A developmental progression that provides a well sequenced core curriculum to support the teaching of primary mathematics. Using guidance from the Ready to Progress Criteria, statements are cross referenced to the National Curriculum and build cumulatively, year on year.

OVF Mathematics Framework

Year 1-6

Introduction

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject."

National Curriculum 2014

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering.

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development matters' non statutory guidance.

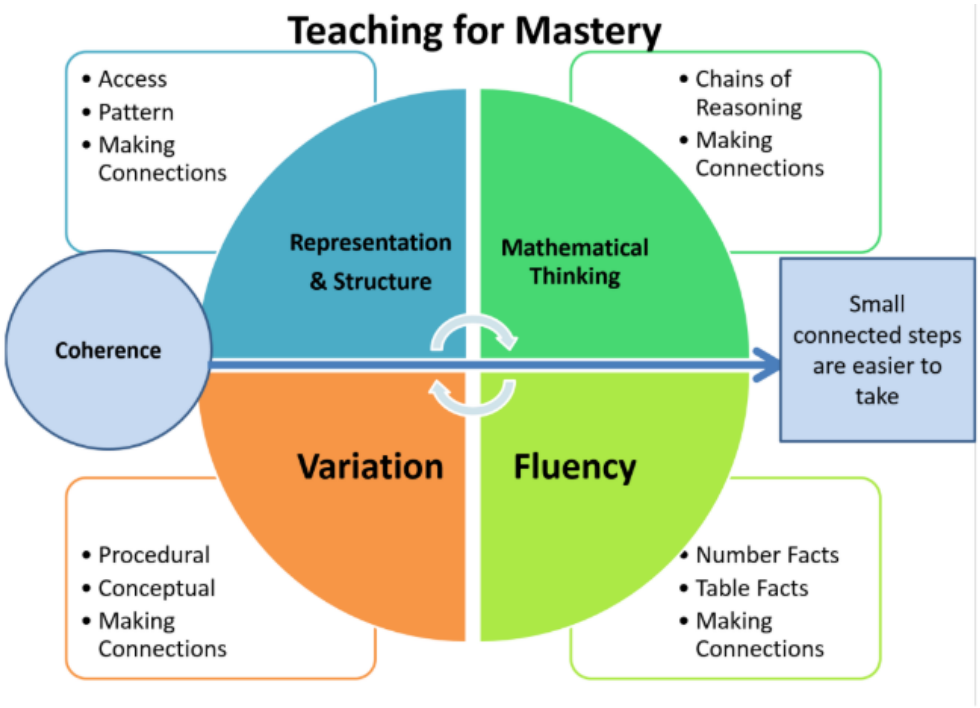
Our belief

We believe that the best teachers of maths not only have great pedagogical knowledge but also have excellent subject knowledge.

"The most effective teachers have deep knowledge of the subjects they teach, and when teachers' knowledge falls below a certain level it is a significant impediment to students' learning. As well as a strong understanding of the material being taught, teachers must also understand the ways students think about the content, be able to evaluate the thinking behind students' own methods and identify students' common misconceptions."

From Sutton Trust report "What makes great teaching" (2014)

We believe that all children can achieve in maths and that the emphasis on effort and growth mindset is paramount.



The phrase 'teaching for mastery' describes the elements of intelligent classroom practice and the school organisation that combine to give pupils the best chance of mastering maths. Achieving mastery means acquiring a secure understanding of the mathematical concepts being taught which enable pupils to move on confidently to more advanced material, whilst mastering maths, means pupils acquire a deep, long-term, secure and adaptable understanding of the subject.

"When we learn a new idea, an electric current fires in our brains, crossing synapses and connecting different areas of the brain. If you learn something deeply, the synaptic activity will create lasting connections in your brain." (Boaler, 2016)

There a Five Big Ideas when adopting a Mastery Approach:

FLUENCY

- Quick recall of facts and procedures
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics
- Understanding a wide range of strategies but choosing the most efficient approach when completing mathematical equations.

REPRESENTATION & STRUCTURE

- Mathematical structures are the key patterns and generalisations that underpin sets of numbers – they are the laws and relationships that we want children to spot.
- Using different representations can help children to 'see' these laws and relationships.

- Using representations that deliberately draw out misconceptions and expose the core structure of a mathematical concept.
- Allowing children the opportunity to use a wide range of concrete resources to support learning with the purpose if scaffolding them to pictorial and abstract representations.

VARIATION (Intelligent practice)

This is not using a variety of resources but making a small adaptations to representations that help deepen understanding and challenge the learner.

- Procedural variation – This is carefully adapted change in the type of examples used and questions set, to draw attention to certain features.
- Conceptual variation – When a concept is presented in different ways, to show what a concept is, and what it is not, in many different forms.

MATHEMATICAL THINKING (Reasoning):

- Looking for pattern and relationships
- Logical Reasoning
- Making Connections
- Providing the children ample opportunity to share their learning with peers to help them explain and question their understanding
- Challenging children to support their answers with examples of proof and explanations.

COHERENCE

- Teachers should develop detailed knowledge of the curriculum in order to break the mathematics down into small steps to develop mastery and address all aspects in a logical progression. This will ensure deep and sustainable learning for all pupils.

- Teachers will be aware of the children's previous exposure to the skill being taught and understand the skills they will require to move through their year and beyond.
- Children will have a clear understanding of the knowledge they are learning through all units of work and well self or peer assess at the end of each lesson.

What does it mean to have a deep understanding of mathematics?

A pupil really understands a mathematical concept, idea or technique if he or she can:

- Describe it in his or her own words
- Represent it in a variety of ways (e.g. using concrete materials, pictures and symbols)
- Explain it to someone else.
- Make up his or her own examples (and non- examples) of it
- See connections between it and other facts or ideas
- Recognise it in new situations and contexts
- Make use of it in various ways, including in new situations

Developing mastery with greater depth is characterised by pupils' ability to:

- Solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination
- Independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics

NCETM (2015) adapted from John Holt (1964)

Number Fluency

"Pupils who are not able to quickly and easily recall maths facts struggle with calculations due to their working memory being overloaded… Many young pupils need and benefit from systematic provision of sequenced core content that becomes the building blocks of later success."

OFSTED Mathematics Review, May 2021

In order to become mathematically literate, children need to develop number fluency, which is important because it helps children understand the cardinal and ordinal aspect of number, improves their performance of mental mathematics, and gives them the tools to look at maths in the outside world and make comparisons.

Good number sense helps children manipulate numbers to make calculations easier and gives them the confidence to be flexible in their approach to solving problems.

Number sense develops over time through opportunities to explore and play with numbers. Visualising numbers in different contexts, spotting relationships between numbers and predicting the patterns all contribute to good number sense. Number fluency is not a fixed ability: it can grow and develop through frequent opportunities to practise effective strategies.

Feniton Primary School followed the DfE non statutory maths curriculum guidance when deciding upon which calculation facts pupils must be fluent in by the end of KS1. These facts are then practiced and rehearsed throughout Year 3 to secure and maintain fluency.

The progression table below summarises the order in which pupil should learn these additive number facts.

	Year 1	Year 2	Year 3	Year 4	Year 5
Additive factual fluency	Addition and subtraction within 10.	Addition and subtraction across 10.	Secure and maintain fluency in addition and subtraction within and across 10, through continued practice.		

The full set of additive calculations that pupils need to be able to solve with automaticity are shown in the table below. Pupils must also be able to solve the corresponding subtraction calculations with automaticity.

We use 'Mastery in Number' as a programme to support additive fluency.

+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1	1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	1 + 10
2	2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	2 + 9	2 + 10
3	3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7	3 + 8	3 + 9	3 + 10
4	4 + 0	4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6	4 + 7	4 + 8	4 + 9	4 + 10
5	5 + 0	5 + 1	5 + 2	5 + 3	5 + 4	5 + 5	5 + 6	5 + 7	5 + 8	5 + 9	5 + 10
6	6 + 0	6 + 1	6 + 2	6 + 3	6 + 4	6 + 5	6 + 6	6 + 7	6 + 8	6 + 9	6 + 10
7	7 + 0	7 + 1	7 + 2	7 + 3	7 + 4	7 + 5	7 + 6	7 + 7	7 + 8	7 + 9	7 + 10
8	8 + 0	8 + 1	8 + 2	8 + 3	8 + 4	8 + 5	8 + 6	8 + 7	8 + 8	8 + 9	8 + 10
9	9 + 0	9 + 1	9 + 2	9 + 3	9 + 4	9 + 5	9 + 6	9 + 7	9 + 8	9 + 9	9 + 10
10	10 + 0	10 + 1	10 + 2	10 + 3	10 + 4	10 + 5	10 + 6	10 + 7	10 + 8	10 + 9	10 + 10

Factual Fluency – Multiplicative Facts

"If multiplication facts are learnt and stored, rather than being calculated or by skip counting repeatedly, then they will require less activity from the brain, reducing the 'cognitive load' and essentially 'freeing up' space to focus brain activity on the application of the facts NOT the facts themselves."

Dehaene, S. http://win.pisavisionlab.org/teaching/burr/piazzadehaene_chapgazzaniga.pdf

The full set of multiplication calculations that pupils need to be able to solve by automatic recall are shown in the table below. Pupils must also have automatic recall of the corresponding division facts.

1 × 1	1 × 2	1 × 3	1 × 4	1 × 5	1 × 6	1 × 7	1 × 8	1 × 9	1 × 10	1 × 11	1 × 12
2 × 1	2 × 2	2 × 3	2 × 4	2 × 5	2 × 6	2 × 7	2 × 8	2 × 9	2 × 10	2 × 11	2 × 12
3 × 1	3 × 2	3 × 3	3 × 4	3 × 5	3 × 6	3 × 7	3 × 8	3 × 9	3 × 10	3 × 11	3 × 12
4 × 1	4 × 2	4 × 3	4 × 4	4 × 5	4 × 6	4 × 7	4 × 8	4 × 9	4 × 10	4 × 11	4 × 12
5 × 1	5 × 2	5 × 3	5 × 4	5 × 5	5 × 6	5 × 7	5 × 8	5 × 9	5 × 10	5 × 11	5 × 12
6 × 1	6 × 2	6 × 3	6 × 4	6 × 5	6 × 6	6 × 7	6 × 8	6 × 9	6 × 10	6 × 11	6 × 12
7 × 1	7 × 2	7 × 3	7 × 4	7 × 5	7 × 6	7 × 7	7 × 8	7 × 9	7 × 10	7 × 11	7 × 12
8 × 1	8 × 2	8 × 3	8 × 4	8 × 5	8 × 6	8 × 7	8 × 8	8 × 9	8 × 10	8 × 11	8 × 12
9 × 1	9 × 2	9 × 3	9 × 4	9 × 5	9 × 6	9 × 7	9 × 8	9 × 9	9 × 10	9 × 11	9 × 12
10 × 1	10 × 2	10 × 3	10 × 4	10 × 5	10 × 6	10 × 7	10 × 8	10 × 9	10 × 10	10 × 11	10 × 12
11 × 1	11 × 2	11 × 3	11 × 4	11 × 5	11 × 6	11 × 7	11 × 8	11 × 9	11 × 10	11 × 11	11 × 12
12 × 1	12 × 2	12 × 3	12 × 4	12 × 5	12 × 6	12 × 7	12 × 8	12 × 9	12 × 10	12 × 11	12 × 12

Pupils must be fluent in these facts by the end of year 4, and this is assessed in the multiplication tables check. Pupils should continue with regular practice through year 5 to secure and maintain fluency.

The 36 most important facts are highlighted in the table. Fluency in these facts should be prioritised because, when coupled with an understanding of commutativity and fluency in the formal written method for multiplication, they enable pupils to multiply any pair of numbers.

The progression table below summarises the order in which pupil should learn these multiplicative number facts. Pupils should learn the multiplication tables in the 'families' described in the progression table – making connections between the multiplication tables in each family will enable pupils to develop automatic recall more easily and provide a deeper understanding of multiplication and division.

	Year 1	Year 2	Year 3	Year 4	Year 5
Multiplicative factual fluency			Recall the 10 and 5 multiplication tables, and corresponding division facts.	Recall the 3, 6 and 9 multiplication tables, and corresponding division facts.	Secure and maintain fluency in all multiplication tables, and corresponding division facts, through continued practice.
			Recall the 2, 4 and 8 multiplication tables, and corresponding division facts.	Recall the 7 multiplication table, and corresponding division facts.	
				Recall the 11 and 12 multiplication tables, and corresponding division facts.	

Principles of teaching mental calculation

A feature of mental calculation is that a type of calculation can often be worked out in several different ways. Which method is the best will depend on the numbers involved, the age of the children and the range of methods that they are confident with.

Therefore, it is important to teach a mental strategy explicitly but in addition invite children to suggest an approach and to explain their methods of solution to the rest of the class.

This has the advantages that:

- children get used to looking out for an approach they can call their own
- children doing the explaining, clarify their own thinking
- children who are listening, develop their awareness of the range of possible methods
- the activity can lead to a discussion of which methods are the most efficient.

Revisiting mental work daily and even devoting a whole lesson to it from time to time, helps children to generate confidence in themselves and a feeling that they control calculations rather than calculations controlling them. Regular short practice keeps the mind fresh. Mental calculation is one of those aspects of learning where – if you don't use it you will end up losing it!

- Commit regular time to teaching mental calculation strategies.
- Provide practice time with frequent opportunities for children to use one or more facts that they already know to work out more facts.
- Introduce practical approaches and jottings with models and images children can use to carry out calculations as they secure mental strategies.
- Engage children in discussion when they explain their methods and strategies to you and their peers.

Assessment

"If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him [sic] accordingly." (Ausubel, 1968, p. vi)

At Feniton we use assessment for three main purposes:

1. To impact on learning
2. To support school level decision making
3. To inform classroom teaching

We understand that there is a difference between learning (relatively permanent changes in long term memory -Sweller and Willingham) and performance (immediate behaviour or knowledge that can be observed and measured.) Therefore, we use a variety of methods to gather evidence of mathematical competency, carefully considering the validity and reliability of the systems in place.

"Assessment is making measurements of learning" (Dylan Wiliam)

When designing assessments, we ask ourselves:

- Why are we assessing?
- What are we trying to find out?
- How will we know?

Assessment for Summative Purpose
We understand this to be using an assessment to measure pupil achievement. At Feniton Primary School we use PUMA assessments three times yearly as part of our systematic assessment process. This gives us general information about how well our curriculum is working to meet pupil needs.

Assessment for Formative Purposes
We understand this to be using an assessment to inform future teaching practice. We use this assessment data in a diagnostic approach to determine competence, gaps, and progress. At Feniton Primary School we use White Rose and Primary Stars pre and post unit assessments and NCETM assessment questions as a tool for formative assessment.

Within the classroom staff follow Harry Fletcher-Woods principles of responsive teaching:

1. Plan and sequence the specific broken down knowledge pupils are to learn

2. Identify what pupils have understood and where they are struggling through careful planning of formative assessment

3. Respond and adapt teaching to support pupils better

4. Develop and maintain positive relationships in a safe and open learning environment

Number and Place Value					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1NPV–1 Count within 100, forwards and backwards, starting with any number.	**2NPV–1** Recognise the place value of each digit in two-digit numbers and compose and decompose two-digit numbers using standard and non- standard partitioning.	**3NPV–1** Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three- digit multiples of 10.	**4NPV–1** Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	**1NPV1**- tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth and that 0.1 is 10 times the size of 0.01.	**6NPV–1** Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =	**2NPV–2** Reason about the location of any two- digit number in the linear number system, including identifying the previous and next multiple of 10.	3NPV–2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and nonstandard partitioning	**4NPV–2** Recognise the place value of each digit in *four*-digit numbers and compose and decompose *four*-digit numbers using standard and non- standard partitioning.	**5NPV–2** Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.	**6NPV–2** Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non- standard partitioning.
Represent and explain how to distinguish between 'teen' and 'ty' numbers		**3NPV–3** Reason about the location of any *three*- digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	**4NPV–3** Reason about the location of any *four*- digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	**5NPV–3** Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each	**6NPV–3** Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.
		3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	**4NPV–4** Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.	**5NPV–4** Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	**6NPV–4** Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

Number facts					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1NF–1 Develop fluency in addition and subtraction facts within 10.	**2NF–1** Secure fluency in addition and subtraction facts within 10, through continued practice.	**3NF–1** Secure fluency in addition and subtraction facts that bridge 10, through continued practice.	**4NF–1** Recall multiplication and division facts up to 12 x12 and recognise products in multiplication tables as multiples of the corresponding number.	**5NF–1** Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	
1NF–2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.	**Count in steps of 2s, 3s, 5s and 10s from any number**	**3NF–2** Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.	**4NF–2** Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.	**5NF–2** Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).	
			4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)	**Understand the concept of square and cube numbers**	
				Understand the concept of prime numbers	

Addition and Subtraction					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.	**2AS–1** Add and subtract across 10.	**3AS–1** Calculate complements to 100.	**Consolidate adding and subtracting numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate**		**6AS/MD–1** Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).
1AS–2 Read, write and interpret equations containing addition , subtraction and equals symbols, and relate additive expressions and equations to real-life contexts.	**2AS–2** Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".	**3AS–2** Add and subtract up to three-digit numbers using columnar methods.	**Use place value and number facts to carry out mental calculations**		**6AS/MD–2** Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
	2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two- digit number.	**3AS–3** Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition and understand the related property for subtraction.			**6AS/MD–3** Solve problems involving ratio relationships.

Multiplication and Division					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	**3MD–1** Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.	**4MD–1** Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.	**5MD–1** Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	For year 6, MD ready-to-progress criteria are combined with AS ready- to-progress criteria (please see above).
	2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).		**4MD–2** Manipulate multiplication and division equations and understand and apply the commutative property of multiplication.	**5MD–2** Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	
	Represent (including with arrays) and explain multiplication and division problems (involving 2s, 5s and 10s and commutativity) in different contexts (including interpreting data and time). Explain decisions and justify solutions using mathematical language and equations		**4MD–3** Understand and apply the distributive property of multiplication.	**5MD–3** Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	
			Develop and use written methods to record, support and explain multiplication and division of two digit numbers by a one digit.	**5MD–4** Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context.	

Fractions					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Recognise, find, name and write 1/3, 1/4, 1/2 and ¾ and 2/4 of size, shape or quantity.	3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	4F–1 Reason about the location of mixed numbers in the linear number system.	5F–1 Find non-unit fractions of quantities.	6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions.
	Write simple fraction facts, e.g. 1/2 of 6 = 3.	3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency).	4F–2 Convert mixed numbers to improper fractions and vice versa.	5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value.
	Recognise, find and name a whole.	3F–3 Reason about the location of any fraction within 1 in the linear number system.	4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	5F–3 Recall decimal fraction equivalents for , , and , and for multiples of these proper fractions.	6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.
	Recognise, find and name a half.	3F–4 Add and subtract fractions with the same denominator, within 1.			
	Recognise, find and name a quarter.	**Recognise and show equivalent fractions ½ - 2/4**			
		Identify a numerator and a denominator			

Geometry					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	**2G–1** Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties. (Number if edges, vertices and faces)	**3G–1** Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.	**4G–1** Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	**5G–1** Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.	**6G–1** Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.
1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.		**3G–2** Draw polygons by joining marked points, and identify parallel and perpendicular sides.	**4G–2** Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.	**5G–2** Compare areas and calculate the area of rectangles (including squares) using standard units.	
			4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.		

Measurement					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Estimate, measure, weigh and compare objects, choosing and using suitable uniform nonstandards or standards units and measuring instruments.	**Combine amounts of money to make a value, including using £ and p symbols.**	**Measure, compare and calculate measures using standard units.**	**Convert between different units of metric measurement, including money.**	**5NPV–5** Convert between units of measure, including using common decimals and fractions.	**Convert between miles and kilometres**
Recognise and know the value of all coins and notes.	**Tell the time to the nearest 15 minutes, including drawing clocks.**	**Add and subtract money, including giving change.**		**Convert between metric and imperial measures**	
Use language to sequence events in chronological order.	**Using appropriate standard units and nonstandard units to measure length, height, mass, temperature and capacity**	**Tell and write the time from an analogue clock.**			
Use vocabulary related to time; order days of the week and months; read the time to the hour and half hour.		**Estimate and read time to the nearest minute.**			

Statistics					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Interpret and construct simple tables, tally charts and pictograms.	**Interpret and present data using bar charts, pictograms and tables.**	**Interpret and present discrete and continuous data on appropriate graphs.**	**Complete, read and interpret information in tables, including times tables.**	**Construct and interpret pie chart**
					Calculate the mean as an average

Mathematics in the Early Years Foundation Stage Framework

ELG: Number Children at the expected level of development will:

- Have a deep understanding of numbers to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

ELG: Numerical Patterns Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.