Abingdon Primary School

Calculations Policy

September 2026

Introduction

At Abingdon Primary School, pupils are introduced to calculation through a carefully sequenced Concrete-Pictorial-Abstract (CPA) approach. Across the school, concrete resources and carefully selected representations are used to expose mathematical structure and support pupils in developing secure mental images before working increasingly abstractly.

Over time, pupils learn to use models and images such as rekenreks, Cuisenaire rods, Dienes/base-ten equipment, place-value counters, bar models and tens frames to support mental and informal written calculation. As mental strategies are strengthened and refined, informal written methods become more efficient and succinct and lead, where appropriate, to efficient formal written methods. By the end of Year 6, pupils should be able to select a method that is appropriate to the calculation and use estimation, inverse operations and number sense to judge whether an answer is reasonable. When faced with a calculation, pupils are encouraged to ask themselves:

- Can I visualise it?
- Can I draw a representation of it?
- Do I need to use a formal method?

At whatever stage in their learning, and whatever method is being used, it must still be underpinned by a secure and appropriate knowledge of number facts, along with those mental skills that are needed to carry out the process and judge if it was successful.

Representations and informal methods remain available whenever they support understanding. Progression does not mean that earlier approaches are removed; pupils should be able to move flexibly between representations, mental strategies and written methods according to the mathematics. The overall aim is that when pupils leave primary school they:

- ✓ Develop fluency with number and increasing automaticity so that key facts can be retrieved efficiently;
- ✓ Have a secure knowledge of number facts and a deep understanding of the four operations and the structures that connect them;
- ✓ Use number sense and known relationships to calculate mentally, selecting efficient strategies rather than relying on counting;
- ✓ Use diagrams, representations and informal jottings when these help to expose structure, record reasoning or reduce cognitive load;
- ✓ Use efficient and reliable formal written methods when these are the most appropriate strategy, while retaining access to earlier representations when they support understanding.

As a school, we have adopted the NCETM Teaching for Mastery approach. Pupils begin their mathematical journey in Reception through Mastering Number, with standalone Mastering Number sessions continuing in Years 1-4. The Five Big Ideas of Teaching for Mastery provide a shared framework for planning and teaching calculation across the school (Figure 1).

Coherence: Teaching is designed to enable a coherent learning progression through the curriculum, providing access for all pupils to develop a deep and connected understanding of mathematics that they can apply and communicate in a range of contexts.

Representation and Structure: Teachers carefully select representations of mathematics to expose mathematical structure. The intention is to support pupils in 'seeing' the mathematics, rather than using the representation as a tool to 'do' the mathematics. These representations become mental images that pupils can use to think about and discuss mathematics, supporting them to achieve a deep understanding of mathematical structures and connections.

Mathematical Thinking: Mathematical Thinking is central to how pupils learn mathematics and includes looking for patterns and relationships, making connections, conjecturing, reasoning, and generalising. Pupils should actively engage in mathematical thinking in all lessons, discussing and communicating their ideas using precise mathematical language.

Fluency: Efficient, accurate recall of key number facts and procedures is essential for fluency, freeing pupils' minds to think deeply about concepts and problems, but fluency demands more than this. It requires pupils to have the flexibility to move between different contexts and representations of mathematics, to recognise relationships and make connections, to explain their ideas and to choose appropriate methods and strategies to solve problems.

Variation: The purpose of variation is to draw closer attention to a key feature of a mathematical concept or structure through varying some elements while keeping others constant. Through variation the teacher focuses thinking and discussion on the key feature in question.

Conceptual variation involves varying how a concept is represented to draw attention to critical features. Often more than one representation is required to look at the concept from different perspectives and gain comprehensive knowledge.

Procedural variation considers how the pupil will 'proceed' through a learning sequence. Purposeful changes are made in order that pupils' attention is drawn to key features of the mathematics, scaffolding pupils' thinking to enable them to reason logically and make connections.

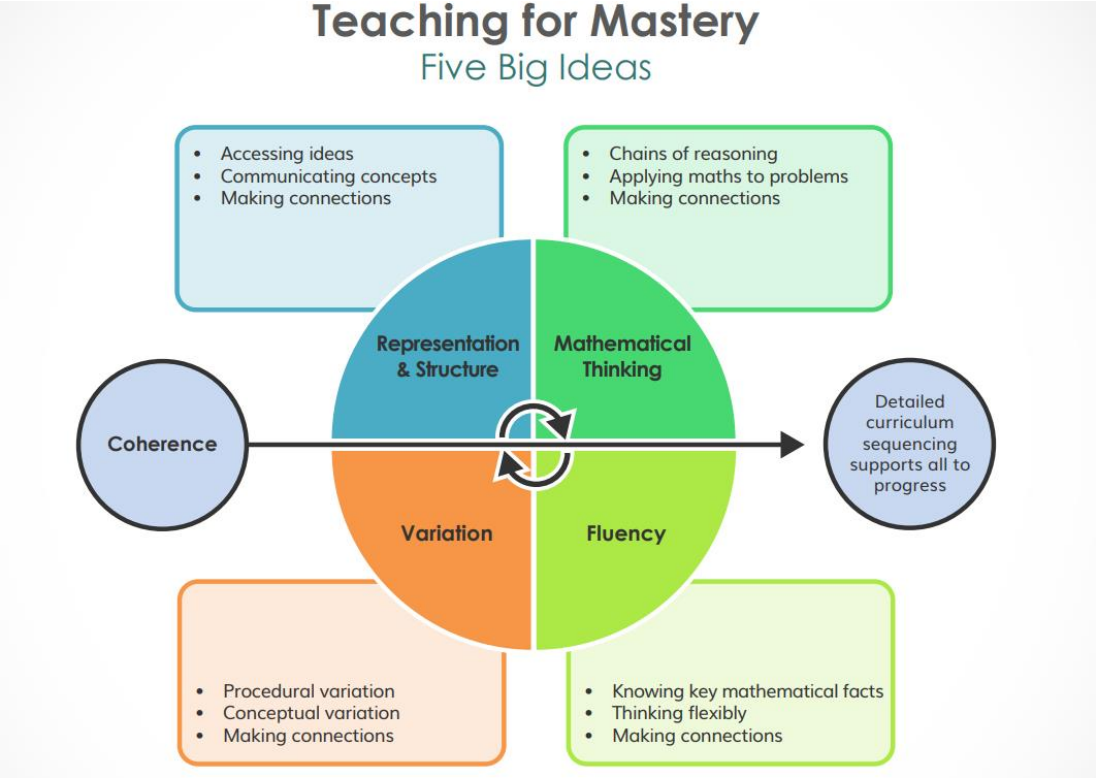

Teaching for Mastery
Five Big Ideas
Accessing ideas
Communicating concepts
Making connections
Chains of reasoning
Applying maths to problems
Making connections
Representation & Structure
Mathematical Thinking
Coherence
Detailed curriculum sequencing supports all to progress
Variation
Fluency
Procedural variation
Conceptual variation
Making connections
Knowing key mathematical facts
Thinking flexibly
Making connections

Figure 1

Progression of Skills - Addition

Year Group	Skill
Reception	Conceptually subitise and notice composition within 10 Combine two groups and identify the whole Use one more/one less relationships Recall bonds to 5 and some bonds to 10, including doubles
Year 1	Add together and add more in meaningful contexts Secure bonds within 10 and derive related facts within 20 Bridge through 10 using known number relationships Represent and solve missing-number addition equations
Year 2	Use known facts to derive related addition facts Add three one-digit numbers and add across 10 Add multiples of 10 and tens to two-digit numbers Add two two-digit numbers, with and without exchange Represent and solve missing-number problems
Year 3	Add ones, tens and hundreds to a three-digit number Use additive relationships, partitioning and compensation mentally Add two- and three-digit numbers, including across 10 and 100 Find complements to 100 and use related facts Develop column addition as an efficient written method
Year 4	Use mental strategies and additive relationships with larger numbers Add up to two four-digit numbers using efficient mental or written methods Secure formal column addition with appropriate exchange Apply addition in measures, money and decimal contexts where appropriate
Year 5	Use mental strategies, derived facts and compensation where efficient Add whole numbers with more than four digits Add decimals with up to two decimal places Use formal column addition accurately and justify method choice
Year 6	Use additive structures, equivalence and compensation to derive related calculations Add whole numbers within the Year 6 place-value range Add decimals with up to three decimal places Use mental and formal methods flexibly and check solutions using estimation/inverse

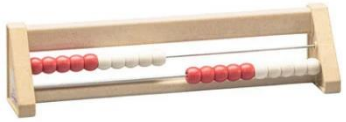
Reception: Foundations for Addition and Subtraction

In Reception, Mastering Number provides the core number progression. Addition and subtraction are developed through subitising, composition, comparison, practical stories and carefully selected representations. The emphasis is on understanding parts and wholes and developing secure number relationships; there is no expectation that pupils use a formal written algorithm.

Foundation	Practical and representational experiences	Key language and thinking
Subitising and composition	Use fingers, structured dot patterns, five/ten frames and rekenreks to see small quantities and how a number can be made from smaller parts.	"I can see ___ and ___." "___ is made of ___ and ___." "What do you notice?"
Parts, wholes, combining and bonds	Combine real objects in stories and play. Use part-part-whole representations and rekenreks to connect parts to a whole and build bonds to 5 and some bonds to 10.	"There are ___ and ___; altogether there are ___." "___ and ___ make ___."
One more, one less and doubles	Use objects, number tracks and rekenreks to notice consecutive-number relationships. Explore doubles through equal groups and symmetrical arrangements.	"___ is one more than ___." "___ is one less than ___." "What do you notice about the double?"
From experience to representation	Encourage pupils to explain what they can see, then represent the same structure with objects, images, marks or diagrams. Recording grows from understanding rather than preceding it.	"Can you show it another way?" "What is the same? What is different?" "Can you visualise it?"

Year 1	Year 2	Year 3
Pupils memorise and reason with number bonds to 10 and 20 in several forms.	**Practise addition to 20 and become increasing fluent in deriving facts.**	**Practise solving varied addition questions with two-digit numbers - the answers could exceed 100.**
+ = signs and missing numbers Pupils need to understand the concept of equality and its meaning of 'the same as' before using the '=' sign. Calculations should be written either side of the equals sign so that the sign is not just interpreted as 'the answer'. **2 = 1 + 1** **2 + 3 = 4 + 1** Missing numbers need to be placed in all possible places. **3 + 4 = □** **□ = 3 + 4** **7 = □ + 4** **3 + □ = 7** **Counting and Combining sets of Objects** Combining two sets of objects (aggregation) which will progress onto adding on to a set (augmentation) 	**Missing number problems** e.g. 14 + 5 = 10 +□ 32 + □ + □ = 100 35 = 1 + □ + 5 It is valuable to use a range of representations (also see y1). Continue to use number lines to develop understanding of: **Adding in tens and ones** 23 + 12 = 23 + 10 + 2 = 33 + 2 = 35 **Partitioning and bridging through 10.** The steps in addition often bridge through a multiple of 10 e.g. Pupils should be able to partition the 7 to relate adding the 2 and then the 5. 8 + 7= 15 **Adding 9 or 11 by adding 10 and adjusting by 1** e.g . Add 9 by adding 10 and adjusting by 1 35+ 9 = 44 **Towards a Written Method** Partitioning in different ways and recombine	Missing number problems using a range of equations as in Year 1 and 2 but with appropriate, larger numbers. **Partition into tens and ones** Partition both numbers and recombine. Add by partitioning the second number only e.g. 247 + 125 = 247 + 100 + 20+ 5 = 347 + 20 + 5 = 367 + 5 = 372 Pupils need to be secure adding multiples of 100 and 10 to any three-digit number including those that are not multiples of 10. **Towards a Written Method (with equipment)** Introduce expanded column addition modelled with place value

Use structured representations such as a rekenrek and Numicon to calculate, identify number relationships and bridge through 10.

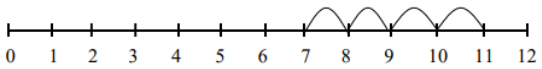


Use a hundred square selectively to notice patterns in the number system and connect changes of 1 and 10.

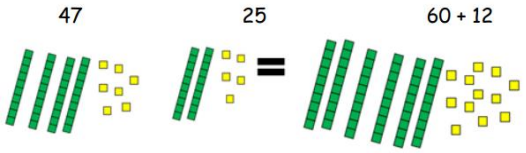
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Use a number line to represent efficient jumps and known number relationships (supported by models and images).

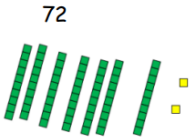
7 + 4



47 + 25



Leading to exchanging:



Leading to expanded method:

$$\begin{array}{r} 40 + 7 \\ +\ 20 + 5 \\ \hline 60 + 12 = 72 \end{array}$$

counters or Dienes.

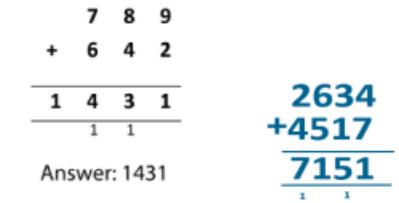
$$\begin{array}{r} 200 + 40 + 7 \\ 100 + 20 + 5 \\ \hline 300 + 60 + 12 = 372 \end{array}$$

When understanding of the expanded method is secure, pupils move to the formal columnar algorithm. The formal method is a more streamlined recording of the same place-value structure, not a completely new method.

$$\begin{array}{r} 247 \\ +125 \\ \hline 372 \\ \hline 10 \end{array}$$

Mixed Year 5/6 provision

In the mixed Year 5/6 class, calculation is taught through the agreed two-year NCETM rolling programme. Pupils may access common mathematical structures, representations and contexts while working towards age-appropriate Ready-to-Progress and National Curriculum expectations. Greater depth is developed through reasoning, connection, efficiency and complexity rather than simply through larger numbers.

Year 4	Year 5	Year 6
Pupils continue to practise mental methods with increasingly large numbers using models and images to help them.	**Pupils practise mental calculations with increasingly large numbers to help fluency (12,462 +2300 = 14,762) using models and images to help them.**	**Undertake mental calculations with increasingly large numbers and more complex calculations using models and images to help them.**
Written methods (progressing to four digits) Expanded column addition modelled with place value counters, progressing to calculations with 4-digit numbers. 200 + 40 + 7 100 + 20 + 5 300 + 60 +12 = 372 **Compact written method** Extend to numbers with at least four-digits. 789 + 642 becomes  Answer: 1431 **Pupils should retain access to expanded methods and earlier representations whenever these support understanding or help them diagnose an error.** Extend to up to two places of decimals (same number of decimal places) and adding several numbers (with different numbers of digits).	**Written methods (progressing to more than four digits)** As year 4, progressing when understanding of the expanded method is secure, pupils will move on to the formal columnar method for whole numbers and decimal numbers as an efficient written algorithm.	**Written methods** As year 5, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with columnar method to be secured. Continue calculating with decimals, including those with different numbers of decimal places. **Problem Solving** Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems (exploring cross curricular links) to deepen their understanding.

Progression of Skills - Subtraction

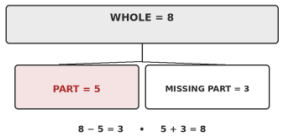
Year Group	Skill
Reception	Conceptually subitise and notice composition within 10 Separate a whole into parts and recognise what is left Use one less relationships in practical contexts Recall and use bonds to 5 and some bonds to 10 to identify missing parts
Year 1	Understand subtraction as partitioning, reduction and finding the difference Secure subtraction facts within 10 and derive related facts within 20 Use structured representations to count back or find the difference efficiently Represent and solve missing-number subtraction equations
Year 2	Use known facts to derive related subtraction facts Subtract across 10 using bridging and partitioning strategies Subtract multiples of 10 and tens from two-digit numbers Subtract two two-digit numbers, with and without exchange Represent and solve missing-number problems using inverse relationships
Year 3	Subtract ones, tens and hundreds from a three-digit number Use additive relationships, partitioning and compensation mentally Subtract two- and three-digit numbers, including across 10 and 100 Find complements to 100 and use related subtraction facts Develop column subtraction as an efficient written method where appropriate
Year 4	Use mental strategies and additive relationships with larger numbers Subtract up to four-digit numbers using efficient mental or written methods Secure formal column subtraction with appropriate exchange Apply subtraction in measures, money and decimal contexts where appropriate
Year 5	Use mental strategies, derived facts and compensation where efficient Subtract whole numbers with more than four digits Subtract decimals with up to two decimal places Use formal column subtraction accurately and justify method choice
Year 6	Use additive structures, equivalence and compensation to derive related calculations Subtract whole numbers within the Year 6 place-value range Subtract decimals with up to three decimal places Use mental and formal methods flexibly and check solutions using estimation/inverse

Subtraction: Development of Methods

Subtraction is taught as part of pupils' wider understanding of additive structures. Pupils learn that subtraction can represent partitioning a whole into parts, reduction (a quantity becoming smaller), or finding the difference between two quantities. Teaching should make these structures explicit so pupils do not see subtraction only as 'taking away'.

Key subtraction structures and representations

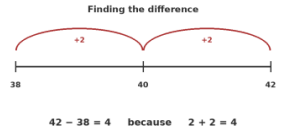
Partitioning / missing part



Connect all four related addition and subtraction facts.

Reduction

Use 'first, then, now' stories so the starting quantity and removed part are clear.



Difference

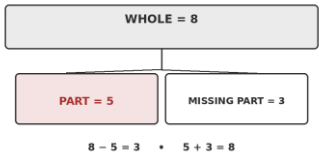
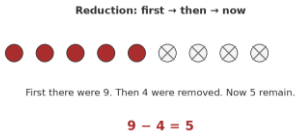
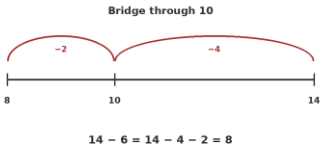
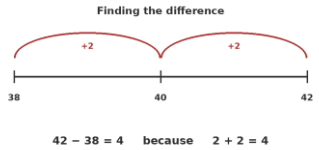
Compare two quantities and count up when this is the most efficient strategy.

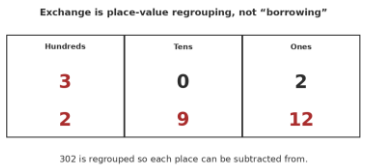
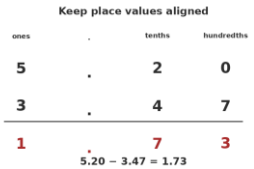
Progression in classroom practice

Year 1	Year 2	Year 3
Use objects, counters, ten frames and rekenreks to tell subtraction stories. Represent partitioning, reduction and difference with part-part-whole models and number lines. Missing numbers appear in different positions so '=' is understood as equivalence.	Use known facts, bridging through 10 and partitioning to subtract efficiently. Compare counting back with finding the difference and select a strategy that suits the numbers.	Use additive relationships, compensation and place-value knowledge mentally. Connect two- and three-digit subtraction to expanded and then compact column subtraction, modelling exchange explicitly with place-value equipment.
Year 4	**Year 5**	**Year 6**
Secure column subtraction with exchange while retaining efficient mental strategies. Explain each exchange in terms of the value of the digits and use place-value counters where needed.	Subtract numbers with more than four digits and decimals. Use estimation, inverse operations and known facts to check solutions; maintain clear place-value alignment in decimal work.	Calculate flexibly using additive structures, equivalence and the same-difference principle. Choose between compensation, finding the difference, mental calculation and formal written methods, and justify the choice.

Subtraction: Worked Examples and Visual Representations

These examples show a deliberate progression from structure and representation towards efficient recording. The representation is selected because it exposes the mathematics, not because every pupil must pass through a fixed set of pictures before working abstractly.

Year group	Worked example / focus	Representation and key thinking
Reception / Year 1	Part-part-whole: 8 − 5 = 3	 Name the whole and both parts. Discuss 5 + 3 = 8 alongside 8 − 5 = 3.
Year 1	Reduction: 9 − 4 = 5	 Connect the story to 'first, then, now' and physically remove or cross out the subtracted part.
Year 2	Bridge through 10: 14 − 6	 Partition 6 into 4 and 2 so the known benchmark of 10 is used efficiently.
Year 2 / Year 3	Finding the difference: 42 − 38	 When numbers are close, counting up from the smaller number can be much more efficient than counting back.

Year 3 / Year 4	Exchange with place value: 302 − 127	 Use 'exchange/regroup' rather than 'borrow'. Pupils explain the value change before compact recording.
Year 5 / Year 6	Decimal subtraction: 5.20 − 3.47	 Align place values and use zero placeholders where needed. Estimate before calculating to judge reasonableness.
Mixed Year 5/6 provision		
In the mixed Year 5/6 class, pupils work with shared additive structures and representations while meeting age-appropriate expectations. Year 5 pupils may secure calculation with whole numbers and decimals as Year 6 pupils extend the same structures through equivalence, compensation and more complex contexts. Greater depth comes through reasoning and method choice rather than simply larger numbers.		

Problem solving and method choice
Pupils should meet subtraction in varied contexts and decide which structure is present: missing part, reduction or difference. They should be encouraged to ask: Can I visualise it? Can I represent it? Is a mental strategy more efficient? Do I need a formal method? Answers should be checked using estimation, inverse relationships and number sense.

Progression of Skills - Multiplication

Year Group	Skill
Reception	Notice equal and unequal groups in practical contexts Explore doubles using fingers, objects and symmetrical arrangements Copy and create repeated patterns and equal groups Begin to unitise by seeing a group as one unit
Year 1	Count in multiples of 2, 5 and 10 using objects and structured representations Recognise equal groups and describe repeated addition Connect doubling to two equal groups Represent multiplication contexts practically and pictorially
Year 2	Represent multiplication as equal groups and repeated addition Use arrays to understand commutativity Recall and use multiplication facts for 2, 5 and 10 Connect multiplication to doubling, halving and related division facts
Year 3	Recall and use multiplication facts for 3, 4 and 8 Use relationships between times tables, including doubling and halving Represent multiplication using arrays, bar models and area models Record two-digit by one-digit multiplication using partitioning where appropriate
Year 4	Recall multiplication facts up to 12 × 12 and use related division facts Use factor pairs, commutativity and the distributive property to calculate efficiently Multiply two- and three-digit numbers by a one-digit number using partitioning and short multiplication Connect multiplication to area, scaling and correspondence
Year 5	Identify and use factors, multiples, primes and composite numbers Multiply whole numbers and decimals by 10, 100 and 1,000 using place-value relationships Multiply up to four digits by one digit and by two digits using efficient written methods Use equivalence, scaling and area models to reason about products
Year 6	Multiply multi-digit numbers up to four digits by a two-digit whole number using long multiplication Use associative, distributive and commutative properties to calculate efficiently Use scale factors and equivalence to simplify calculations Apply multiplication in measures, area, volume, ratio and proportion

Reception: Foundations for Multiplicative Thinking

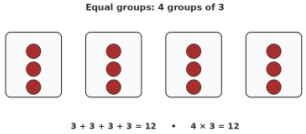
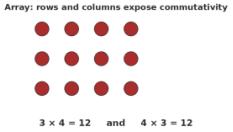
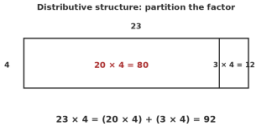
In Reception, multiplicative thinking grows from noticing equal groups, doubles, repeated patterns, fair sharing and halving. The emphasis is on seeing structure and using language such as equal, group, double, half and each. Formal multiplication and division symbols are not the starting point.

Foundation	Practical and representational experiences	Key language and thinking
Equal groups and unitising	Make equal groups with objects, cups, plates, hoops and natural materials. Encourage pupils to see a whole group as one unit and then count the groups.	"There are ___ equal groups." "Each group has ___." "What is the same about the groups?"
Doubles	Build symmetrical arrangements with fingers, counters and dot patterns. Connect two equal groups with doubling.	"Double ___ is ___." "I can see two equal groups of ___."
Sharing and halving	Share objects fairly between two or more people/containers and check that each share is equal. Explore half of quantities and shapes.	"Share equally." "Each group has ___." "Half of ___ is ___."
Patterns and repeated structure	Copy, continue and create repeated patterns. Notice repeated quantities in songs, routines and play.	"What repeats?" "How many equal groups can you see?" "Can you show it another way?"

Multiplication: Development of Methods

Multiplication is developed through equal groups, repeated addition, arrays, scaling and correspondence. Pupils learn to unitise: seeing one group as a single unit and then reasoning about how many equal units there are. Arrays, bar models, area models and place-value representations connect known facts to derived facts and, later, to formal written methods.

Key multiplication representations

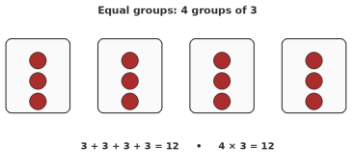
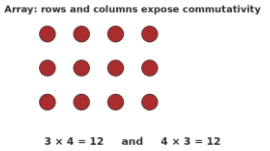
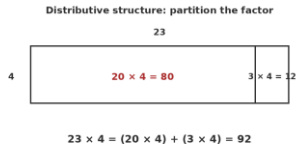
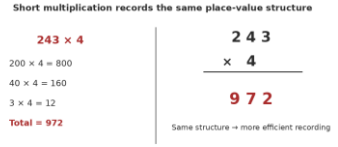
 **Equal groups** Build the concept before relying on repeated counting.	 **Arrays** Expose rows, columns and commutativity.	 **Area / distributive model** Partition one factor while keeping the multiplicative structure visible.

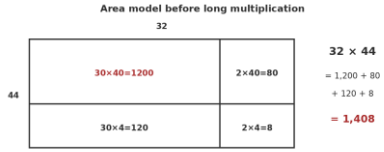
Progression in classroom practice

Year 1	Year 2	Year 3
Build and describe equal groups. Connect repeated addition, counting in multiples and doubles to practical multiplication contexts. Use arrays and grouping language before emphasising symbolic recording.	Use equal groups and arrays to secure 2, 5 and 10 facts and commutativity. Connect multiplication and division facts and use known doubles to derive related facts.	Secure 3, 4 and 8 facts through relationships between tables. Use arrays, bar and area models to expose distributivity and partition two-digit by one-digit calculations.
Year 4	**Year 5**	**Year 6**
Use factor pairs and distributivity alongside secure table facts. Develop short multiplication from expanded partitioning and place-value representations.	Extend multiplication to four-digit by one-digit and two-digit factors. Use area models to connect partitioning with long multiplication and use place-value relationships for ×10, ×100 and ×1,000.	Secure long multiplication and choose mental or written methods efficiently. Apply multiplication through scaling, ratio, area, volume and multi-step problems while reasoning with equivalence.

Multiplication: Worked Examples and Visual Representations

The examples below move from equal groups and arrays to distributive and place-value structures. Formal algorithms should be understood as efficient records of structures pupils have already met, rather than isolated procedures.

Year group	Worked example / focus	Representation and key thinking
Reception / Year 1	Equal groups: 4 groups of 3	 Count groups and the number in each group. Connect the group as one unit to the total.
Year 2	Array: 3 × 4 and 4 × 3	 Rotate or reinterpret the array to expose commutativity while the total remains unchanged.
Year 3	Distributive model: 23 × 4	 Partition 23 into 20 and 3. Combine the partial products to calculate efficiently.
Year 4 / Year 5	Short multiplication: 243 × 4	

		Make the link from expanded partitioning to the compact algorithm explicit. Exchange is explained through place value.
Year 5 / Year 6	Long multiplication: 32 × 44	 Use the area model to expose the four partial products before or alongside the formal long multiplication layout.

Mixed Year 5/6 provision
Year 5 and Year 6 pupils can share multiplicative structures, arrays, area models and scaling contexts. Year 5 secures efficient written multiplication and factor relationships while Year 6 extends the same ideas through long multiplication, ratio, scale factors and more complex reasoning. Different numbers do not replace different mathematical thinking.

Problem solving and method choice
Pupils should recognise whether a problem involves equal groups, scaling or correspondence and select an efficient strategy. They should use known facts and factor relationships before defaulting to a written algorithm, and should estimate the size of a product so answers can be checked for reasonableness.

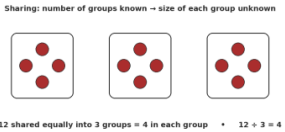
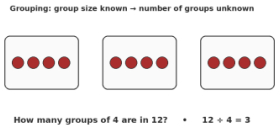
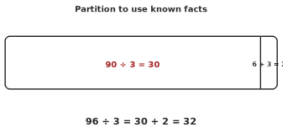
Progression of Skills - Division

Year Group	Skill
Reception	Share objects fairly in practical contexts Notice equal and unequal groups Explore halving through objects, shapes and quantities Begin to describe how many are in each group
Year 1	Share into equal groups using practical equipment Group objects in twos, fives and tens Connect halving to two equal groups Use counting in multiples and practical grouping to solve division contexts
Year 2	Understand division as sharing and grouping Use arrays and bar models to connect multiplication and division Recall and use related division facts for 2, 5 and 10 Solve division problems using concrete and pictorial representations
Year 3	Use division facts linked to 3, 4 and 8 tables Represent division using arrays, bar models and number lines Understand remainders in practical contexts Use partitioning to divide two-digit numbers by one-digit numbers where appropriate
Year 4	Recall division facts up to 12 × 12 through known multiplication facts Divide two- and three-digit numbers by one-digit numbers using partitioning, known facts and structured representations Interpret remainders appropriately in context Use division in scaling, correspondence and measure contexts
Year 5	Divide whole numbers and decimals by 10, 100 and 1,000 using place-value relationships Divide numbers up to four digits by a one-digit number using short division Use factors, multiples and equivalence to simplify division calculations Interpret remainders as whole-number, fractional or decimal remainders according to context
Year 6	Divide numbers up to four digits by a two-digit whole number using short or long division where appropriate Use common factors and equivalence to simplify division Reason about the effect on a quotient when dividend and divisor are scaled Apply division in ratio, proportion, fractions, decimals and measures

Division: Development of Methods

Division is taught through two key structures: sharing equally (partitive division) and grouping (quotitive division). Pupils should experience both structures and connect them to multiplication, so division is not reduced to one written layout. Bar models, arrays, number lines and place-value representations help pupils reason about the dividend, divisor and quotient before formal recording is introduced.

Key division structures and representations

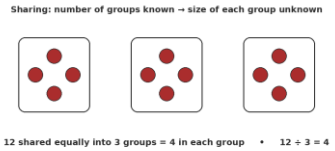
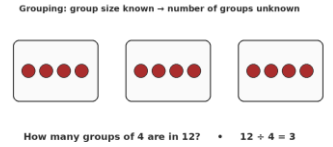
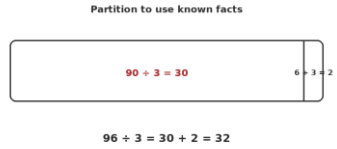
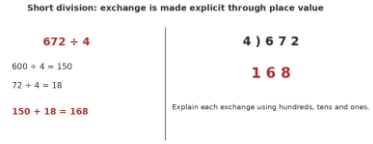
 **Sharing** The number of groups is known; find the size of each group.	 **Grouping** The group size is known; find how many groups can be made.	 **Partitioning / known facts** Partition the dividend into parts that are easy to divide using known facts.

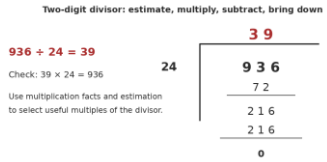
Progression in classroom practice

Year 1	Year 2	Year 3
Physically share and group objects and describe what is equal. Connect halving with two equal groups and use multiples of 2, 5 and 10 in practical grouping contexts.	Compare sharing and grouping structures. Use arrays, bar models and related multiplication facts to derive division facts for 2, 5 and 10.	Use 3, 4 and 8 facts, arrays and number lines. Partition two-digit dividends into useful parts and interpret remainders in the context of a problem.
Year 4	**Year 5**	**Year 6**
Use partitioning, known facts and place-value representations to divide two- and three-digit numbers by a one-digit divisor. Interpret remainders according to context and prepare pupils for formal short division in Year 5.	Secure short division with dividends up to four digits and use factor relationships for efficient mental division. Connect ÷10, ÷100 and ÷1,000 to place-value scaling.	Divide by two-digit divisors using short or long division where appropriate. Use estimation and multiples of the divisor, and express or round remainders according to the context.

Division: Worked Examples and Visual Representations

These examples keep the meaning of division visible as the recording becomes more compact. Teachers should continue to ask whether the context is sharing or grouping and connect each division calculation to a related multiplication fact.

Year group	Worked example / focus	Representation and key thinking
Reception / Year 1	Sharing: 12 shared into 3 groups	 The number of groups is known; determine how many are in each group.
Year 1 / Year 2	Grouping: 12 grouped in 4s	 The group size is known; determine how many groups can be made.
Year 3	Partitioning: 96 ÷ 3	 Partition 96 into 90 and 6 so known division facts can be used efficiently.
Year 5	Short division: 672 ÷ 4	

		Link the compact notation to place-value partitioning and exchange. Pupils explain each exchange, not just carry digits.
Year 6	Two-digit divisor: 936 ÷ 24	 Estimate using multiples of 24, use a formal layout when efficient, and verify with the inverse multiplication.

Remainders
Remainders must be interpreted according to context. A remainder may stay as a whole-number remainder, be expressed as a fraction or decimal, or require the quotient to be rounded up or down. Pupils should explain what the remainder means in the problem rather than treating it as an extra digit to append mechanically.

Mixed Year 5/6 provision
Year 5 and Year 6 pupils may share division structures and representations while working towards different end points. Year 5 secures short division and interpretation of remainders; Year 6 extends to two-digit divisors, short or long division where appropriate, and deeper reasoning with factors, equivalence and ratio.

Problem solving and method choice
Pupils should identify whether a division problem is sharing or grouping, use known multiplication facts and factor relationships, and estimate the likely quotient before calculating. Formal methods are used when they are efficient, but mental strategies, partitioning and representations remain available whenever they expose the structure more clearly.