li>Area of a parallelogram.</li> <li><a href="#">What is volume?</a></li> <li>Volume – counting cubes.</li> <li>Volume of a cuboid.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>Children need to understand the difference between area and perimeter.</li> <li>Children encouraged to calculate perimeter and area of rectilinear shapes confidently before missing length problems.</li> </ul>	<p><b>Statistics</b>  <b>Small Steps: 6</b>  <b>NCETM Spine: <a href="#">1.28</a> <a href="#">3.10</a> <a href="#">2.26</a></b></p> <ul style="list-style-type: none"> <li>Line graphs</li> <li>Dual bar charts</li> <li>Read and interpret pie charts.</li> <li>Pie charts with percentages.</li> <li>Draw pie charts.</li> <li>The mean.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>This unit is flexible but is advised to be taught during Spring 1 - linking to unit 4 in Science - data handling.</li> </ul>

**Year 6 – Summer Term ( 19 Small Steps)**

Weeks 1 - 3	Weeks 4	Weeks 5-12
<p align="center"><b>Geometry: Property of Shape</b>  <b>Small Steps: 14</b>  <b>NCETM Spine: 1.28 TP4 (missing angles only)</b></p> <ul style="list-style-type: none"> <li>● Identify and compare angles.</li> <li>● Measure and classify angles</li> <li>● Calculate angles.</li> <li>● Vertically opposite angles.</li> <li>● Types of triangles</li> <li>● Angles in a triangle</li> <li>● Angles in a triangle – special cases</li> <li>● Angles in a triangle – missing angles</li> <li>● Quadrilaterals.</li> <li>● Angles in special quadrilaterals.</li> <li>● Angles in polygons.</li> <li>● Circles</li> <li>● Draw shapes accurately.</li> <li>● Nets of 3D shapes.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Constant recapping of the properties of shape required e.g. parallel, perpendicular, angles, regular, irregular, lines of symmetry.</li> <li>- Constant recapping of 2D and 3D shape names.</li> <li>- Add small steps where required.</li> </ul>	<p align="center"><b>Geometry: Position &amp; Direction</b>  <b>Small Steps: 5</b>  <b>NCETM Spine: 1.27 TP 6</b></p> <ul style="list-style-type: none"> <li>● Coordinates in the first quadrant.</li> <li>● Read and plot points in four quadrants.</li> <li>● Solve problems with coordinates.</li> <li>● Translations.</li> <li>● Reflections.</li> </ul> <p><b>Guidance:</b></p> <ul style="list-style-type: none"> <li>- Introduce steps for depth where required.</li> </ul>	<p align="center">Themed projects, consolidation and problem solving.</p>