Hillocks Primary Academy

Power Maths calculation policy: KS1

The following pages show the *Power Maths* progression in calculation (addition, subtraction, multiplication and division) and how this works in line with the National Curriculum. The consistent use of the CPA (concrete, pictorial, abstract) approach across *Power Maths* helps children develop mastery across all the operations in an efficient and reliable way. This policy shows how these methods develop children's confidence in their understanding of both written and mental methods.

KEY STAGE 1

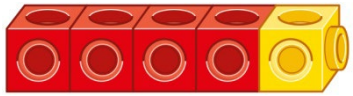
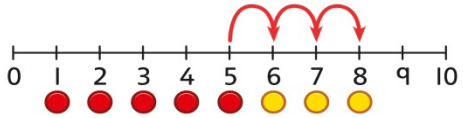
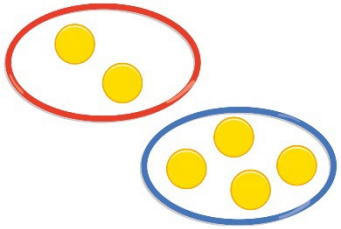
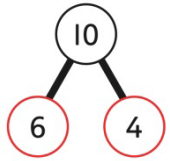
Children develop the core ideas that underpin all calculation. They begin by connecting calculation with counting on and counting back, but they should learn that understanding wholes and parts will enable them to calculate efficiently and accurately, and with greater flexibility. They learn how to use an understanding of 10s and 1s to develop their calculation strategies, especially in addition and subtraction.

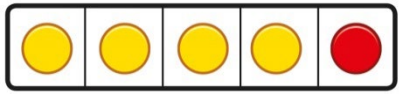
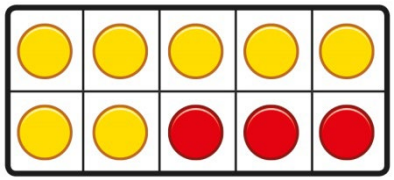
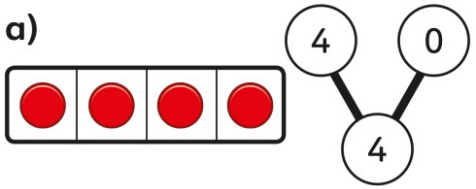
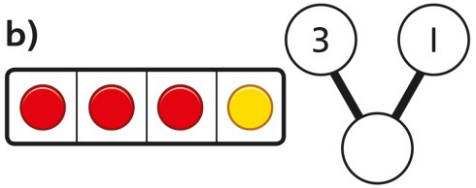
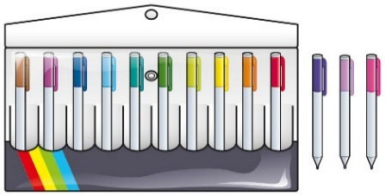
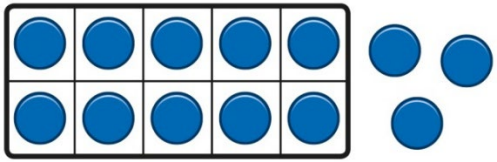
Key language: whole, part, ones, ten, tens, number bond, add, addition, plus, total, altogether, subtract, subtraction, find the difference, take away, minus, less, more, group, share, equal, equals, is equal to, groups, equal groups, times, multiply, multiplied by, divide, share, shared equally, times-table

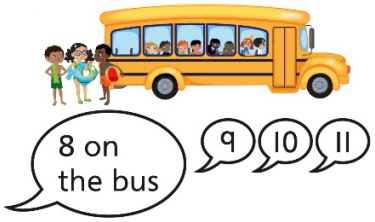
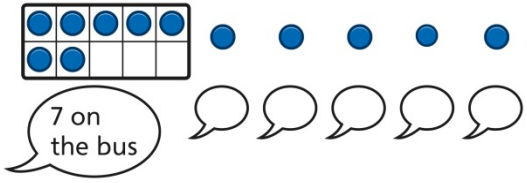
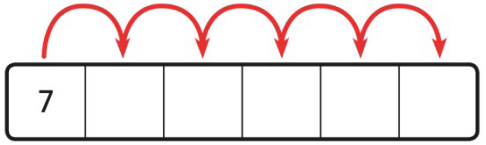
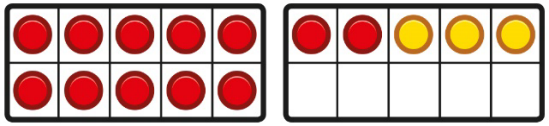
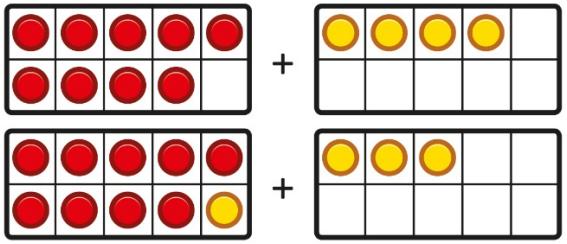
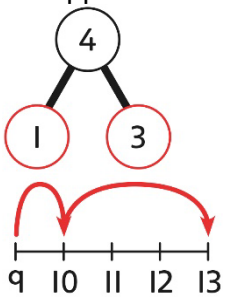
Addition and subtraction: Children first learn to connect addition and subtraction with counting, but they soon develop two very important skills: an understanding of parts and wholes, and an understanding of unitising 10s, to develop efficient and effective calculation strategies based on known number bonds and an increasing awareness of place value. Addition and subtraction are taught in a way that is interlinked to highlight the link between the two operations.
A key idea is that children will select methods and approaches based on their number sense. For example, in Year 1, when faced with 15 − 3 and 15 − 13, they will adapt their ways of approaching the calculation appropriately. The teaching should always emphasise the importance of mathematical thinking to ensure accuracy and flexibility of approach, and the importance of using known number facts to harness their recall of bonds within 20 to support both addition and subtraction methods.
In Year 2, they will start to see calculations presented in a column format, although this is not expected to be formalised until KS2. We show the column method in Year 2 as an option; teachers may not wish to include it until Year 3.

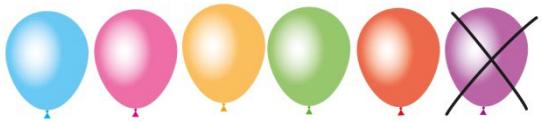
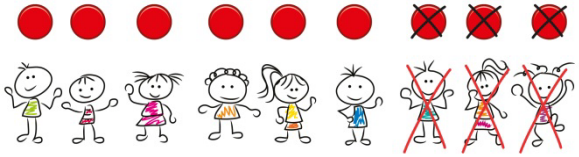
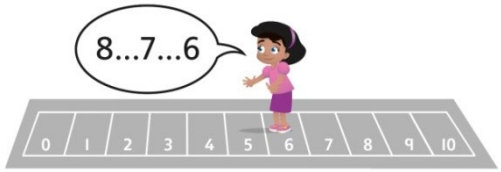
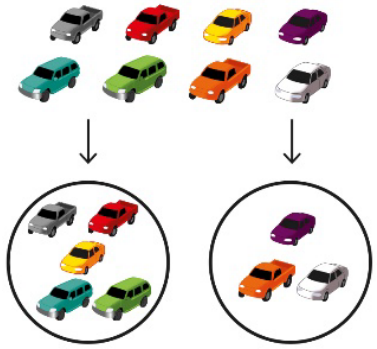
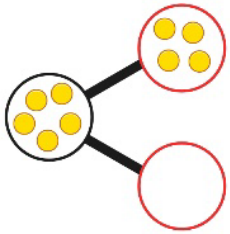
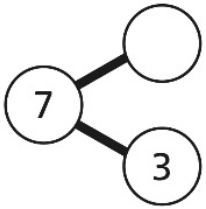
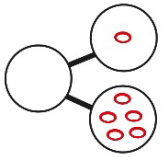
Multiplication and division: Children develop an awareness of equal groups and link this with counting in equal steps, starting with 2s, 5s and 10s. In Year 2, they learn to connect the language of equal groups with the mathematical symbols for multiplication and division.
They learn how multiplication and division can be related to repeated addition and repeated subtraction to find the answer to the calculation.
In this key stage, it is vital that children explore and experience a variety of strong images and manipulative representations of equal groups, including concrete experiences as well as abstract calculations.
Children begin to recall some key multiplication facts, including doubles, and an understanding of the 2, 5 and 10 times-tables and how they are related to counting.

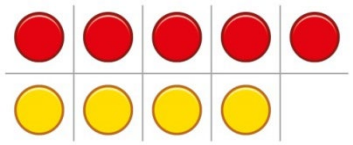
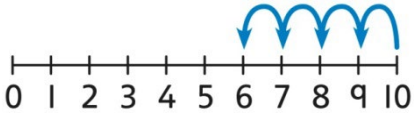
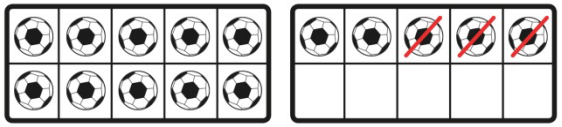
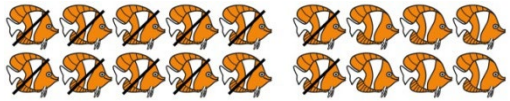
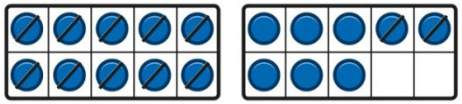
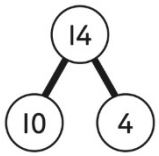
Fractions: In Year 1, children encounter halves and quarters, and link this with their understanding of sharing. They experience key spatial representations of these fractions, and learn to recognise examples and non-examples, based on their awareness of equal parts of a whole.
In Year 2, they develop an awareness of unit fractions and experience non-unit fractions, and they learn to write them and read them in the common format of numerator and denominator.

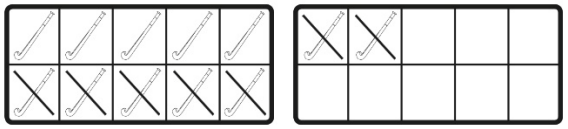
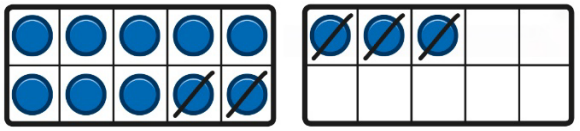
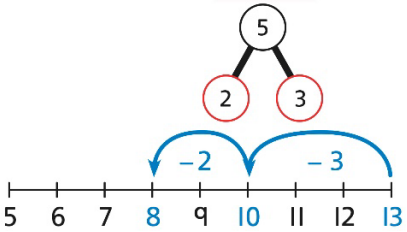
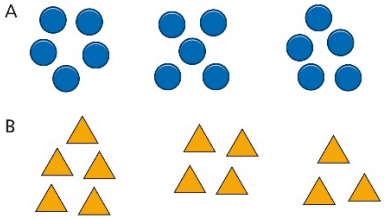
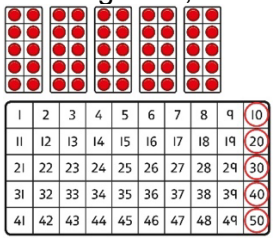
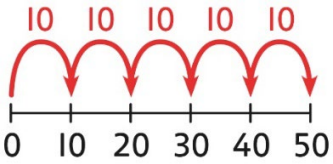
Year 1			
	Concrete	**Pictorial**	**Abstract**
Year 1 Addition	**Counting and adding more** Children add one more person or object to a group to find one more.	**Counting and adding more** Children add one more cube or counter to a group to represent one more.  *One more than 4 is 5.*	**Counting and adding more** Use a number line to understand how to link counting on with finding one more.  *One more than 6 is 7.* *7 is one more than 6.* Learn to link counting on with adding more than one.  *5 + 3 = 8*
	Understanding part-part-whole relationship Sort people and objects into parts and understand the relationship with the whole.  *The parts are 2 and 4. The whole is 6.*	**Understanding part-part-whole relationship** Children draw to represent the parts and understand the relationship with the whole.  *The parts are 1 and 5. The whole is 6.*	**Understanding part-part-whole relationship** Use a part-whole model to represent the numbers.   *6 + 4 = 10*

	Knowing and finding number bonds within 10 Break apart a group and put back together to find and form number bonds.  *3 + 4 = 7*  *6 = 2 + 4*	**Knowing and finding number bonds within 10** Use five and ten frames to represent key number bonds.  *5 = 4 + 1*  *10 = 7 + 3*	**Knowing and finding number bonds within 10** Use a part-whole model alongside other representations to find number bonds. Make sure to include examples where one of the parts is zero.   *4 + 0 = 4* *3 + 1 = 4*
	Understanding teen numbers as a complete 10 and some more Complete a group of 10 objects and count more.  *13 is 10 and 3 more.*	**Understanding teen numbers as a complete 10 and some more** Use a ten frame to support understanding of a complete 10 for teen numbers.  *13 is 10 and 3 more.*	**Understanding teen numbers as a complete 10 and some more**. *1 ten and 3 ones equal 13.* *10 + 3 = 13*

	Adding by counting on Children use knowledge of counting to 20 to find a total by counting on using people or objects. 	**Adding by counting on** Children use counters to support and represent their counting on strategy. 	**Adding by counting on** Children use number lines or number tracks to support their counting on strategy.  7 + 5 = ☐
	Adding the 1s Children use bead strings to recognise how to add the 1s to find the total efficiently.  *2 + 3 = 5* *12 + 3 = 15*	**Adding the 1s** Children represent calculations using ten frames to add a teen and 1s.  *2 + 3 = 5* *12 + 3 = 15*	**Adding the 1s** Children recognise that a teen is made from a 10 and some 1s and use their knowledge of addition within 10 to work efficiently. *3 + 5 = 8* *So, 13 + 5 = 18*
	Bridging the 10 using number bonds Children use a bead string to complete a 10 and understand how this relates to the addition.  *7 add 3 makes 10.* *So, 7 add 5 is 10 and 2 more.*	**Bridging the 10 using number bonds** Children use counters to complete a ten frame and understand how they can add using knowledge of number bonds to 10.  .	**Bridging the 10 using number bonds** Use a part-whole model and a number line to support the calculation.  *9 + 4 = 13*

Year 1 Subtraction	**Counting back and taking away** Children arrange objects and remove to find how many are left.  *1 less than 6 is 5.* *6 subtract 1 is 5.*	**Counting back and taking away** Children draw and cross out or use counters to represent objects from a problem.  9 − ☐ = ☐ There are ☐ children left.	**Counting back and taking away** Children count back to take away and use a number line or number track to support the method.  *9 − 3 = 6*
	Finding a missing part, given a whole and a part Children separate a whole into parts and understand how one part can be found by subtraction.  *8 − 5 = ?*	**Finding a missing part, given a whole and a part** Children represent a whole and a part and understand how to find the missing part by subtraction.  5 − 4 = ☐	**Finding a missing part, given a whole and a part** Children use a part-whole model to support the subtraction to find a missing part.  *7 − 3 = ?* Children develop an understanding of the relationship between addition and subtraction facts in a part-whole model.  ☐ − ☐ = ☐ ☐ − ☐ = ☐ ☐ + ☐ = ☐ ☐ + ☐ = ☐

	Finding the difference Arrange two groups so that the difference between the groups can be worked out.  *8 is 2 more than 6.* *6 is 2 less than 8.* *The difference between 8 and 6 is 2.*	**Finding the difference** Represent objects using sketches or counters to support finding the difference.  *5 − 4 = 1* *The difference between 5 and 4 is 1.*	**Finding the difference** Children understand 'find the difference' as subtraction.  *10 − 4 = 6* *The difference between 10 and 6 is 4.*
	Subtraction within 20 Understand when and how to subtract 1s efficiently. Use a bead string to subtract 1s efficiently.  *5 − 3 = 2* *15 − 3 = 12*	**Subtraction within 20** Understand when and how to subtract 1s efficiently.  *5 − 3 = 2* *15 − 3 = 12*	**Subtraction within 20** Understand how to use knowledge of bonds within 10 to subtract efficiently. *5 − 3 = 2* *15 − 3 = 12*
	Subtracting 10s and 1s For example: 18 − 12 Subtract 12 by first subtracting the 10, then the remaining 2.  *First subtract the 10, then take away 2.*	**Subtracting 10s and 1s** For example: 18 − 12 Use ten frames to represent the efficient method of subtracting 12.  *First subtract the 10, then subtract 2.*	**Subtracting 10s and 1s** Use a part-whole model to support the calculation.  *19 − 14* *19 − 10 = 9* *9 − 4 = 5* *So, 19 − 14 = 5*

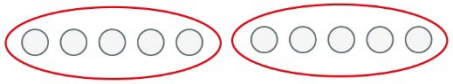
	Subtraction bridging 10 using number bonds For example: 12 − 7 Arrange objects into a 10 and some 1s, then decide on how to split the 7 into parts.  *7 is 2 and 5, so I take away the 2 and then the 5.*	**Subtraction bridging 10 using number bonds** Represent the use of bonds using ten frames.  *For 13 – 5, I take away 3 to make 10, then take away 2 to make 8.*	**Subtraction bridging 10 using number bonds** Use a number line and a part-whole model to support the method. *13 − 5* 
Year 1 Multiplication	**Recognising and making equal groups** Children arrange objects in equal and unequal groups and understand how to recognise whether they are equal. 	**Recognising and making equal groups** Children draw and represent equal and unequal groups. 	**Describe equal groups using words** *Three equal groups of 4.* *Four equal groups of 3.*
	Finding the total of equal groups by counting in 2s, 5s and 10s  There are 5 pens in each pack … 5…10…15…20…25…30…35…40…	**Finding the total of equal groups by counting in 2s, 5s and 10s** 100 squares and ten frames support counting in 2s, 5s and 10s. 	**Finding the total of equal groups by counting in 2s, 5s and 10s** Use a number line to support repeated addition through counting in 2s, 5s and 10s. 

<table>
<tr>
<td rowspan="2">Year 1
Division</td>
<td>Grouping
Learn to make equal groups from a whole and find how many equal groups of a certain size can be made.

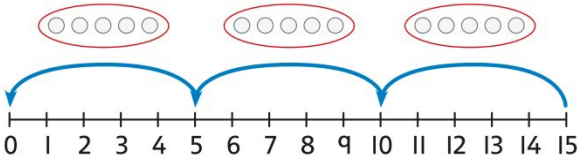
Sort a whole set people and objects into equal groups.

There are 10 children altogether.
There are 2 in each group.
There are 5 groups.</td>
<td>Grouping
Represent a whole and work out how many equal groups.

There are 10 in total.
There are 5 in each group.
There are 2 groups.</td>
<td>Grouping
Children may relate this to counting back in steps of 2, 5 or 10.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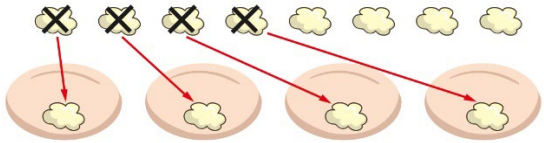
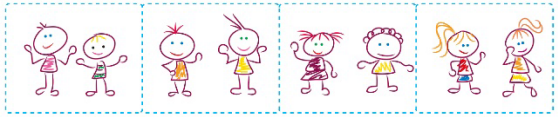
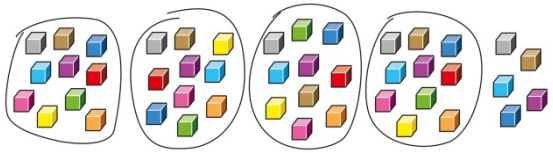
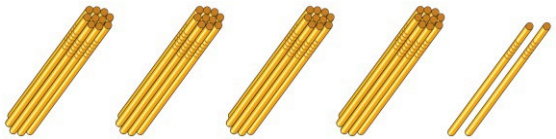
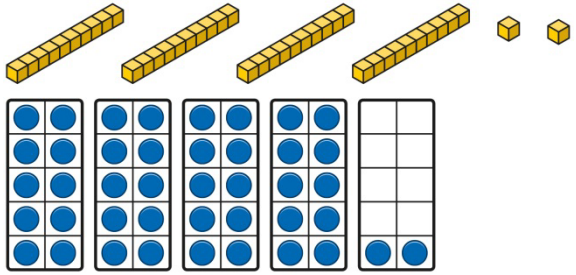
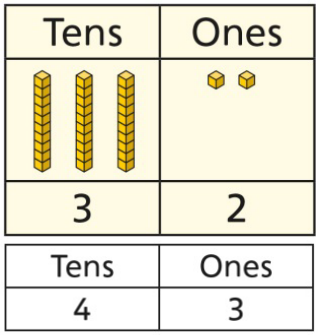
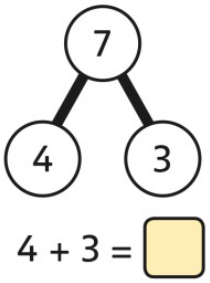
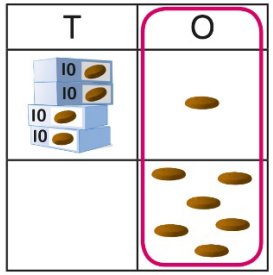
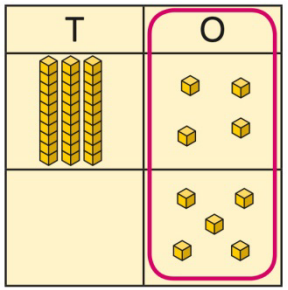
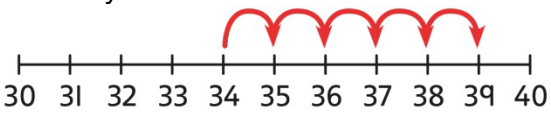
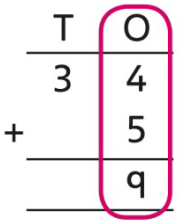
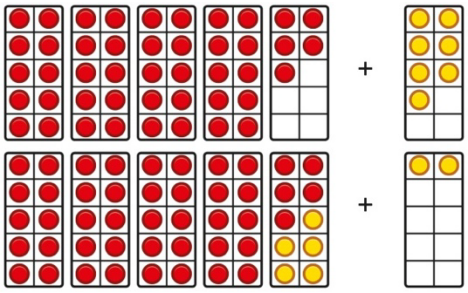
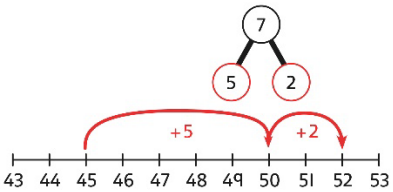
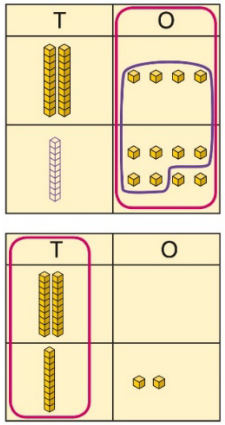
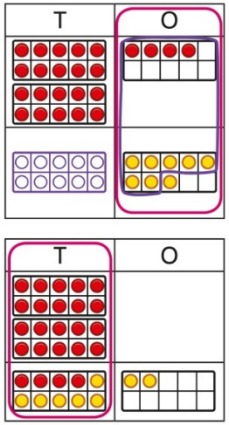
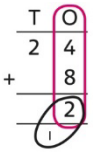
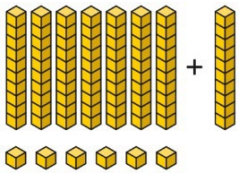
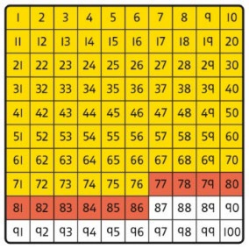
<tr>
<td>Sharing
Share a set of objects into equal parts and work out how many are in each part.

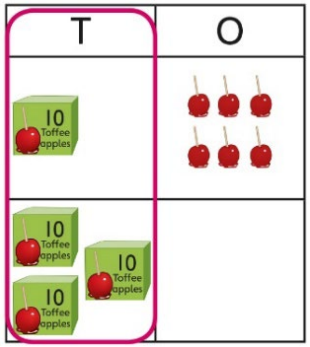
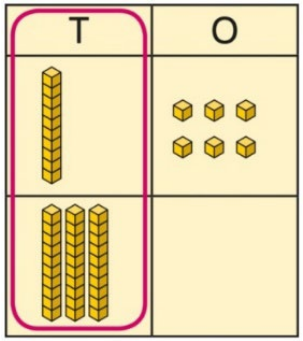
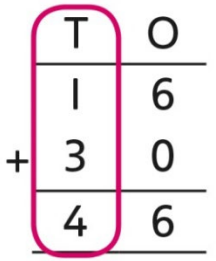
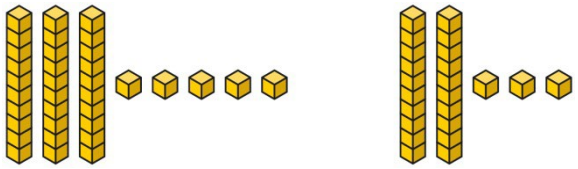
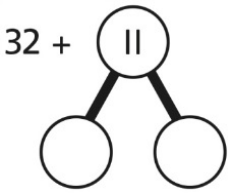
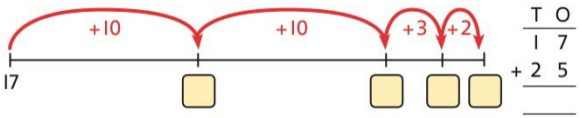
  </td>
<td>Sharing
Sketch or draw to represent sharing into equal parts. This may be related to fractions.

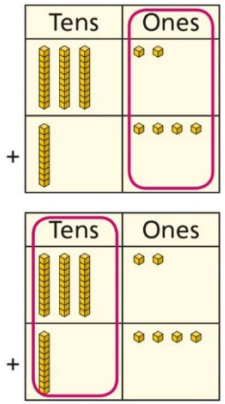
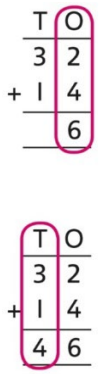
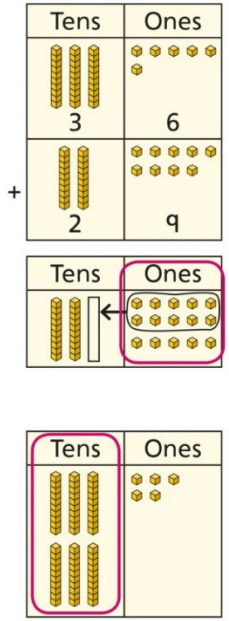
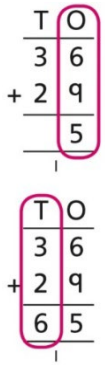
  </td>
<td>Sharing
10 shared into 2 equal groups gives 5 in each group.</td>
</tr>
</table>

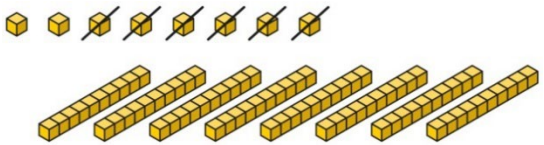
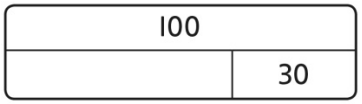
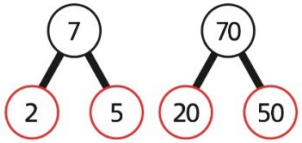
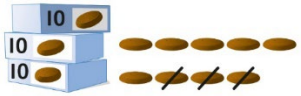
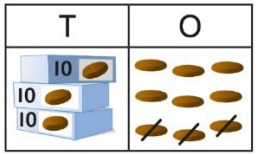
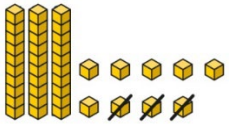
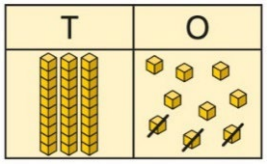
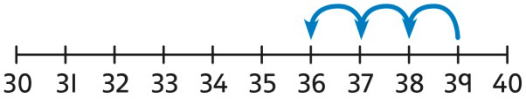
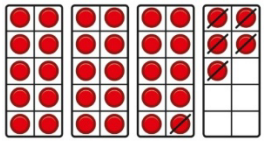
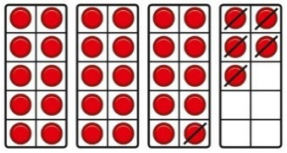
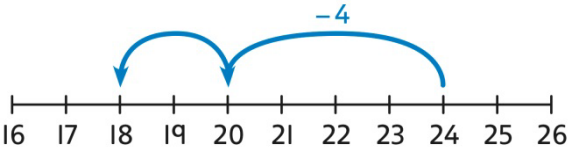
Year 2			
	Concrete	**Pictorial**	**Abstract**
Year 2 Addition			
Understanding 10s and 1s	Group objects into 10s and 1s.  Bundle straws to understand unitising of 10s. 	Understand 10s and 1s equipment, and link with visual representations on ten frames. 	Represent numbers on a place value grid, using equipment or numerals. 
Adding 10s	Use known bonds and unitising to add 10s.  *I know that 4 + 3 = 7.* *So, I know that 4 tens add 3 tens is 7 tens.*	Use known bonds and unitising to add 10s.  *I know that 4 + 3 = 7.* *So, I know that 4 tens add 3 tens is 7 tens.*	Use known bonds and unitising to add 10s.  *4 + 3 = 7* *4 tens + 3 tens = 7 tens* *40 + 30 = 70*

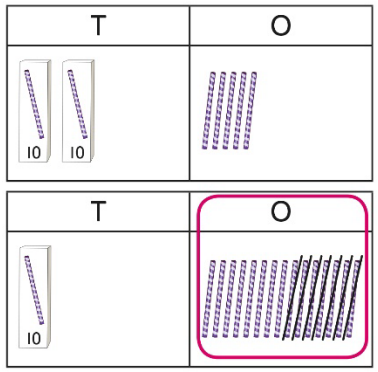
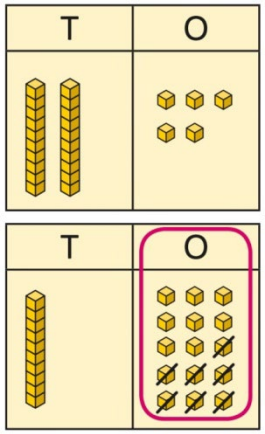
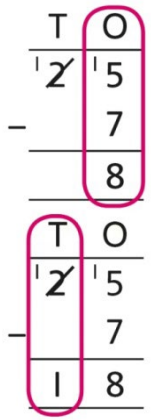
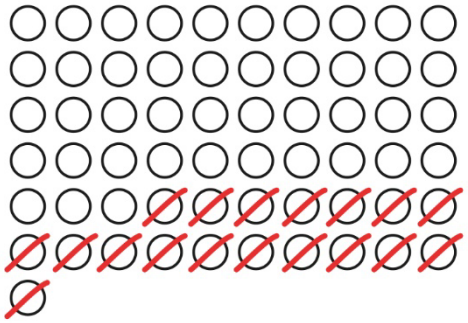
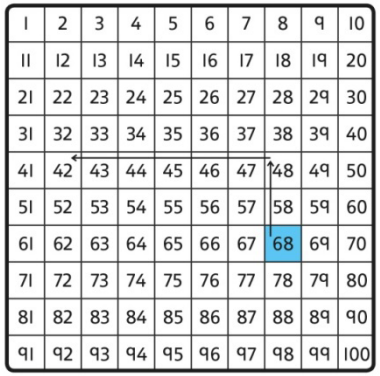
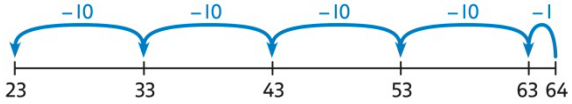
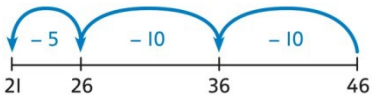
Adding a 1-digit number to a 2-digit number not bridging a 10	Add the 1s to find the total. Use known bonds within 10.  *41 is 4 tens and 1 one.* *41 add 6 ones is 4 tens and 7 ones.* This can also be done in a place value grid.  	Add the 1s.  *34 is 3 tens and 4 ones.* *4 ones and 5 ones are 9 ones.* *The total is 3 tens and 9 ones.*  	Add the 1s. Understand the link between counting on and using known number facts. Children should be encouraged to use known number bonds to improve efficiency and accuracy.  This can be represented horizontally or vertically. *34 + 5 = 39* *or* 
Adding a 1-digit number to a 2-digit number bridging 10	Complete a 10 using number bonds.  *There are 4 tens and 5 ones.* *I need to add 7. I will use 5 to complete a 10, then add 2 more.*	Complete a 10 using number bonds.  	Complete a 10 using number bonds.  *7 = 5 + 2* *45 + 5 + 2 = 52*

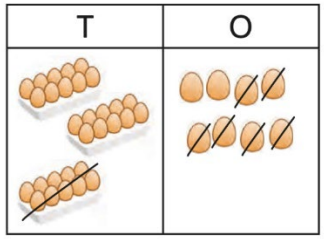
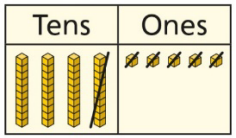
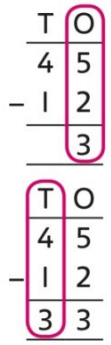
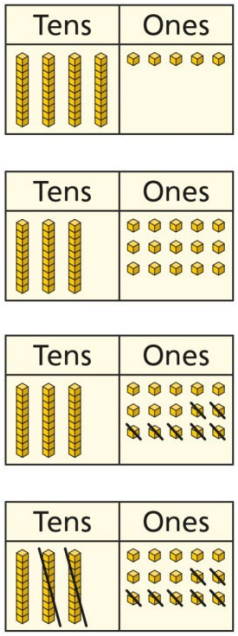
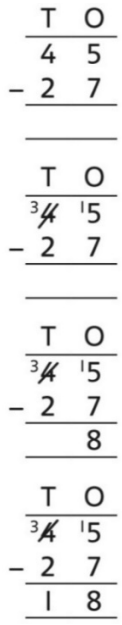
Adding a 1-digit number to a 2-digit number using exchange	Exchange 10 ones for 1 ten.  	Exchange 10 ones for 1 ten.  	Exchange 10 ones for 1 ten.  
Adding a multiple of 10 to a 2-digit number	Add the 10s and then recombine.  *27 is 2 tens and 7 ones.* *50 is 5 tens.* *There are 7 tens in total and 7 ones.* *So, 27 + 50 is 7 tens and 7 ones.*	Add the 10s and then recombine.  *66 is 6 tens and 6 ones.* *66 + 10 = 76* A 100 square can support this understanding. 	Add the 10s and then recombine. *37 + 20 = ?* *30 + 20 = 50* *50 + 7 = 57* *37 + 20 = 57*

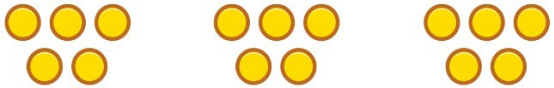
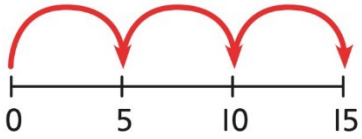
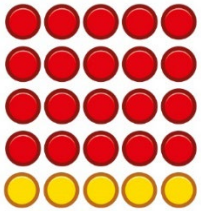
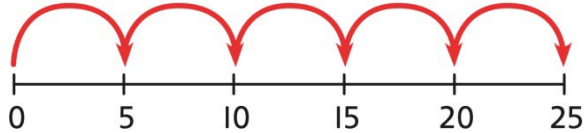
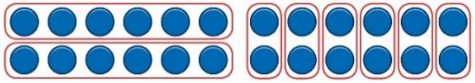
Adding a multiple of 10 to a 2-digit number using columns	Add the 10s using a place value grid to support.  *16 is 1 ten and 6 ones.* *30 is 3 tens.* *There are 4 tens and 6 ones in total.*	Add the 10s using a place value grid to support.  *16 is 1 ten and 6 ones.* *30 is 3 tens.* *There are 4 tens and 6 ones in total.*	Add the 10s represented vertically. Children must understand how the method relates to unitising of 10s and place value.  *1 + 3 = 4* *1 ten + 3 tens = 4 tens* *16 + 30 = 46*
Adding two 2-digit numbers	Add the 10s and 1s separately.  *5 + 3 = 8* *There are 8 ones in total.* *3 + 2 = 5* *There are 5 tens in total.* *35 + 23 = 58*	Add the 10s and 1s separately. Use a part-whole model to support.  *11 = 10 + 1* *32 + 10 = 42* *42 + 1 = 43* *32 + 11 = 43*	Add the 10s and the 1s separately, bridging 10s where required. A number line can support the calculations.  *17 + 25*

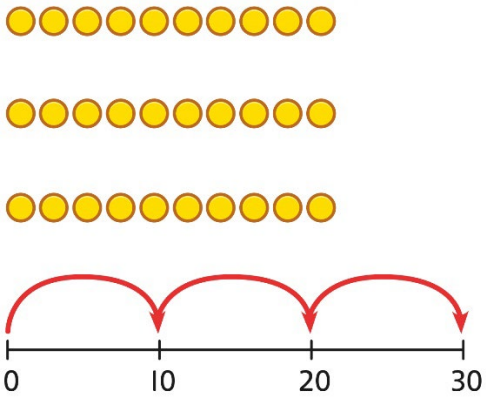
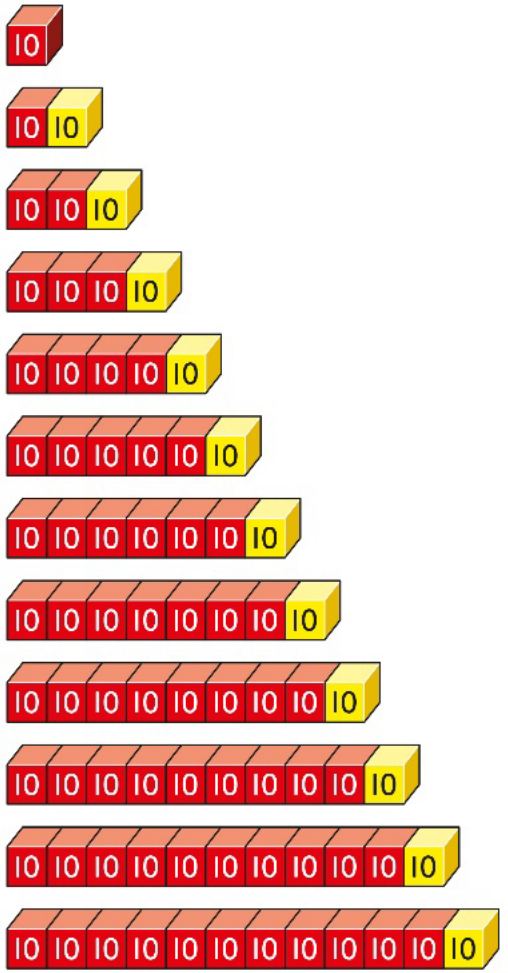
Adding two 2-digit numbers using a place value grid	Add the 1s. Then add the 10s. 		Add the 1s. Then add the 10s. 
Adding two 2-digit numbers with exchange	Add the 1s. Exchange 10 ones for a ten. Then add the 10s. 		Add the 1s. Exchange 10 ones for a ten. Then add the 10s. 

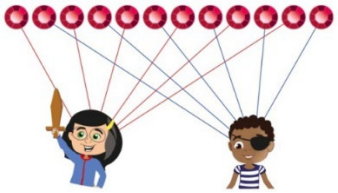
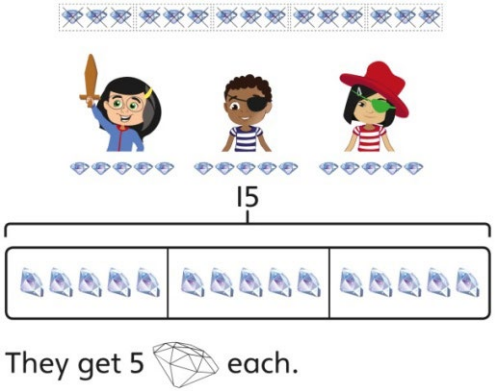
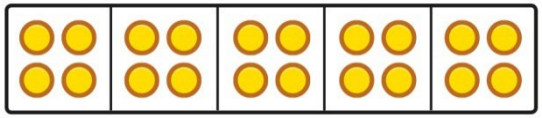
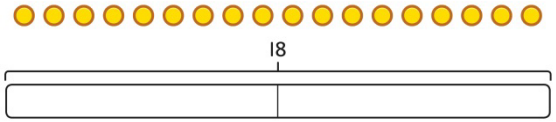
Year 2 Subtraction			
Subtracting multiples of 10	Use known number bonds and unitising to subtract multiples of 10.  *8 subtract 6 is 2.* *So, 8 tens subtract 6 tens is 2 tens.*	Use known number bonds and unitising to subtract multiples of 10.  *10 − 3 = 7* *So, 10 tens subtract 3 tens is 7 tens.*	Use known number bonds and unitising to subtract multiples of 10.  *7 tens subtract 5 tens is 2 tens.* *70 − 50 = 20*
Subtracting a single-digit number	Subtract the 1s. This may be done in or out of a place value grid.  	Subtract the 1s. This may be done in or out of a place value grid.  	Subtract the 1s. Understand the link between counting back and subtracting the 1s using known bonds.  T O 3 9 − 3 3 6 *9 − 3 = 6* *39 − 3 = 36*
Subtracting a single-digit number bridging 10	Bridge 10 by using known bonds.  *35 − 6* *I took away 5 counters, then 1 more.*	Bridge 10 by using known bonds.  *35 − 6* *First, I will subtract 5, then 1.*	Bridge 10 by using known bonds.  *24 − 6 = ?* *24 − 4 − 2 = ?*

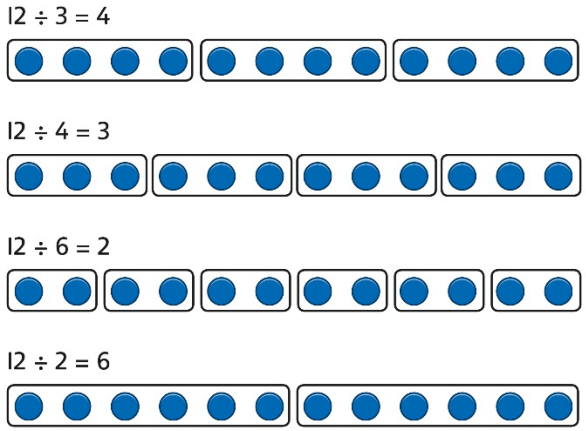
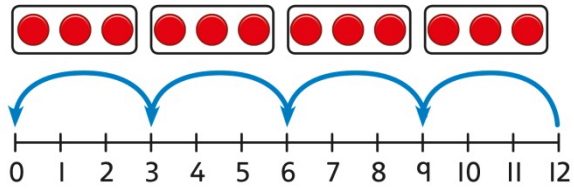
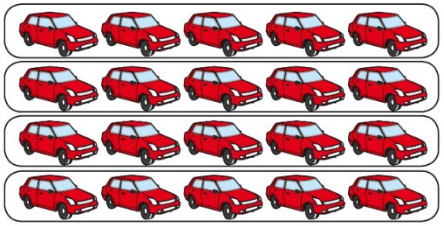
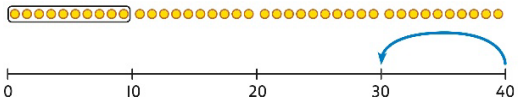
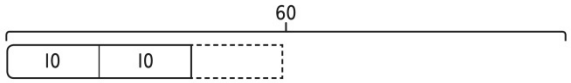
Subtracting a single-digit number using exchange	Exchange 1 ten for 10 ones. This may be done in or out of a place value grid. 	Exchange 1 ten for 10 ones. 	Exchange 1 ten for 10 ones.  *25 − 7 = 18*
Subtracting a 2-digit number	Subtract by taking away.  *61 − 18* *I took away 1 ten and 8 ones.*	Subtract the 10s and the 1s. This can be represented on a 100 square. 	Subtract the 10s and the 1s. This can be represented on a number line.  *64 − 41 = ?* *64 − 1 = 63* *63 − 40 = 23* *64 − 41 = 23*  *46 − 20 = 26* *26 − 5 = 21* *46 − 25 = 21*

Subtracting a 2-digit number using place value and columns	Subtract the 1s. Then subtract the 10s. This may be done in or out of a place value grid.  *38 − 16 = 22*	Subtract the 1s. Then subtract the 10s.  	Using column subtraction, subtract the 1s. Then subtract the 10s. 
Subtracting a 2-digit number with exchange		Exchange 1 ten for 10 ones. Then subtract the 1s. Then subtract the 10s.  	Using column subtraction, exchange 1 ten for 10 ones. Then subtract the 1s. Then subtract the 10s. 

Year 2 Multiplication			
Equal groups and repeated addition	Recognise equal groups and write as repeated addition and as multiplication.  *3 groups of 5 chairs* *15 chairs altogether*	Recognise equal groups using standard objects such as counters and write as repeated addition and multiplication.  *3 groups of 5* *15 in total*	Use a number line and write as repeated addition and as multiplication.  *5 + 5 + 5 = 15* *3 × 5 = 15*
Using arrays to represent multiplication and support understanding	Understand the relationship between arrays, multiplication and repeated addition.  *4 groups of 5*	Understand the relationship between arrays, multiplication and repeated addition.  *4 groups of 5 … 5 groups of 5*	Understand the relationship between arrays, multiplication and repeated addition.  *5 × 5 = 25*
Understanding commutativity	Use arrays to visualise commutativity.  *I can see 6 groups of 3.* *I can see 3 groups of 6.*	Form arrays using counters to visualise commutativity. Rotate the array to show that orientation does not change the multiplication.  *This is 2 groups of 6 and also 6 groups of 2.*	Use arrays to visualise commutativity.  *4 + 4 + 4 + 4 + 4 = 20* *5 + 5 + 5 + 5 = 20* *4 × 5 = 20 and 5 × 4 = 20*

Learning ×2, ×5 and ×10 table facts	Develop an understanding of how to unitise groups of 2, 5 and 10 and learn corresponding times-table facts.  *3 groups of 10 … 10, 20, 30* *3 × 10 = 30*	Understand how to relate counting in unitised groups and repeated addition with knowing key times-table facts.  *10 + 10 + 10 = 30* *3 × 10 = 30*	Understand how the times-tables increase and contain patterns.  *5 × 10 = 50* *6 × 10 = 60*

Year 2 Division			
Sharing equally	Start with a whole and share into equal parts, one at a time.  *12 shared equally between 2.* *They get 6 each.* Start to understand how this also relates to grouping. To share equally between 3 people, take a group of 3 and give 1 to each person. Keep going until all the objects have been shared  *15 shared equally between 3.* *They get 5 each.*	Represent the objects shared into equal parts using a bar model.  *20 shared into 5 equal parts.* *There are 4 in each part.*	Use a bar model to support understanding of the division.  *18 ÷ 2 = 9*

Grouping equally	Understand how to make equal groups from a whole.  *8 divided into 4 equal groups.* *There are 2 in each group.*	Understand the relationship between grouping and the division statements. 	Understand how to relate division by grouping to repeated subtraction.  There are 4 groups now. *12 divided into groups of 3.* *12 ÷ 3 = 4* *There are 4 groups.*
Using known times-tables to solve divisions	Understand the relationship between multiplication facts and division.  *4 groups of 5 cars is 20 cars in total.* *20 divided by 4 is 5.*	Link equal grouping with repeated subtraction and known times-table facts to support division.  *40 divided by 4 is 10.* Use a bar model to support understanding of the link between times-table knowledge and division. 	Relate times-table knowledge directly to division. 1 × 10 = 10 2 × 10 = 20 **3 × 10 = 30** 4 × 10 = 40 5 × 10 = 50 6 × 10 = 60 7 × 10 = 70 8 × 10 = 80 I used the 10 times-table to help me. 3 × 10 = 30. *I know that 3 groups of 10 makes 30, so I know that 30 divided by 10 is 3.* *3 × 10 = 30 so 30 ÷ 10 = 3*

Hillocks Primary Academy

Power Maths calculation policy: LKS2

The following pages show the *Power Maths* progression in calculation (addition, subtraction, multiplication and division) and how this works in line with the National Curriculum. The consistent use of the CPA (concrete, pictorial, abstract) approach across *Power Maths* helps children develop mastery across all the operations in an efficient and reliable way. This policy shows how these methods develop children's confidence in their understanding of both written and mental methods.

KEY STAGE 2

In Years 3 and 4, children develop the basis of written methods by building their skills alongside a deep understanding of place value. They should use known addition/subtraction and multiplication/division facts to calculate efficiently and accurately, rather than relying on counting. Children use place value equipment to support their understanding, but not as a substitute for thinking.

Key language: partition, place value, tens, hundreds, thousands, column method, whole, part, equal groups, sharing, grouping, bar model

Addition and subtraction: In Year 3 especially, the column methods are built up gradually. Children will develop their understanding of how each stage of the calculation, including any exchanges, relates to place value. The example calculations chosen to introduce the stages of each method may often be more suited to a mental method. However, the examples and the progression of the steps have been chosen to help children develop their fluency in the process, alongside a deep understanding of the concepts and the numbers involved, so that they can apply these skills accurately and efficiently to later calculations. The class should be encouraged to compare mental and written methods for specific calculations, and children should be encouraged at every stage to make choices about which methods to apply.

In Year 4, the steps are shown without such fine detail, although children should continue to build their understanding with a secure basis in place value. In subtraction, children will need to develop their understanding of exchange as they may need to exchange across one or two columns.

By the end of Year 4, children should have developed fluency in column methods alongside a deep understanding, which will allow them to progress confidently in upper Key Stage 2.

Multiplication and division: Children build a solid grounding in times-tables, understanding the multiplication and division facts in tandem. As such, they should be as confident knowing that 35 divided by 7 is 5 as knowing that 5 times 7 is 35. Children develop key skills to support multiplication methods: unitising, commutativity, and how to use partitioning effectively.

Unitising allows children to use known facts to multiply and divide multiples of 10 and 100 efficiently. Commutativity gives children flexibility in applying known facts to calculations and problem solving. An understanding of partitioning allows children to extend their skills to multiplying and dividing 2- and 3-digit numbers by a single digit.

Children develop column methods to support multiplications in these cases.

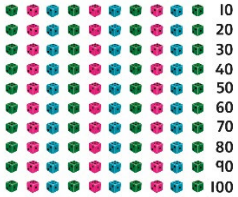
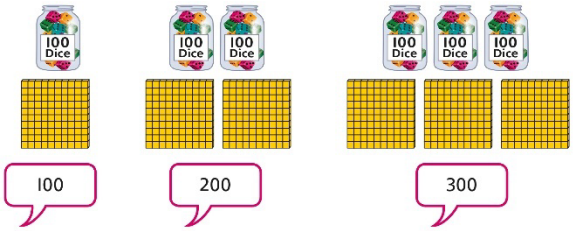
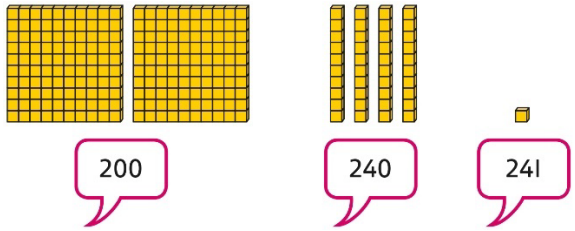
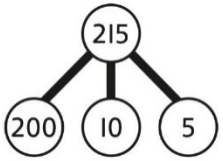
For successful division, children will need to make choices about how to partition. For example, to divide 423 by 3, it is effective to partition 423 into 300, 120 and 3, as these can be divided by 3 using known facts.

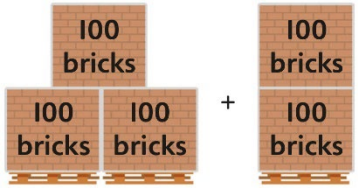
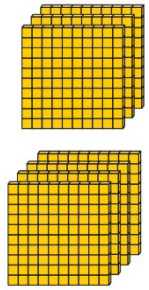
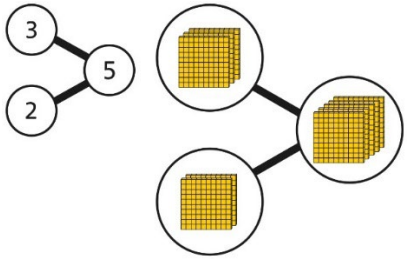
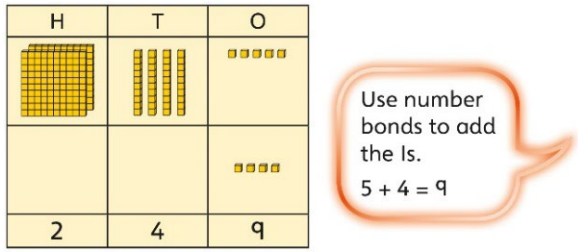
Children will also need to understand the concept of remainder, in terms of a given calculation and in terms of the context of the problem.

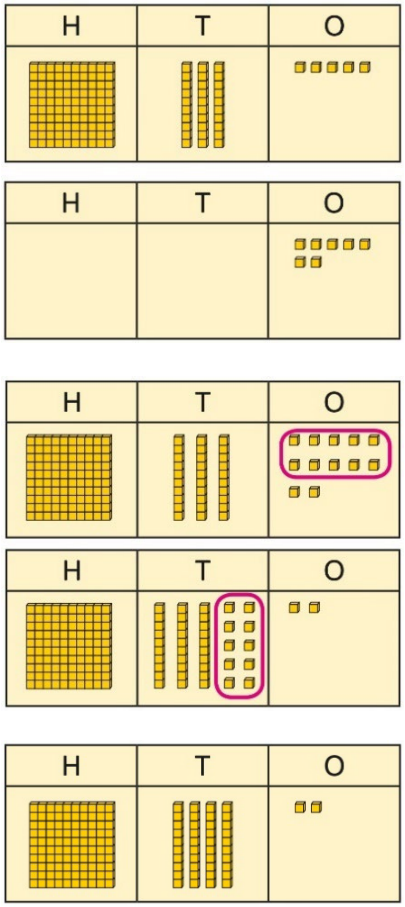
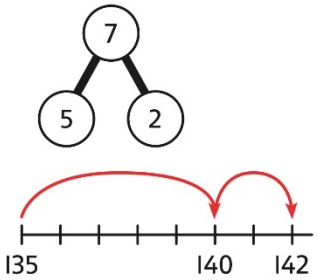
Fractions: Children develop the key concept of equivalent fractions, and link this with multiplying and dividing the numerators and denominators, as well as exploring the visual concept through fractions of shapes. Children learn how to find a fraction of an amount, and develop this with the aid of a bar model and other representations alongside.

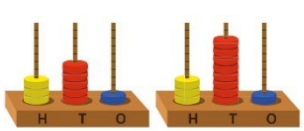
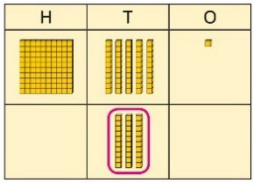
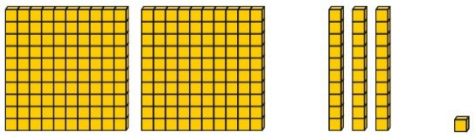
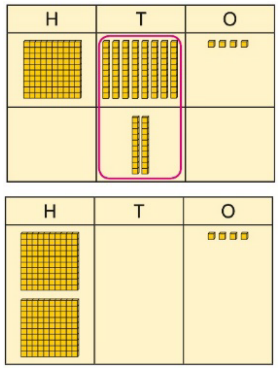
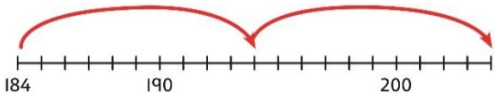
in Year 3, children develop an understanding of how to add and subtract fractions with the same denominator and find complements to the whole. This is developed alongside an understanding of fractions as numbers, including fractions greater than 1. In Year 4, children begin to work with fractions greater than 1.

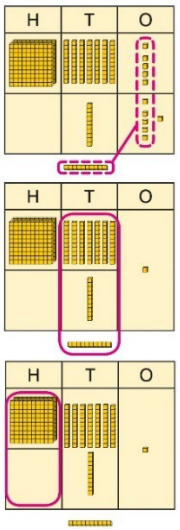
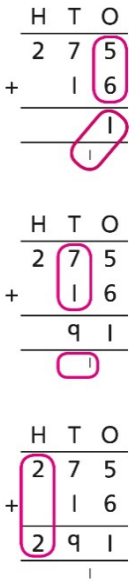
Decimals are introduced, as tenths in Year 3 and then as hundredths in Year 4. Children develop an understanding of decimals in terms of the relationship with fractions, with dividing by 10 and 100, and also with place value.

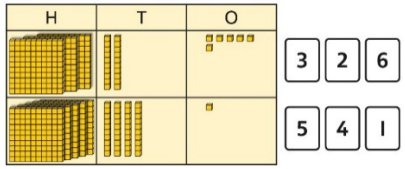
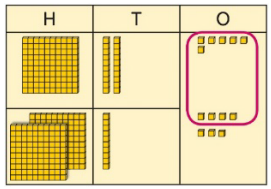
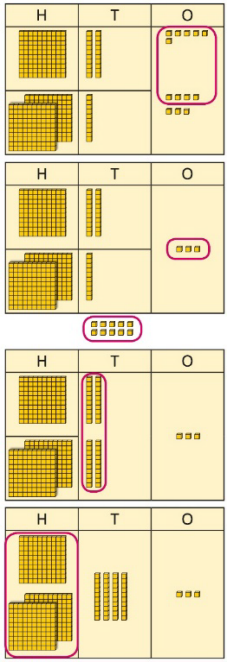
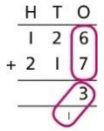
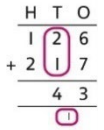
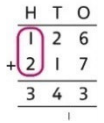
Year 3			
	Concrete	**Pictorial**	**Abstract**
Year 3 Addition			
Understanding 100s	Understand the cardinality of 100, and the link with 10 tens. Use cubes to place into groups of 10 tens. 	Unitise 100 and count in steps of 100. 	Represent steps of 100 on a number line and a number track and count up to 1,000 and back to 0. 
Understanding place value to 1,000	Unitise 100s, 10s and 1s to build 3-digit numbers. 	Use equipment to represent numbers to 1,000.  Use a place value grid to support the structure of numbers to 1,000. Place value counters are used alongside other equipment. Children should understand how each counter represents a different unitised amount.	Represent the parts of numbers to 1,000 using a part-whole model.  *215 = 200 + 10 + 5* Recognise numbers to 1,000 represented on a number line, including those between intervals.

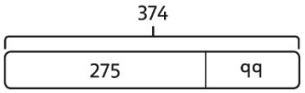
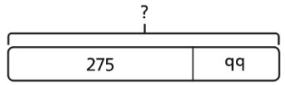
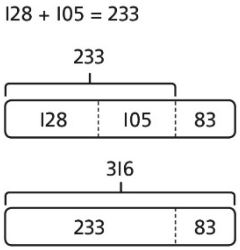
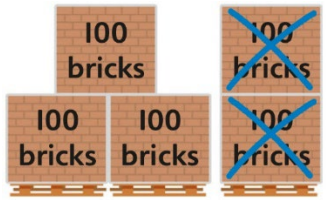
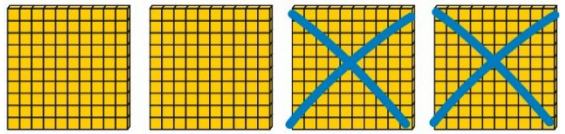
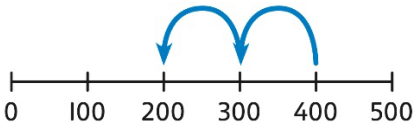
Adding 100s	Use known facts and unitising to add multiples of 100.  *3 + 2 = 5* *3 hundreds + 2 hundreds = 5 hundreds* *300 + 200 = 500*	Use known facts and unitising to add multiples of 100.  *3 + 4 = 7* *3 hundreds + 4 hundreds = 7 hundreds* *300 + 400 = 700*	Use known facts and unitising to add multiples of 100. Represent the addition on a number line. Use a part-whole model to support unitising.  *3 + 2 = 5* *300 + 200 = 500*
3-digit number + 1s, no exchange or bridging	Use number bonds to add the 1s.  *214 + 4 = ?* *Now there are 4 + 4 ones in total.* *4 + 4 = 8* *214 + 4 = 218*	Use number bonds to add the 1s.  *245 + 4* *5 + 4 = 9* *245 + 4 = 249*	Understand the link with counting on. *245 + 4*  Use number bonds to add the 1s and understand that this is more efficient and less prone to error. *245 + 4 = ?* *I will add the 1s.* *5 + 4 = 9* *So, 245 + 4 = 249*

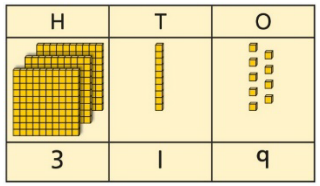
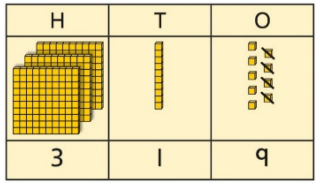
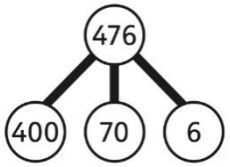
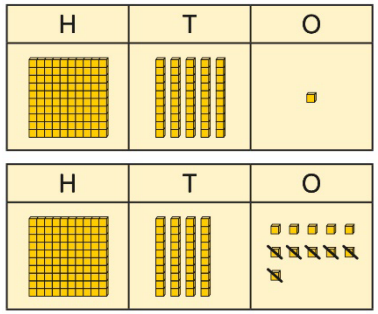
3-digit number + 1s with exchange	Understand that when the 1s sum to 10 or more, this requires an exchange of 10 ones for 1 ten. Children should explore this using unitised objects or physical apparatus.	Exchange 10 ones for 1 ten where needed. Use a place value grid to support the understanding.  *135 + 7 = 142*	Understand how to bridge by partitioning to the 1s to make the next 10.  *135 + 7 = ?* *135 + 5 + 2 = 142* Ensure that children understand how to add 1s bridging a 100. *198 + 5 = ?* *198 + 2 + 3 = 203*

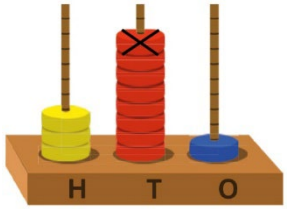
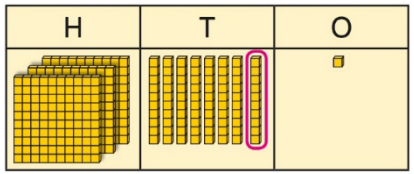
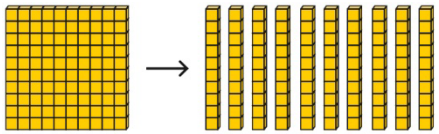
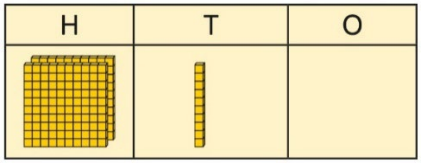
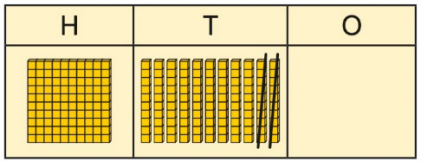
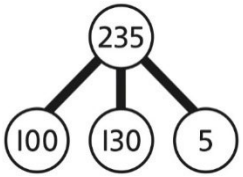
3-digit number + 10s, no exchange	Calculate mentally by forming the number bond for the 10s.  *234 + 50* *There are 3 tens and 5 tens altogether.* *3 + 5 = 8* *In total there are 8 tens.* *234 + 50 = 284*	Calculate mentally by forming the number bond for the 10s. *351 + 30 = ?*   *5 tens + 3 tens = 8 tens* *351 + 30 = 381*	Calculate mentally by forming the number bond for the 10s. *753 + 40* *I know that 5 + 4 = 9* *So, 50 + 40 = 90* *753 + 40 = 793*
3-digit number + 10s, with exchange	Understand the exchange of 10 tens for 1 hundred. 	Add by exchanging 10 tens for 1 hundred. *184 + 20 = ?*  *184 + 20 = 204*	Understand how the addition relates to counting on in 10s across 100.  *184 + 20 = ?* *I can count in 10s … 194 … 204* *184 + 20 = 204* Use number bonds within 20 to support efficient mental calculations. *385 + 50* *There are 8 tens and 5 tens.* *That is 13 tens.* *385 + 50 = 300 + 130 + 5* *385 + 50 = 435*

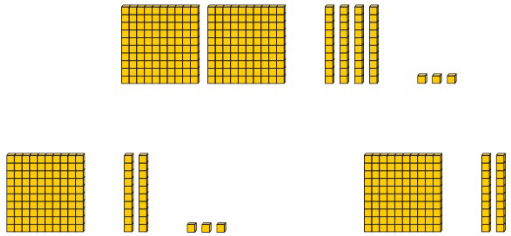
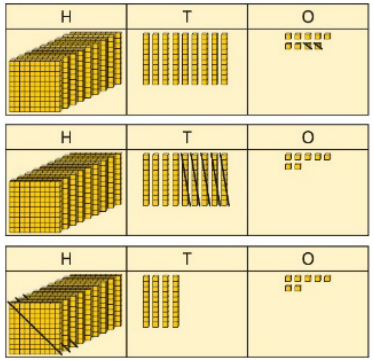
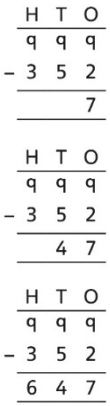
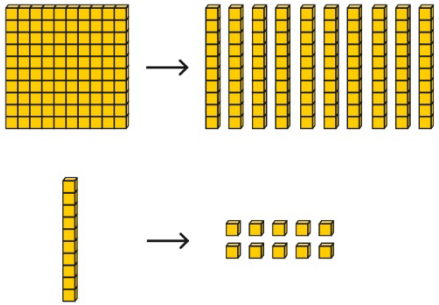
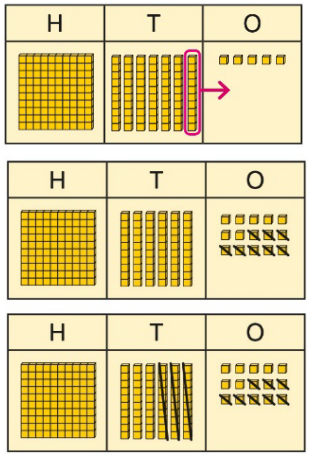
3-digit number + 2-digit number	Use place value equipment to make and combine groups to model addition. 	Use a place value grid to organise thinking and adding of 1s, then 10s.	Use the vertical column method to represent the addition. Children must understand how this relates to place value at each stage of the calculation.
3-digit number + 2-digit number, exchange required	Use place value equipment to model addition and understand where exchange is required. *Use place value counters to represent 154 + 72.* *Use this to decide if any exchange is required.* *There are 5 tens and 7 tens. That is 12 tens so I will exchange.*	Represent the required exchange on a place value grid using equipment. *275 + 16 = ?*  *275 + 16 = 291* Note: In this example, a mental method may be more efficient. The numbers for the example calculation have been chosen to allow children to visualise the concept and see how the method relates to place value. Children should be encouraged at every stage to select methods that are accurate and efficient.	Use a column method with exchange. Children must understand how the method relates to place value at each stage of the calculation.  *275 + 16 = 291*

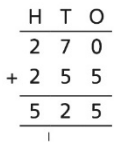
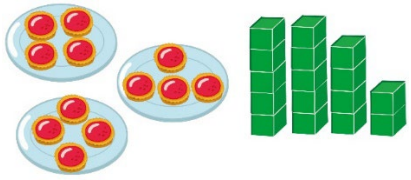
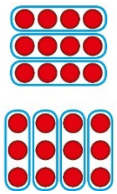
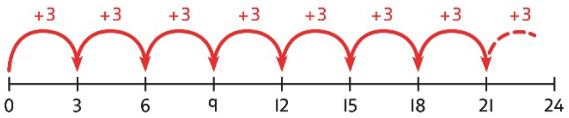
3-digit number + 3-digit number, no exchange	Use place value equipment to make a representation of a calculation. This may or may not be structured in a place value grid. *326 + 541 is represented as:* 	Represent the place value grid with equipment to model the stages of column addition.	Use a column method to solve efficiently, using known bonds. Children must understand how this relates to place value at every stage of the calculation.
3-digit number + 3-digit number, exchange required	Use place value equipment to enact the exchange required.  *There are 13 ones.* *I will exchange 10 ones for 1 ten.*	Model the stages of column addition using place value equipment on a place value grid. 	Use column addition, ensuring understanding of place value at every stage of the calculation.    *126 + 217 = 343* Note: Children should also study examples where exchange is required in more than one column, for example *185 + 318 = ?*

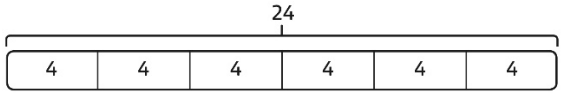
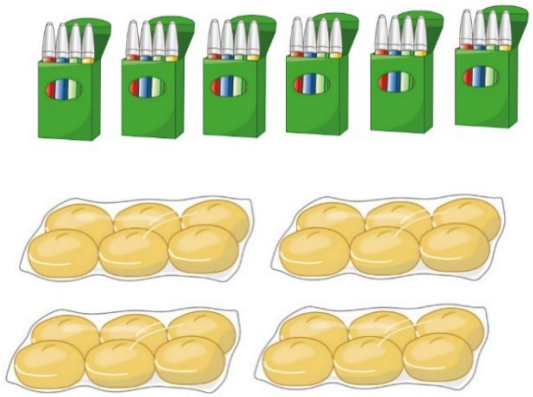
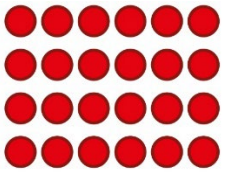
Representing addition problems, and selecting appropriate methods	Encourage children to use their own drawings and choices of place value equipment to represent problems with one or more steps. These representations will help them to select appropriate methods.	Children understand and create bar models to represent addition problems. *275 + 99 = ?*  *275 + 99 = 374*	Use representations to support choices of appropriate methods.  *I will add 100, then subtract 1 to find the solution.* *128 + 105 + 83 = ?* *I need to add three numbers.* 
Year 3 Subtraction			
Subtracting 100s	Use known facts and unitising to subtract multiples of 100.  *5 − 2 = 3* *500 − 200 = 300*	Use known facts and unitising to subtract multiples of 100.  *4 − 2 = 2* *400 − 200 = 200*	Understand the link with counting back in 100s.  *400 − 200 = 200* Use known facts and unitising as efficient and accurate methods. *I know that 7 − 4 = 3. Therefore, I know that 700 − 400 = 300.*

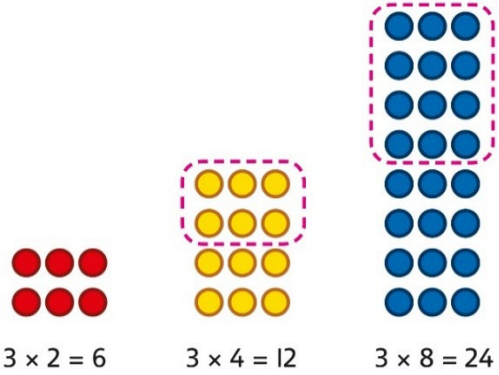
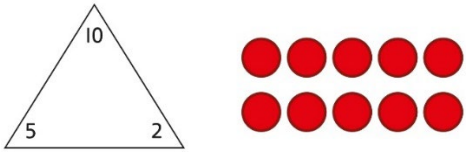
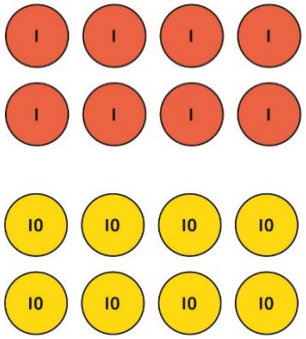
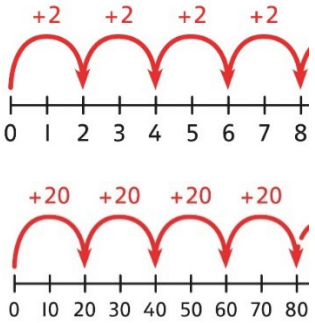
3-digit number − 1s, no exchange	Use number bonds to subtract the 1s.  *214 − 3 = ?*  *4 − 3 = 1* *214 − 3 = 211*	Use number bonds to subtract the 1s.  *319 − 4 = ?*  *9 − 4 = 5* *319 − 4 = 315*	Understand the link with counting back using a number line. Use known number bonds to calculate mentally. *476 − 4 = ?*  *6 − 4 = 2* *476 − 4 = 472*
3-digit number − 1s, exchange or bridging required	Understand why an exchange is necessary by exploring why 1 ten must be exchanged. Use place value equipment.	Represent the required exchange on a place value grid. *151 − 6 = ?* 	Calculate mentally by using known bonds. *151 − 6 = ?* *151 − 1 − 5 = 145*

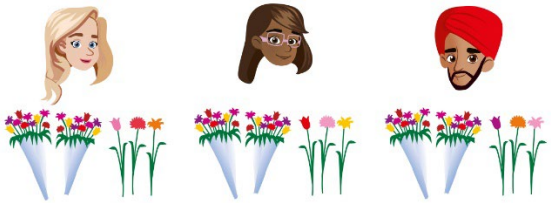
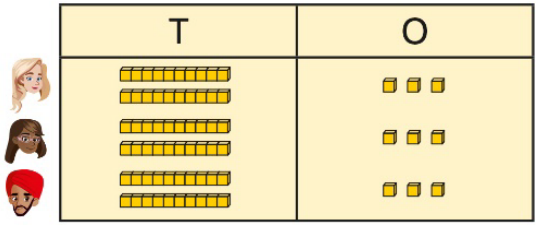
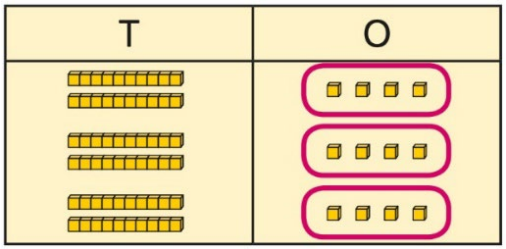
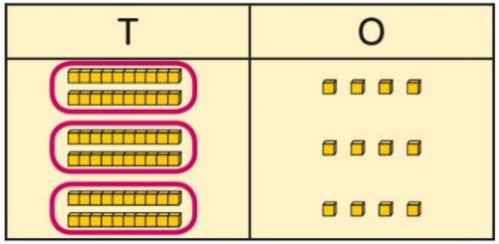
3-digit number − 10s, no exchange	Subtract the 10s using known bonds.  *381 − 10 = ?* *8 tens with 1 removed is 7 tens.* *381 − 10 = 371*	Subtract the 10s using known bonds.  *8 tens − 1 ten = 7 tens* *381 − 10 = 371*	Use known bonds to subtract the 10s mentally. *372 − 50 = ?* *70 − 50 = 20* *So, 372 − 50 = 322*
3-digit number − 10s, exchange or bridging required	Use equipment to understand the exchange of 1 hundred for 10 tens. 	Represent the exchange on a place value grid using equipment. *210 − 20 = ?*  *I need to exchange 1 hundred for 10 tens, to help subtract 2 tens.*  *210 − 20 = 190*	Understand the link with counting back on a number line. Use flexible partitioning to support the calculation. *235 − 60 = ?*  *235 = 100 + 130 + 5* *235 − 60 = 100 + 70 + 5* *= 175*

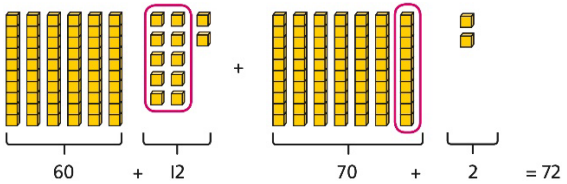
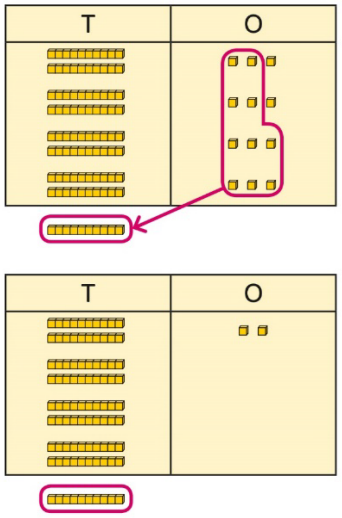
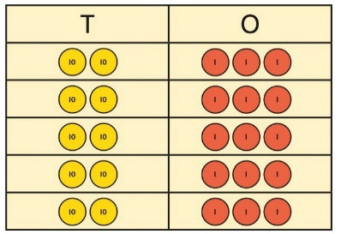
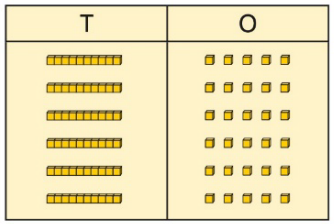
3-digit number − up to 3-digit number	Use place value equipment to explore the effect of splitting a whole into two parts, and understand the link with taking away. 	Represent the calculation on a place value grid. 	Use column subtraction to calculate accurately and efficiently. 
3-digit number − up to 3-digit number, exchange required	Use equipment to enact the exchange of 1 hundred for 10 tens, and 1 ten for 10 ones. 	*Model the required exchange on a place value grid.* *175 − 38 = ?* *I need to subtract 8 ones, so I will exchange a ten for 10 ones.* 	Use column subtraction to work accurately and efficiently.  175 − 38 = 137 If the subtraction is a 3-digit number subtract a 2-digit number, children should understand how the recording relates to the place value, and so how to line up the digits correctly. Children should also understand how to exchange in calculations where there is a zero in the 10s column. 

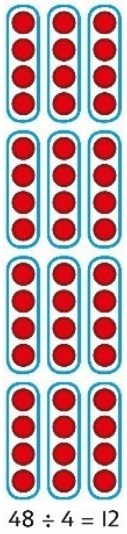
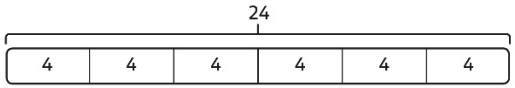
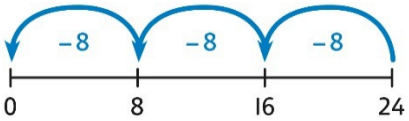
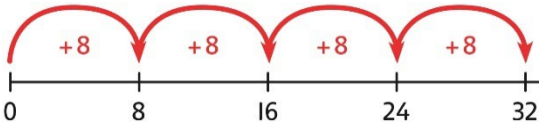
Representing subtraction problems		Use bar models to represent subtractions. 'Find the difference' is represented as two bars for comparison.  Bar models can also be used to show that a part must be taken away from the whole.	Children use alternative representations to check calculations and choose efficient methods. Children use inverse operations to check additions and subtractions. The part-whole model supports understanding. *I have completed this subtraction.* *525 − 270 = 255* *I will check using addition.*  
Year 3 Multiplication			
Understanding equal grouping and repeated addition	Children continue to build understanding of equal groups and the relationship with repeated addition. They recognise both examples and non-examples using objects. 	Children recognise that arrays demonstrate commutativity.  *This is 3 groups of 4.* *This is 4 groups of 3.*	Children understand the link between repeated addition and multiplication.  *8 groups of 3 is 24.* *3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 24* *8 × 3 = 24*

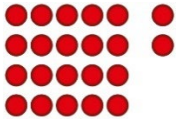
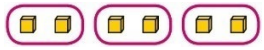
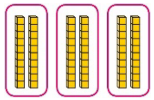
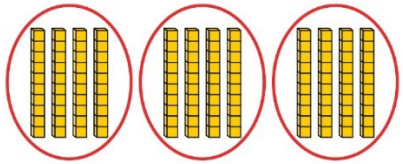
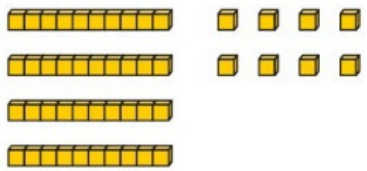
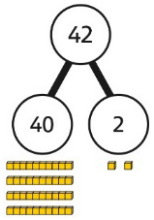
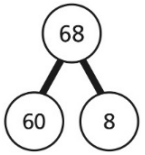
	Children recognise that arrays can be used to model commutative multiplications.  *I can see 3 groups of 8.* *I can see 8 groups of 3.*		A bar model may represent multiplications as equal groups.  *6 × 4 = 24*
Using commutativity to support understanding of the times-tables	Understand how to use times-tables facts flexibly.  *There are 6 groups of 4 pens.* *There are 4 groups of 6 bread rolls.* *I can use 6 × 4 = 24 to work out both totals.*	Understand how times-table facts relate to commutativity.  *6 × 4 = 24* *4 × 6 = 24*	Understand how times-table facts relate to commutativity. *I need to work out 4 groups of 7.* *I know that 7 × 4 = 28* *so, I know that* *4 groups of 7 = 28* *and* *7 groups of 4 = 28.*

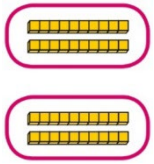
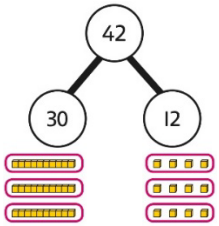
Understanding and using ×3, ×2, ×4 and ×8 tables.	Children learn the times-tables as 'groups of', but apply their knowledge of commutativity.  *I can use the ×3 table to work out how many keys.* *I can also use the ×3 table to work out how many batteries.*	Children understand how the ×2, ×4 and ×8 tables are related through repeated doubling.  3 × 2 = 6 3 × 4 = 12 3 × 8 = 24	Children understand the relationship between related multiplication and division facts in known times-tables.  *2 × 5 = 10* *5 × 2 = 10* *10 ÷ 5 = 2* *10 ÷ 2 = 5*
Using known facts to multiply 10s, for example 3 × 40	Explore the relationship between known times-tables and multiples of 10 using place value equipment. *Make 4 groups of 3 ones.*  *Make 4 groups of 3 tens.*  *What is the same?* *What is different?*	Understand how unitising 10s supports multiplying by multiples of 10.  *4 groups of 2 ones is 8 ones.* *4 groups of 2 tens is 8 tens.* *4 × 2 = 8* *4 × 20 = 80*	Understand how to use known times-tables to multiply multiples of 10.  *4 × 2 = 8* *4 × 20 = 80*

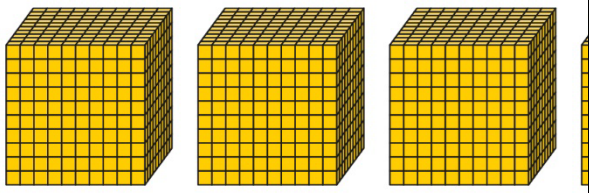
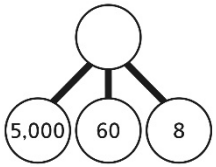
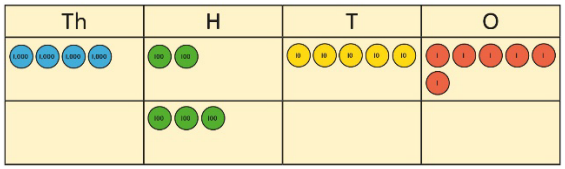
Multiplying a 2-digit number by a 1-digit number	Understand how to link partitioning a 2-digit number with multiplying. *Each person has 23 flowers.* *Each person has 2 tens and 3 ones.*  *There are 3 groups of 2 tens.* *There are 3 groups of 3 ones.* Use place value equipment to model the multiplication context.  *There are 3 groups of 3 ones.* *There are 3 groups of 2 tens.*	Use place value to support how partitioning is linked with multiplying by a 2-digit number. *3 × 24 = ?*  *3 × 4 = 12*  *3 × 20 = 60* *60 + 12 = 72* *3 × 24 = 72*	Use addition to complete multiplications of 2-digit numbers by a 1-digit number. *4 × 13 = ?* *4 × 3 = 12* *4 × 10 = 40* *12 + 40 = 52* *4 × 13 = 52*

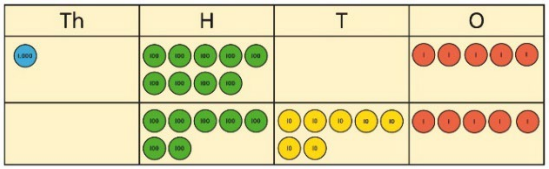
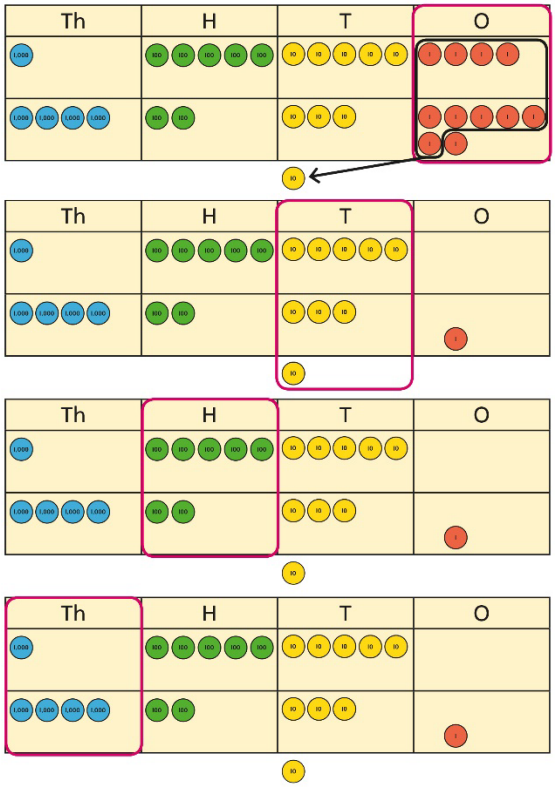
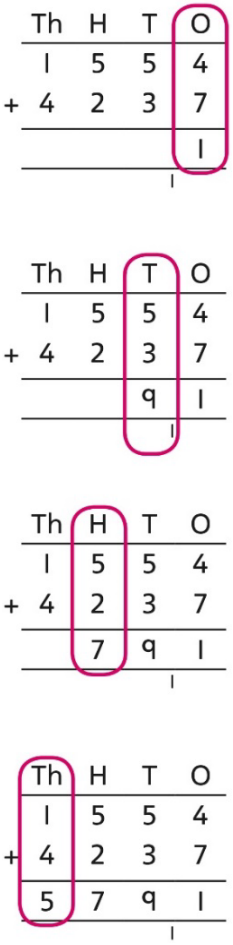
Multiplying a 2-digit number by a 1-digit number, expanded column method	Use place value equipment to model how 10 ones are exchanged for a 10 in some multiplications. *3 × 24 = ?* *3 × 20 = 60* *3 × 4 = 12*  *3 × 24 = 60 + 12* *3 × 24 = 70 + 2* *3 × 24 = 72*	Understand that multiplications may require an exchange of 1s for 10s, and also 10s for 100s. *4 × 23 = ?*  *4 × 23 = 92*  *5 × 23 = ?* *5 × 3 = 15* *5 × 20 = 100* *5 × 23 = 115*	Children may write calculations in expanded column form, but must understand the link with place value and exchange. Children are encouraged to write the expanded parts of the calculation separately.  T O 1 5 × 6 + 6 × 5 6 × 10 *5 × 28 = ?* T O 2 8 × 5 4 0 5 × 8 1 0 0 5 × 20 1 4 0

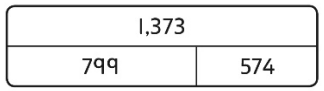
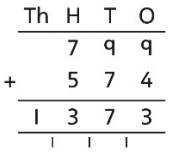
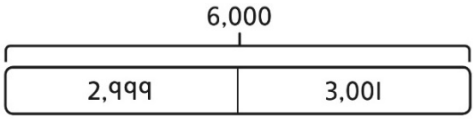
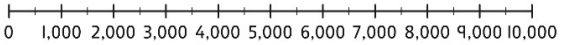
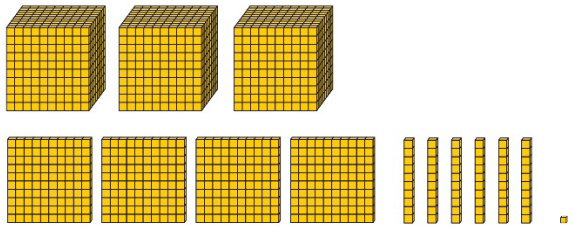
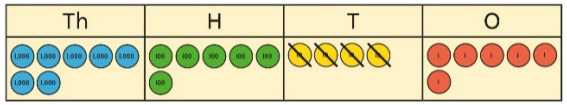
Year 3 Division			
Using times-tables knowledge to divide	Use knowledge of known times-tables to calculate divisions.  *24 divided into groups of 8.* *There are 3 groups of 8.*	Use knowledge of known times-tables to calculate divisions.  48 ÷ 4 = 12 *48 divided into groups of 4.* *There are 12 groups.* *4 × 12 = 48* *48 ÷ 4 = 12*	Use knowledge of known times-tables to calculate divisions. *I need to work out 30 shared between 5.* *I know that 6 × 5 = 30* *so I know that 30 ÷ 5 = 6.* A bar model may represent the relationship between sharing and grouping.  *24 ÷ 4 = 6* *24 ÷ 6 = 4* Children understand how division is related to both repeated subtraction and repeated addition.  *24 ÷ 8 = 3*  *32 ÷ 8 = 4*

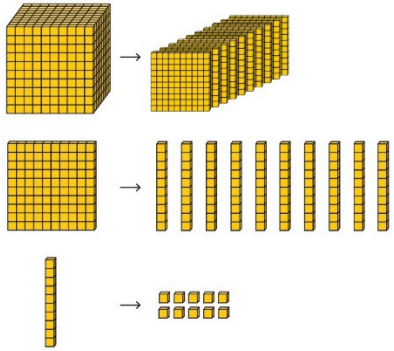
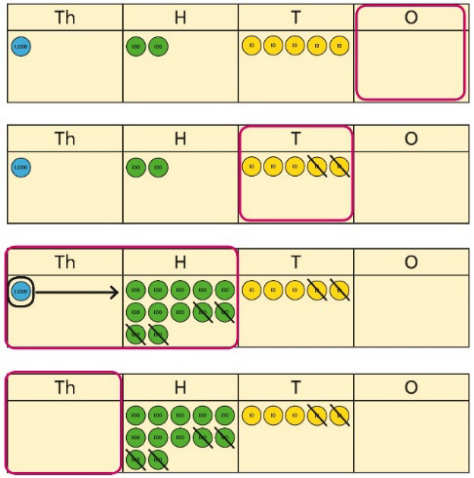
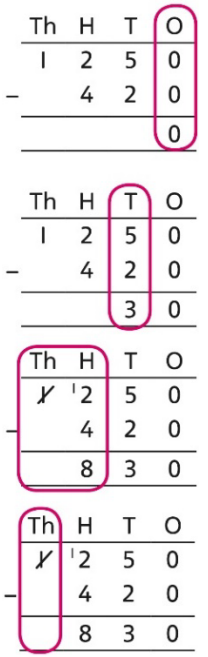
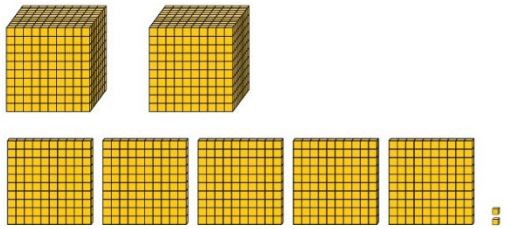
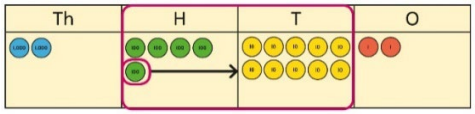
Understanding remainders	Use equipment to understand that a remainder occurs when a set of objects cannot be divided equally any further.  *There are 13 sticks in total.* *There are 3 groups of 4, with 1 remainder.*	Use images to explain remainders.  *22 ÷ 5 = 4 remainder 2*	Understand that the remainder is what cannot be shared equally from a set. *22 ÷ 5 = ?* *3 × 5 = 15* *4 × 5 = 20* *5 × 5 = 25 … this is larger than 22* *So, 22 ÷ 5 = 4 remainder 2*
Using known facts to divide multiples of 10	Use place value equipment to understand how to divide by unitising. *Make 6 ones divided by 3.*  *Now make 6 tens divided by 3.*  *What is the same? What is different?*	Divide multiples of 10 by unitising.  *12 tens shared into 3 equal groups.* *4 tens in each group.*	Divide multiples of 10 by a single digit using known times-tables. *180 ÷ 3 = ?* *180 is 18 tens.* *18 divided by 3 is 6.* *18 tens divided by 3 is 6 tens.* *18 ÷ 3 = 6* *180 ÷ 3 = 60*
2-digit number divided by 1-digit number, no remainders	Children explore dividing 2-digit numbers by using place value equipment.  *48 ÷ 2 = ?*	Children explore which partitions support particular divisions. 	Children partition a number into 10s and 1s to divide where appropriate.  *60 ÷ 2 = 30* *8 ÷ 2 = 4* *30 + 4 = 34* *68 ÷ 2 = 34*

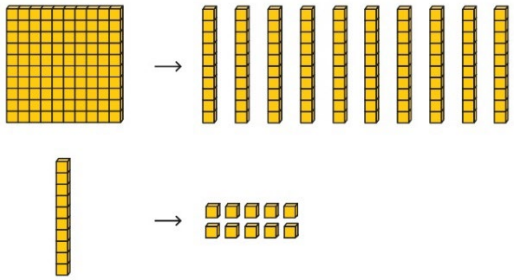
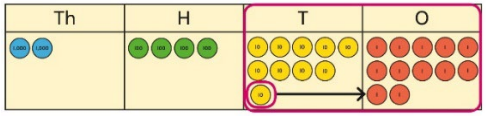
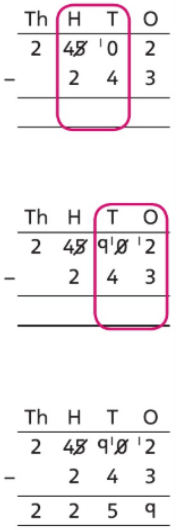
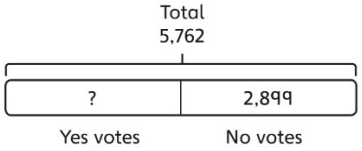
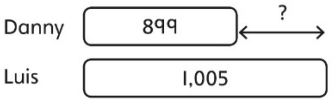
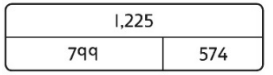
	First divide the 10s.  *Then divide the 1s.* 	*I need to partition 42 differently to divide by 3.*  *42 = 30 + 12* *42 ÷ 3 = 14*	Children partition flexibly to divide where appropriate. *42 ÷ 3 = ?* *42 = 40 + 2* *I need to partition 42 differently to divide by 3.* *42 = 30 + 12* *30 ÷ 3 = 10* *12 ÷ 3 = 4* *10 + 4 = 14* *42 ÷ 3 = 14*
2-digit number divided by 1-digit number, with remainders	Use place value equipment to understand the concept of remainder. *Make 29 from place value equipment. Share it into 2 equal groups*.  *There are two groups of 14 and 1 remainder.*	Use place value equipment to understand the concept of remainder in division. *29 ÷ 2 = ?*  *29 ÷ 2 = 14 remainder 1*	Partition to divide, understanding the remainder in context. *67 children try to make 5 equal lines.* *67 = 50 + 17* *50 ÷ 5 = 10* *17 ÷ 5 = 3 remainder 2* *67 ÷ 5 = 13 remainder 2* *There are 13 children in each line and 2 children left out.*

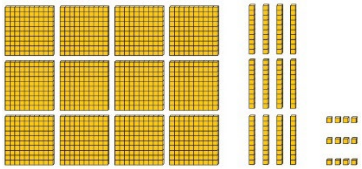
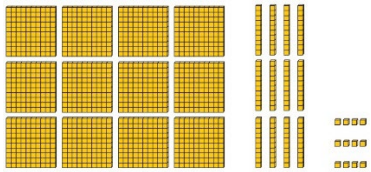
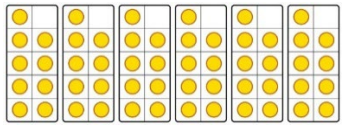
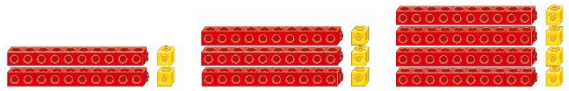
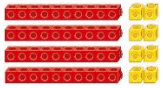
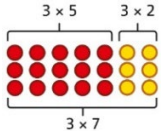
Year 4			
	Concrete	**Pictorial**	**Abstract**
Year 4 Addition			
Understanding numbers to 10,000	Use place value equipment to understand the place value of 4-digit numbers.  *4 thousands equal 4,000.* *1 thousand is 10 hundreds.*	Represent numbers using place value counters once children understand the relationship between 1,000s and 100s.  *2,000 + 500 + 40 + 2 = 2,542*	Understand partitioning of 4-digit numbers, including numbers with digits of 0.  *5,000 + 60 + 8 = 5,068* Understand and read 4-digit numbers on a number line. 
Choosing mental methods where appropriate	Use unitising and known facts to support mental calculations. *Make 1,405 from place value equipment.* *Add 2,000.* *Now add the 1,000s.* *1 thousand + 2 thousands = 3 thousands* *1,405 + 2,000 = 3,405*	Use unitising and known facts to support mental calculations.  *I can add the 100s mentally.* *200 + 300 = 500* *So, 4,256 + 300 = 4,556*	Use unitising and known facts to support mental calculations. *4,256 + 300 = ?* *2 + 3 = 5* *200 + 300 = 500* *4,256 + 300 = 4,556*

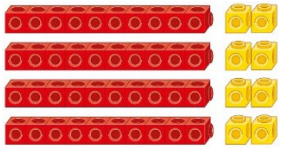
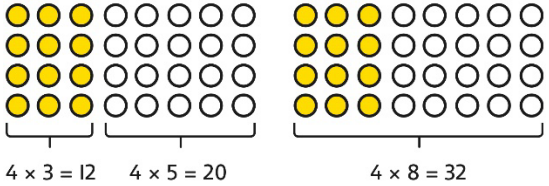
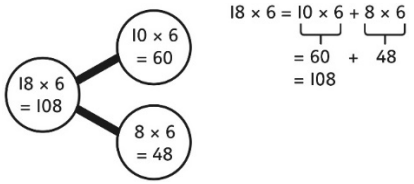
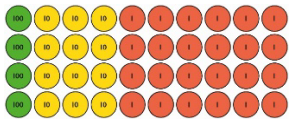
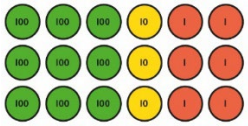
Column addition with exchange	Use place value equipment on a place value grid to organise thinking. Ensure that children understand how the columns relate to place value and what to do if the numbers are not all 4-digit numbers. *Use equipment.to show 1,905 + 775.*  *Why have only three columns been used for the second row? Why is the Thousands box empty?* *Which columns will total 10 or more?*	Use place value equipment to model required exchanges.  Include examples that exchange in more than one column.	Use a column method to add, including exchanges.  Include examples that exchange in more than one column.

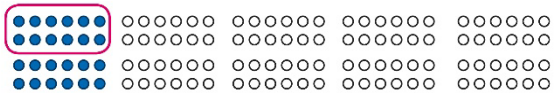
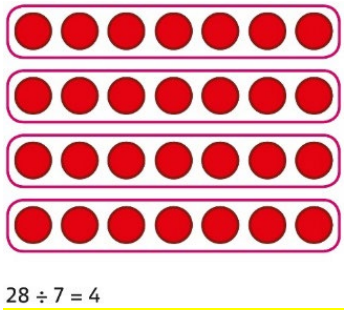
Representing additions and checking strategies		Bar models may be used to represent additions in problem contexts, and to justify mental methods where appropriate.   *I chose to work out 574 + 800, then subtract 1.*  *This is equivalent to 3,000 + 3,000.*	Use rounding and estimating on a number line to check the reasonableness of an addition.  *912 + 6,149 = ?* *I used rounding to work out that the answer should be approximately 1,000 + 6,000 = 7,000.*
Year 4 Subtraction			
Choosing mental methods where appropriate	Use place value equipment to justify mental methods.  *What number will be left if we take away 300?*	Use place value grids to support mental methods where appropriate.  *7,646 − 40 = 7,606*	Use knowledge of place value and unitising to subtract mentally where appropriate. *3,501 − 2,000* *3 thousands − 2 thousands = 1 thousand* *3,501 − 2,000 = 1,501*

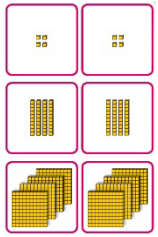
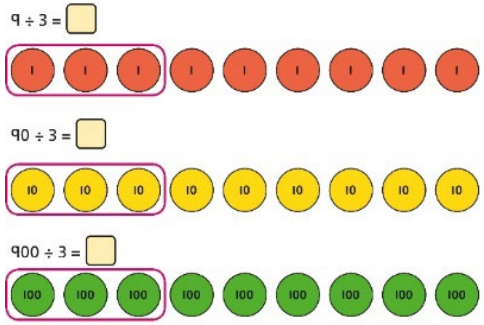
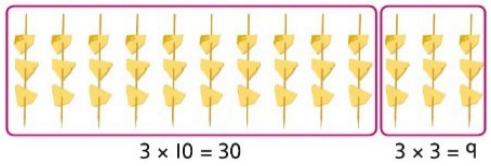
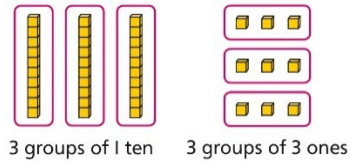
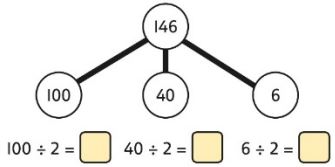
Column subtraction with exchange	Understand why exchange of a 1,000 for 100s, a 100 for 10s, or a 10 for 1s may be necessary. 	Represent place value equipment on a place value grid to subtract, including exchanges where needed. 	Use column subtraction, with understanding of the place value of any exchange required. 
Column subtraction with exchange across more than one column	Understand why two exchanges may be necessary. *2,502 − 243 = ?* 	Make exchanges across more than one column where there is a zero as a place holder. *2,502 − 243 = ?* 	Make exchanges across more than one column where there is a zero as a place holder. *2,502 − 243 = ?*

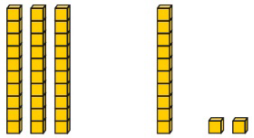
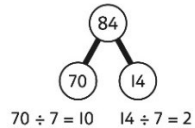
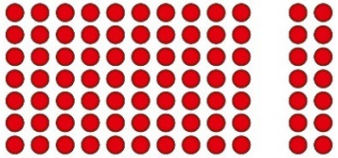
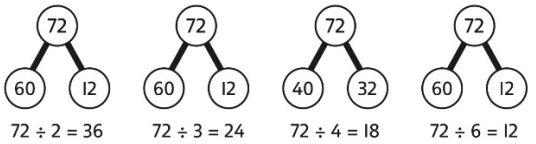
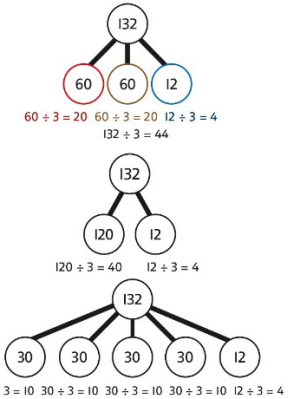
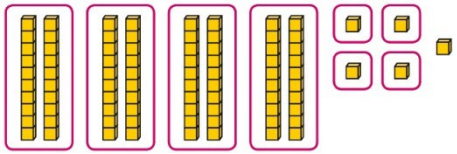
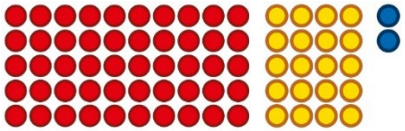
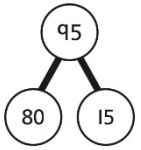
	I need to exchange a 10 for some 1s, but there are not any 10s here. 		
Representing subtractions and checking strategies		Use bar models to represent subtractions where a part needs to be calculated.  *I can work out the total number of Yes votes using 5,762 − 2,899.* Bar models can also represent 'find the difference' as a subtraction problem. 	Use inverse operations to check subtractions. *I calculated 1,225 − 799 = 574.* *I will check by adding the parts.*   *The parts do not add to make 1,225.* *I must have made a mistake.*

Year 4 Multiplication			
Multiplying by multiples of 10 and 100	Use unitising and place value equipment to understand how to multiply by multiples of 1, 10 and 100.  *3 groups of 4 ones is 12 ones.* *3 groups of 4 tens is 12 tens.* *3 groups of 4 hundreds is 12 hundreds.*	Use unitising and place value equipment to understand how to multiply by multiples of 1, 10 and 100.  *3 × 4 = 12* *3 × 40 = 120* *3 × 400 = 1,200*	Use known facts and understanding of place value and commutativity to multiply mentally. *4 × 7 = 28* *4 × 70 = 280* *40 × 7 = 280* *4 × 700 = 2,800* *400 × 7 = 2,800*
Understanding times-tables up to 12 × 12	Understand the special cases of multiplying by 1 and 0.  *5 × 1 = 5* *5 × 0 = 0*	Represent the relationship between the ×9 table and the ×10 table.  Represent the ×11 table and ×12 tables in relation to the ×10 table.  *2 × 11 = 20 + 2* *3 × 11 = 30 + 3* *4 × 11 = 40 + 4*  *4 × 12 = 40 + 8*	Understand how times-tables relate to counting patterns. Understand links between the ×3 table, ×6 table and ×9 table *5 × 6 is double 5 × 3* ×5 table and ×6 table *I know that 7 × 5 = 35* *so I know that 7 × 6 = 35 + 7.* ×5 table and ×7 table *3 × 7 = 3 × 5 + 3 × 2*  ×9 table and ×10 table *6 × 10 = 60* *6 × 9 = 60 − 6*

Understanding and using partitioning in multiplication	Make multiplications by partitioning. *4 × 12 is 4 groups of 10 and 4 groups of 2.*  *4 × 12 = 40 + 8*	Understand how multiplication and partitioning are related through addition.  *4 × 3 = 12* *4 × 5 = 20* *12 + 20 = 32* *4 × 8 = 32*	Use partitioning to multiply 2-digit numbers by a single digit. *18 × 6 = ?*  *18 × 6 = 10 × 6 + 8 × 6* *= 60 + 48* *= 108*
Column multiplication for 2- and 3-digit numbers multiplied by a single digit	Use place value equipment to make multiplications. *Make 4 × 136 using equipment.*  *I can work out how many 1s, 10s and 100s.* *There are 4 × 6 ones… 24 ones* *There are 4 × 3 tens … 12 tens* *There are 4 × 1 hundreds … 4 hundreds* *24 + 120 + 400 = 544*	Use place value equipment alongside a column method for multiplication of up to 3-digit numbers by a single digit.  3 1 2 × 3 9 3 6	Use the formal column method for up to 3-digit numbers multiplied by a single digit. 3 1 2 × 3 9 3 6 Understand how the expanded column method is related to the formal column method and understand how any exchanges are related to place value at each stage of the calculation. 2 3 × 5 1 5 1 0 0 1 1 5 2 3 × 5 1 1 5 1

Multiplying more than two numbers	Represent situations by multiplying three numbers together.  *Each sheet has 2 × 5 stickers.* *There are 3 sheets.* *There are 5 × 2 × 3 stickers in total.* 5 × 2 × 3 = 30 10 × 3 = 30	Understand that commutativity can be used to multiply in different orders.  *2 × 6 × 10 = 120* *12 × 10 = 120* *10 × 6 × 2 = 120* *60 × 2 = 120*	Use knowledge of factors to simplify some multiplications. *24 × 5 = 12 × 2 × 5* 12 × 2 × 5 = 12 × 10 = 120 So, 24 × 5 = 120
Year 4 Division			
Understanding the relationship between multiplication and division, including times-tables	Use objects to explore families of multiplication and division facts.  *4 × 6 = 24* *24 is 6 groups of 4.* *24 is 4 groups of 6.* *24 divided by 6 is 4.* *24 divided by 4 is 6.*	Represent divisions using an array.  28 ÷ 7 = 4	Understand families of related multiplication and division facts. *I know that 5 × 7 = 35* *so I know all these facts:* *5 × 7 = 35* *7 × 5 = 35* *35 = 5 × 7* *35 = 7 × 5* *35 ÷ 5 = 7* *35 ÷ 7 = 5* *7 = 35 ÷ 5* *5 = 35 ÷ 7*

Dividing multiples of 10 and 100 by a single digit	Use place value equipment to understand how to use unitising to divide.  *8 ones divided into 2 equal groups* *4 ones in each group* *8 tens divided into 2 equal groups* *4 tens in each group* *8 hundreds divided into 2 equal groups* *4 hundreds in each group*	Represent divisions using place value equipment.  *9 ÷ 3 = 3* *9 tens divided by 3 is 3 tens.* *9 hundreds divided by 3 is 3 hundreds.*	Use known facts to divide 10s and 100s by a single digit. *15 ÷ 3 = 5* *150 ÷ 3 = 50* *1500 ÷ 3 = 500*
Dividing 2-digit and 3-digit numbers by a single digit by partitioning into 100s, 10s and 1s	Partition into 10s and 1s to divide where appropriate. *39 ÷ 3 = ?*  *39 = 30 + 9* *30 ÷ 3 = 10* *9 ÷ 3 = 3* *39 ÷ 3 = 13*	Partition into 100s, 10s and 1s using Base 10 equipment to divide where appropriate. *39 ÷ 3 = ?*  *39 = 30 + 9* *30 ÷ 3 = 10* *9 ÷ 3 = 3* *39 ÷ 3 = 13*	Partition into 100s, 10s and 1s using a part-whole model to divide where appropriate. *142 ÷ 2 = ?*  *100 ÷ 2 = 50* *40 ÷ 2 = 20* *6 ÷ 2 = 3* *50 + 20 + 3 = 73* *142 ÷ 2 = 73*

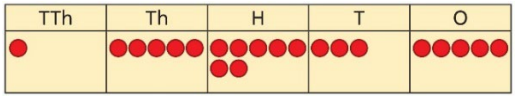
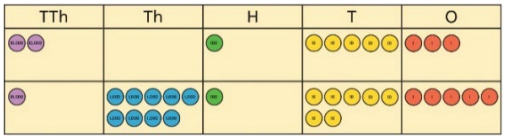
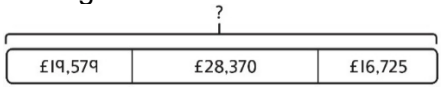
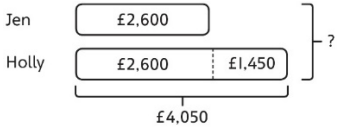
Dividing 2-digit and 3-digit numbers by a single digit, using flexible partitioning	Use place value equipment to explore why different partitions are needed. *42 ÷ 3 = ?* *I will split it into 30 and 12, so that I can divide by 3 more easily.* 	Represent how to partition flexibly where needed. *84 ÷ 7 = ?* *I will partition into 70 and 14 because I am dividing by 7.*   84 ÷ 7 = 12	Make decisions about appropriate partitioning based on the division required.  Understand that different partitions can be used to complete the same division. 
Understanding remainders	Use place value equipment to find remainders. *85 shared into 4 equal groups* *There are 24, and 1 that cannot be shared.* 	Represent the remainder as the part that cannot be shared equally.  *72 ÷ 5 = 14 remainder 2*	Understand how partitioning can reveal remainders of divisions.  *80 ÷ 4 = 20* *12 ÷ 4 = 3* *95 ÷ 4 = 23 remainder 3*

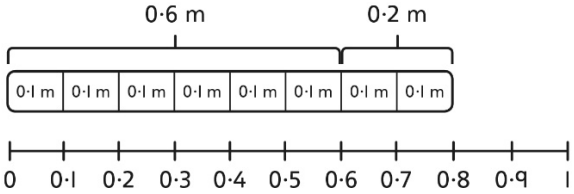
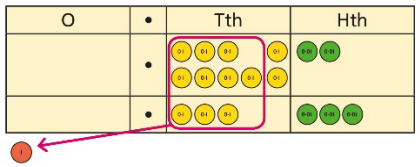
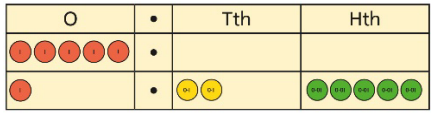
Hillocks Primary Academy

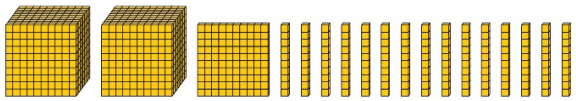
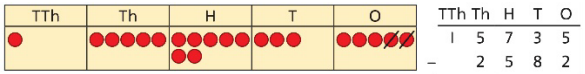
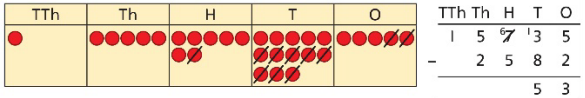
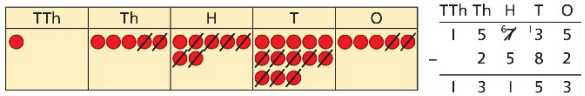
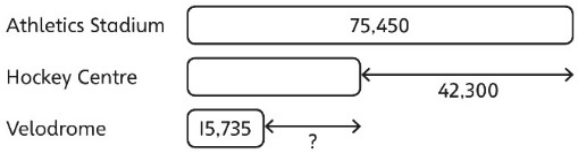
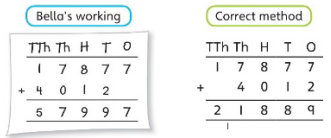
Power Maths calculation policy: UKS2

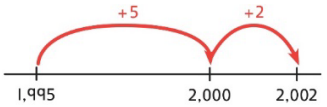
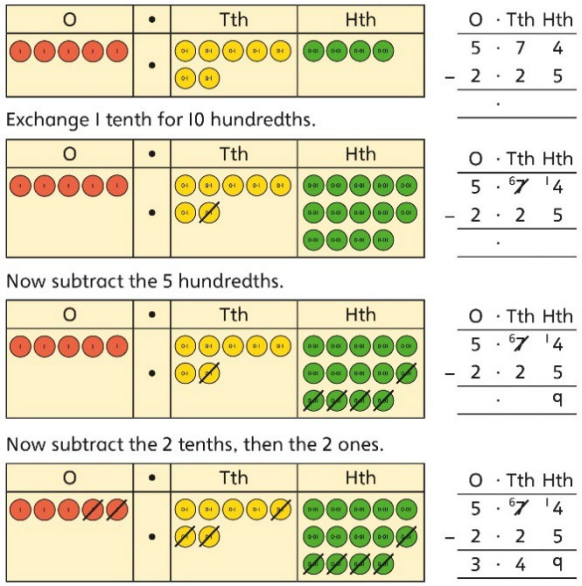
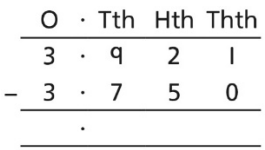
The following pages show the *Power Maths* progression in calculation (addition, subtraction, multiplication and division) and how this works in line with the National Curriculum. The consistent use of the CPA (concrete, pictorial, abstract) approach across *Power Maths* helps children develop mastery across all the operations in an efficient and reliable way. This policy shows how these methods develop children's confidence in their understanding of both written and mental methods.

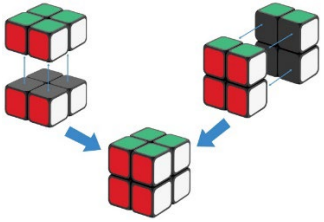
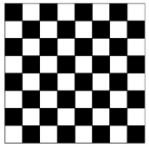
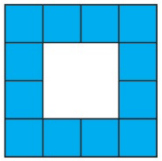
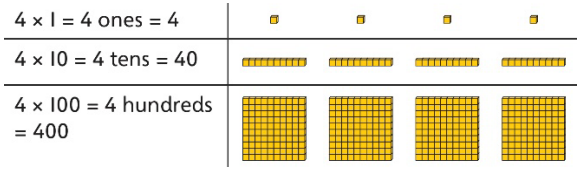
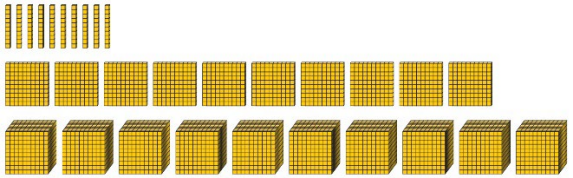
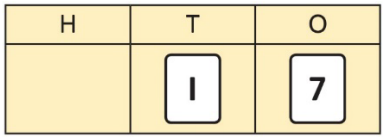
KEY STAGE 2		
In upper Key Stage 2, children build on secure foundations in calculation, and develop fluency, accuracy and flexibility in their approach to the four operations. They work with whole numbers and adapt their skills to work with decimals, and they continue to develop their ability to select appropriate, accurate and efficient operations.		
Key language: decimal, column methods, exchange, partition, mental method, ten thousand, hundred thousand, million, factor, multiple, prime number, square number, cube number		
Addition and subtraction: Children build on their column methods to add and subtract numbers with up to seven digits, and they adapt the methods to calculate efficiently and effectively with decimals, ensuring understanding of place value at every stage. Children compare and contrast methods, and they select mental methods or jottings where appropriate and where these are more likely to be efficient or accurate when compared with formal column methods. Bar models are used to represent the calculations required to solve problems and may indicate where efficient methods can be chosen.	**Multiplication and division:** Building on their understanding, children develop methods to multiply up to 4-digit numbers by single-digit and 2-digit numbers. Children develop column methods with an understanding of place value, and they continue to use the key skill of unitising to multiply and divide by 10, 100 and 1,000. Written division methods are introduced and adapted for division by single-digit and 2-digit numbers and are understood alongside the area model and place value. In Year 6, children develop a secure understanding of how division is related to fractions. Multiplication and division of decimals are also introduced and refined in Year 6.	**Fractions:** Children find fractions of amounts, multiply a fraction by a whole number and by another fraction, divide a fraction by a whole number, and add and subtract fractions with different denominators. Children become more confident working with improper fractions and mixed numbers and can calculate with them. Understanding of decimals with up to 3 decimal places is built through place value and as fractions, and children calculate with decimals in the context of measure as well as in pure arithmetic. Children develop an understanding of percentages in relation to hundredths, and they understand how to work with common percentages: 50%, 25%, 10% and 1%.

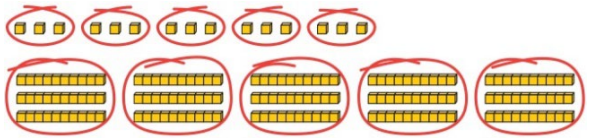
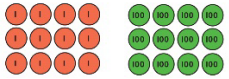
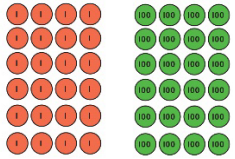
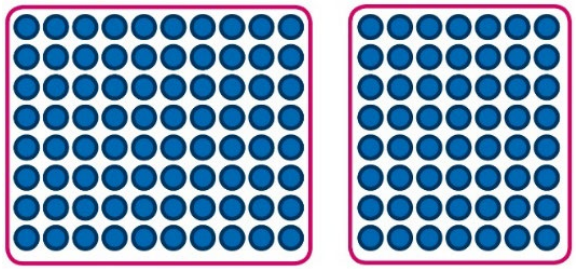
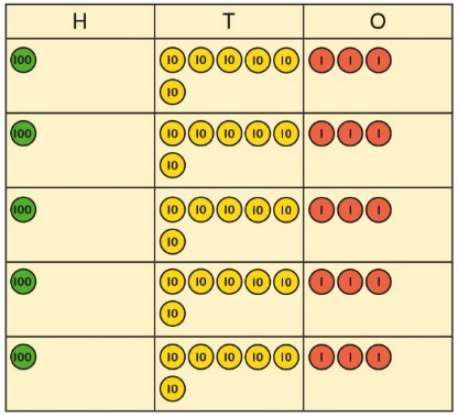
Year 5			
	Concrete	**Pictorial**	**Abstract**
Year 5 Addition			
Column addition with whole numbers	Use place value equipment to represent additions. *Add a row of counters onto the place value grid to show 15,735 + 4,012.* 	Represent additions, using place value equipment on a place value grid alongside written methods.  *I need to exchange 10 tens for a 100.* TTh Th H T O 2 0 1 5 3 + 1 9 1 7 5 3 9 3 2 8	Use column addition, including exchanges. TTh Th H T O 1 9 1 7 5 + 1 8 4 1 7 3 7 5 9 2
Representing additions		Bar models represent addition of two or more numbers in the context of problem solving.   Th H T O 2 6 0 0 + 1 4 5 0 4 0 5 0 Th H T O 2 6 0 0 + 4 0 5 0 6 6 5 0	Use approximation to check whether answers are reasonable. TTh Th H T O 2 3 4 0 5 + 7 8 9 2 2 0 2 9 7 TTh Th H T O 2 3 4 0 5 + 7 8 9 2 3 1 2 9 7 *I will use 23,000 + 8,000 to check.*

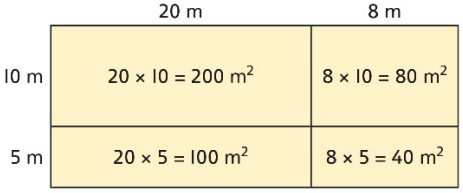
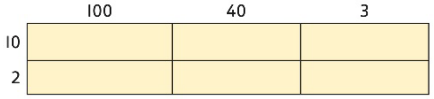
Adding tenths	Link measure with addition of decimals. *Two lengths of fencing are 0·6 m and 0·2 m.* *How long are they when added together?*  	Use a bar model with a number line to add tenths.  *0·6 + 0·2 = 0·8* *6 tenths + 2 tenths = 8 tenths*	Understand the link with adding fractions. $\frac{6}{10} + \frac{2}{10} = \frac{8}{10}$ *6 tenths + 2 tenths = 8 tenths* *0·6 + 0·2 = 0·8*
Adding decimals using column addition	Use place value equipment to represent additions. *Show 0·23 + 0·45 using place value counters.*	Use place value equipment on a place value grid to represent additions. Represent exchange where necessary.  O · Tth Hth 0 · 9 2 + 0 · 3 3 1 · 2 5 1 Include examples where the numbers of decimal places are different.  O · Tth Hth 5 · 0 0 + 1 · 2 5 6 · 2 5	Add using a column method, ensuring that children understand the link with place value. O · Tth Hth 0 · 2 3 + 0 · 4 5 0 · 6 8 Include exchange where required, alongside an understanding of place value. O · Tth Hth 0 · 9 2 + 0 · 3 3 1 · 2 5 1 Include additions where the numbers of decimal places are different. *3.4 + 0.65 = ?* O · Tth Hth 3 · 4 0 + 0 · 6 5 .

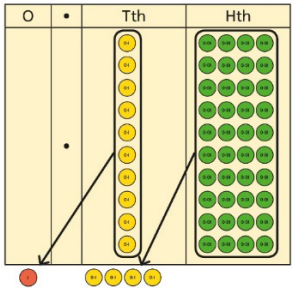
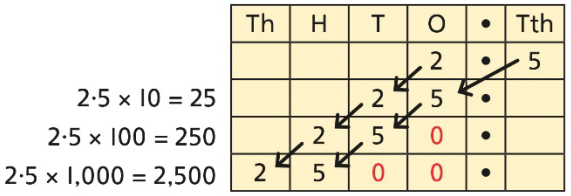
Year 5 Subtraction			
Column subtraction with whole numbers	Use place value equipment to understand where exchanges are required. *2,250 – 1,070* 	Represent the stages of the calculation using place value equipment on a grid alongside the calculation, including exchanges where required. *15,735 − 2,582 = 13,153*  TTh Th H T O 1 5 7 3 5 − 2 5 8 2 3 Now subtract the 10s. Exchange 1 hundred for 10 tens.  TTh Th H T O 1 5 6 13 5 − 2 5 8 2 5 3 Subtract the 100s, 1,000s and 10,000s.  TTh Th H T O 1 5 6 13 5 − 2 5 8 2 1 3 1 5 3	Use column subtraction methods with exchange where required. TTh Th H T O 5 11 1 6 2 0 9 7 − 1 8 5 3 4 4 3 5 6 3 *62,097 − 18,534 = 43,563*
Checking strategies and representing subtractions		Bar models represent subtractions in problem contexts, including ‘find the difference’.  	Children can explain the mistake made when the columns have not been ordered correctly.  Use approximation to check calculations. *I calculated 18,000 + 4,000 mentally to check my subtraction.*

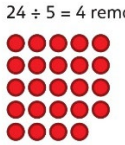
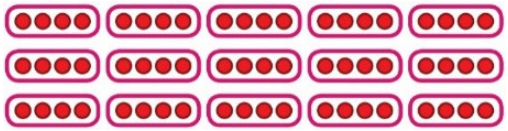
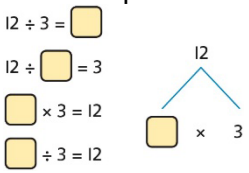
Choosing efficient methods			To subtract two large numbers that are close, children find the difference by counting on. *2,002 − 1,995 = ?*  Use addition to check subtractions. *I calculated 7,546 − 2,355 = 5,191.* *I will check using the inverse.*
Subtracting decimals	Explore complements to a whole number by working in the context of length.  1 m – ☐ m = ☐ m *1 − 0·49 = ?*	Use a place value grid to represent the stages of column subtraction, including exchanges where required. *5·74 − 2·25 = ?*  	Use column subtraction, with an understanding of place value, including subtracting numbers with different numbers of decimal places. *3·921 − 3·75 = ?* 

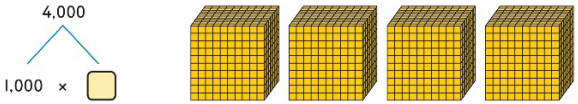
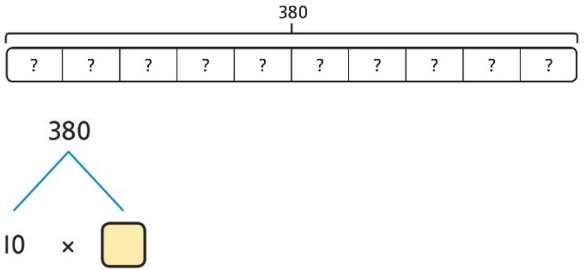
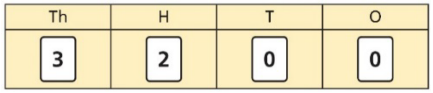
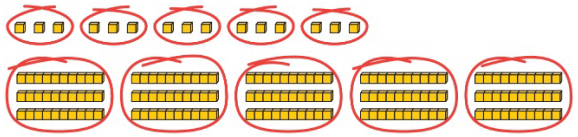
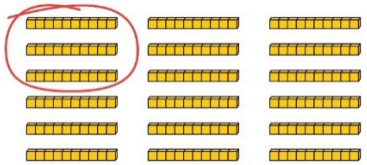
Year 5 Multiplication			
Understanding factors	Use cubes or counters to explore the meaning of 'square numbers'. *25 is a square number because it is made from 5 rows of 5.* Use cubes to explore cube numbers.  *8 is a cube number.*	Use images to explore examples and non-examples of square numbers.  *8 × 8 = 64* *8^2 = 64*  *12 is not a square number, because you cannot multiply a whole number by itself to make 12.*	Understand the pattern of square numbers in the multiplication tables. Use a multiplication grid to circle each square number. Can children spot a pattern?
Multiplying by 10, 100 and 1,000	Use place value equipment to multiply by 10, 100 and 1,000 by unitising.  	Understand the effect of repeated multiplication by 10. 	Understand how exchange relates to the digits when multiplying by 10, 100 and 1,000.  *17 × 10 = 170* *17 × 100 = 17 × 10 × 10 = 1,700* *17 × 1,000 = 17 × 10 × 10 × 10 = 17,000*

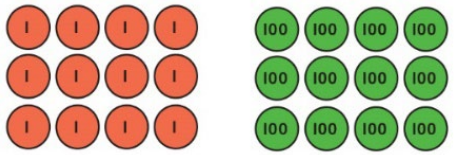
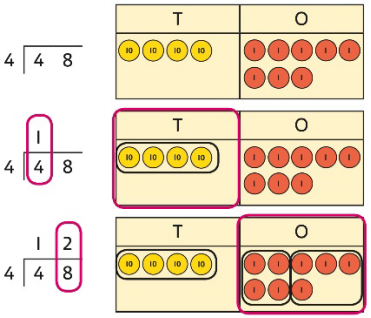
Multiplying by multiples of 10, 100 and 1,000	Use place value equipment to explore multiplying by unitising.  *5 groups of 3 ones is 15 ones.* *5 groups of 3 tens is 15 tens.* *So, I know that 5 groups of 3 thousands would be 15 thousands.*	Use place value equipment to represent how to multiply by multiples of 10, 100 and 1,000.  *4 × 3 = 12* *4 × 300 = 1,200*  *6 × 4 = 24* *6 × 400 = 2,400*	Use known facts and unitising to multiply. *5 × 4 = 20* *5 × 40 = 200* *5 × 400 = 2,000* *5 × 4,000 − 20,000* *5,000 × 4 = 20,000*
Multiplying up to 4-digit numbers by a single digit	Explore how to use partitioning to multiply efficiently. *8 × 17 = ?*  8 × 10 = 80 8 × 7 = 56 80 + 56 = 136 *So, 8 × 17 = 136*	Represent multiplications using place value equipment and add the 1s, then 10s, then 100s, then 1,000s. 	Use an area model and then add the parts. 100 60 3 5 | 100 × 5 = 500 | 60 × 5 = 300 | 3 × 5 = 15 Use a column multiplication, including any required exchanges. 1 3 6 × 6 8 1 6 2 3

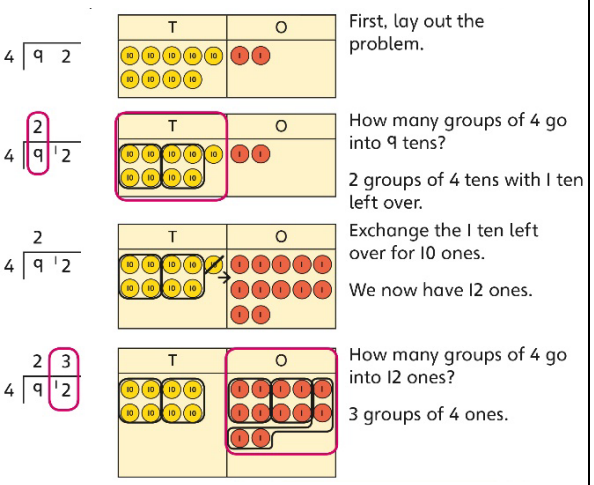
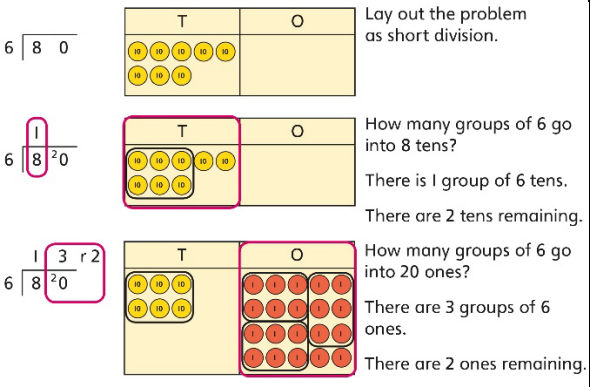
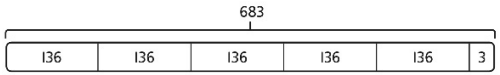
Multiplying 2-digit numbers by 2-digit numbers	Partition one number into 10s and 1s, then add the parts. *23 × 15 = ?*  10 × 15 = 150 10 × 15 = 150  3 × 15 = 45 There are 345 bottles of milk in total. H T O 1 5 0 1 5 0 + 4 5 3 4 5 1 *23 × 15 = 345*	Use an area model and add the parts. *28 × 15 = ?*  H T O 2 0 0 1 0 0 8 0 + 4 0 4 2 0 1 *28 × 15 = 420*	Use column multiplication, ensuring understanding of place value at each stage. 3 4 × 2 7 2 3 8 (2) 34 × 7 3 4 × 2 7 2 3 8 (2) 34 × 7 6 8 0 34 × 20 3 4 × 2 7 2 3 8 (2) 34 × 7 6 8 0 34 × 20 9 1 8 34 × 27 1
Multiplying up to 4-digits by 2-digits		Use the area model then add the parts.  143 × 12 = 1,716 There are 1,716 boxes of cereal in total. Th H T O 1 0 0 0 4 0 0 2 0 0 8 0 3 0 + 6 1 7 1 6 1 *143 × 12 = 1,716*	Use column multiplication, ensuring understanding of place value at each stage. 1 4 3 × 1 2 2 8 6 143 × 2 1 4 3 0 143 × 10 1 7 1 6 143 × 12 1 Progress to include examples that require multiple exchanges as understanding, confidence and fluency build.

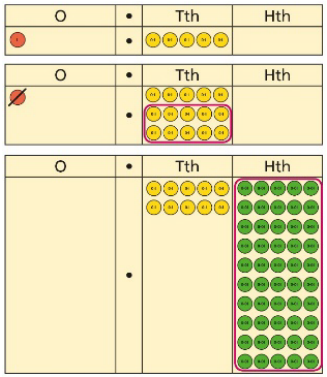
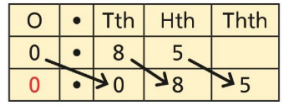
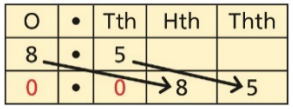
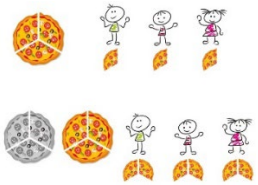
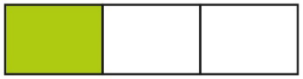
			1,274 × 32 = ? *First multiply 1,274 by 2.* 1 2 7 4 × 3 2 2 5 4 8 1,274 × 2 *Then multiply 1,274 by 30.* 1 2 7 4 × 3 2 2 5 4 8 1,274 × 2 3 8 2 2 0 1,274 × 30 *Finally, find the total.* 1 2 7 4 × 3 2 2 5 4 8 1,274 × 2 3 8 2 2 0 1,274 × 30 4 0 7 6 8 1,274 × 32 *1,274 × 32 = 40,768*
Multiplying decimals by 10, 100 and 1,000	Use place value equipment to explore and understand the exchange of 10 tenths, 10 hundredths or 10 thousandths.	Represent multiplication by 10 as exchange on a place value grid.  *0·14 × 10 = 1·4*	Understand how this exchange is represented on a place value chart. 

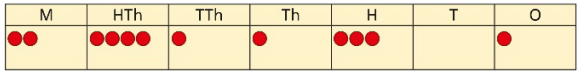
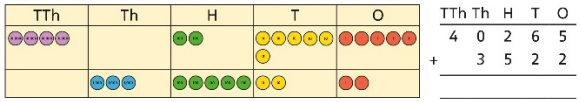
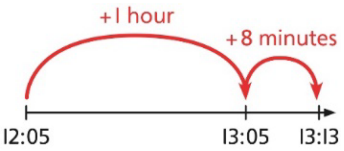
Year 5 Division			
Understanding factors and prime numbers	Use equipment to explore the factors of a given number.  *24 ÷ 3 = 8* *24 ÷ 8 = 3* *8 and 3 are factors of 24 because they divide 24 exactly.*  *5 is not a factor of 24 because there is a remainder.*	Understand that prime numbers are numbers with exactly two factors. *13 ÷ 1 = 13* *13 ÷ 2 = 6 r 1* *13 ÷ 4 = 4 r 1* *1 and 13 are the only factors of 13.* *13 is a prime number.*	Understand how to recognise prime and composite numbers. *I know that 31 is a prime number because it can be divided by only 1 and itself without leaving a remainder.* *I know that 33 is not a prime number as it can be divided by 1, 3, 11 and 33.* *I know that 1 is not a prime number, as it has only 1 factor.*
Understanding inverse operations and the link with multiplication, grouping and sharing	Use equipment to group and share and to explore the calculations that are present. *I have 28 counters.* *I made 7 groups of 4. There are 28 in total.* *I have 28 in total. I shared them equally into 7 groups. There are 4 in each group.* *I have 28 in total. I made groups of 4. There are 7 equal groups.*	Represent multiplicative relationships and explore the families of division facts.  *60 ÷ 4 = 15* *60 ÷ 15 = 4*	Represent the different multiplicative relationships to solve problems requiring inverse operations.  Understand missing number problems for division calculations and know how to solve them using inverse operations. *22 ÷ ? = 2* *22 ÷ 2 = ?* *? ÷ 2 = 22* *? ÷ 22 = 2*

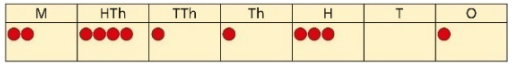
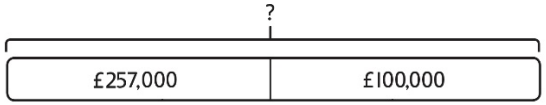
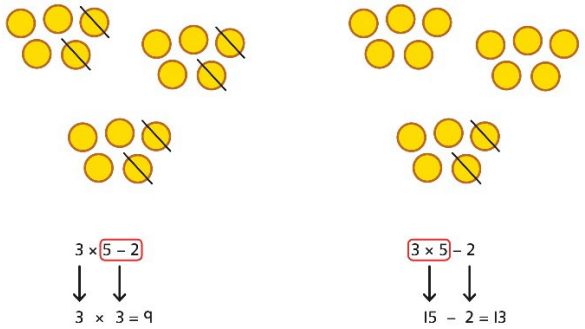
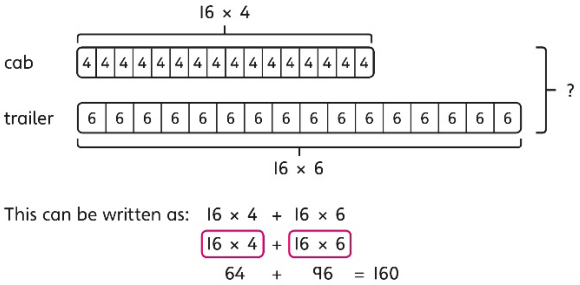
Dividing whole numbers by 10, 100 and 1,000	Use place value equipment to support unitising for division. *4,000 ÷ 1,000*  *4,000 is 4 thousands.* *4 × 1,000= 4,000* *So, 4,000 ÷ 1,000 = 4*	Use a bar model to support dividing by unitising. *380 ÷ 10 = 38*  *380 is 38 tens.* *38 × 10 = 380* *10 × 38 = 380* *So, 380 ÷ 10 = 38*	Understand how and why the digits change on a place value grid when dividing by 10, 100 or 1,000.  *3,200 ÷ 100 = ?* *3,200 is 3 thousands and 2 hundreds.* *200 ÷ 100 = 2* *3,000 ÷ 100 = 30* *3,200 ÷ 100 = 32* *So, the digits will move two places to the right.*
Dividing by multiples of 10, 100 and 1,000	Use place value equipment to represent known facts and unitising.  *15 ones put into groups of 3 ones. There are 5 groups.* *15 ÷ 3 = 5* *15 tens put into groups of 3 tens. There are 5 groups.* *150 ÷ 30 = 5*	Represent related facts with place value equipment when dividing by unitising.  *180 is 18 tens.* *18 tens divided into groups of 3 tens. There are 6 groups.* *180 ÷ 30 = 6*	Reason from known facts, based on understanding of unitising. Use knowledge of the inverse relationship to check. *3,000 ÷ 5 = 600* *3,000 ÷ 50 = 60* *3,000 ÷ 500 = 6* *5 × 600 = 3,000* *50 × 60 = 3,000* *500 × 6 = 3,000*

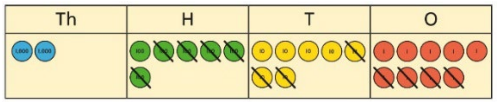
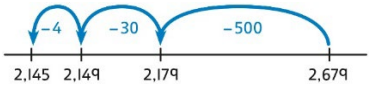
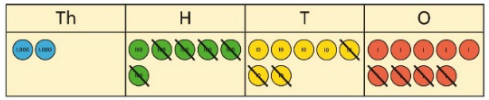
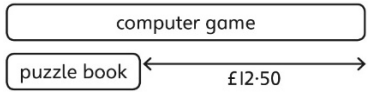
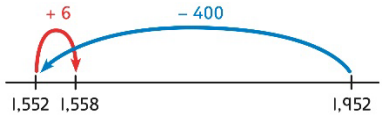
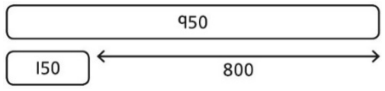
		 *12 ones divided into groups of 4. There are 3 groups.* *12 hundreds divided into groups of 4 hundreds. There are 3 groups.* *1200 ÷ 400 = 3*	
Dividing up to four digits by a single digit using short division	Explore grouping using place value equipment. *268 ÷ 2 = ?* *There is 1 group of 2 hundreds.* *There are 3 groups of 2 tens.* *There are 4 groups of 2 ones.* *264 ÷ 2 = 134*	Use place value equipment on a place value grid alongside short division. The model uses grouping. A sharing model can also be used, although the model would need adapting.  Lay out the problem as a short division. *There is 1 group of 4 in 4 tens.* *There are 2 groups of 4 in 8 ones.*	Use short division for up to 4-digit numbers divided by a single digit. $\begin{array}{r} 0\ 5\ 5\ 6 \\ 7\overline{)\,3\ {}^{3}8\ {}^{3}9\ {}^{4}2} \end{array}$ *3,892 ÷ 7 = 556* Use multiplication to check. *556 × 7 = ?* *6 × 7 = 42* *50 × 7 = 350* *500 × 7 = 3500* *3,500 + 350 + 42 = 3,892*

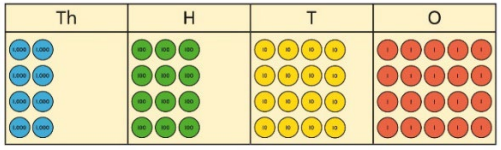
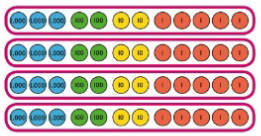
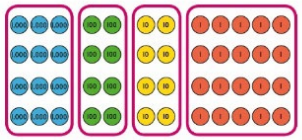
		Work with divisions that require exchange.  	
Understanding remainders	Understand remainders using concrete versions of a problem. *80 cakes divided into trays of 6.*  *80 cakes in total. They make 13 groups of 6, with 2 remaining.*	Use short division and understand remainders as the last remaining 1s.  	In problem solving contexts, represent divisions including remainders with a bar model.  *683 = 136 × 5 + 3* *683 ÷ 5 = 136 r 3*

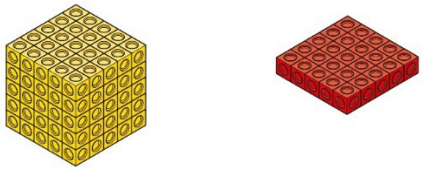
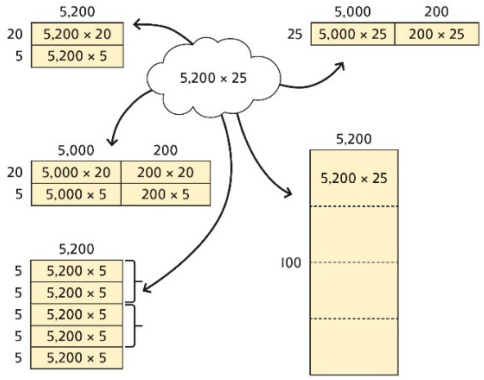
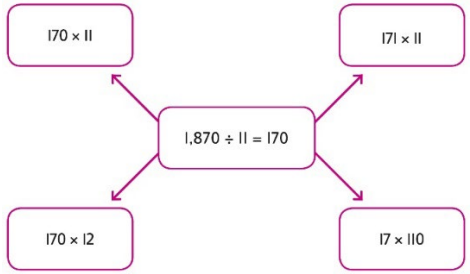
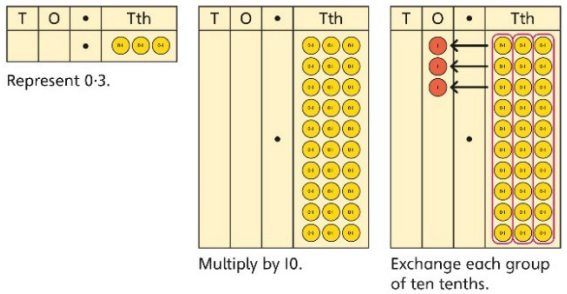
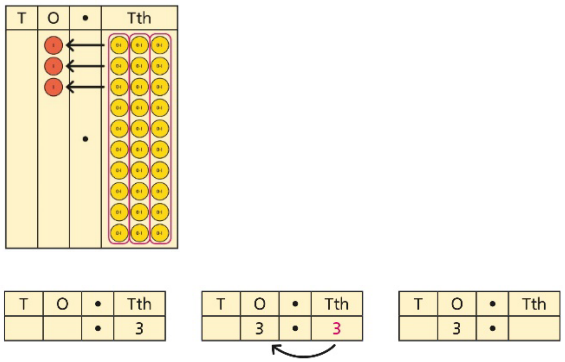
Dividing decimals by 10, 100 and 1,000	Understand division by 10 using exchange. *2 ones are 20 tenths.* *20 tenths divided by 10 is 2 tenths.*	Represent division using exchange on a place value grid.  *1·5 is 1 one and 5 tenths.* *This is equivalent to 10 tenths and 50 hundredths.* *10 tenths divided by 10 is 1 tenth.* *50 hundredths divided by 10 is 5 hundredths.* *1·5 divided by 10 is 1 tenth and 5 hundredths.* *1·5 ÷ 10 = 0.15*	Understand the movement of digits on a place value grid.  *0·85 ÷ 10 = 0·085*  *8·5 ÷ 100 = 0·085*
Understanding the relationship between fractions and division	Use sharing to explore the link between fractions and division. *1 whole shared between 3 people.* *Each person receives one-third.* 	Use a bar model and other fraction representations to show the link between fractions and division.  $1 \div 3 = \frac{1}{3}$	Use the link between division and fractions to calculate divisions. $5 \div 4 = \frac{5}{4} = 1\frac{1}{4}$ $11 \div 4 = \frac{11}{4} = 2\frac{3}{4}$

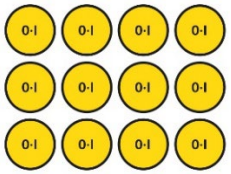
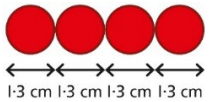
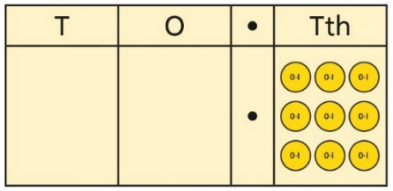
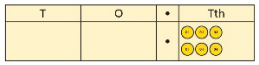
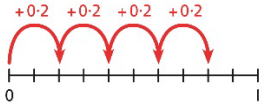
Year 6			
	Concrete	**Pictorial**	**Abstract**
Year 6 Addition			
Comparing and selecting efficient methods	Represent 7-digit numbers on a place value grid, and use this to support thinking and mental methods. 	Discuss similarities and differences between methods, and choose efficient methods based on the specific calculation. Compare written and mental methods alongside place value representations.   Use bar model and number line representations to model addition in problem-solving and measure contexts. 	Use column addition where mental methods are not efficient. Recognise common errors with column addition. *32,145 + 4,302 = ?* TTh Th H T O 3 2 1 4 5 + 4 3 0 2 3 6 4 4 7 TTh Th H T O 3 2 1 4 5 + 4 3 0 2 7 5 1 6 5 *Which method has been completed accurately?* *What mistake has been made?* Column methods are also used for decimal additions where mental methods are not efficient. H T O · Tth Hth 1 4 0 · 0 9 + 4 9 · 8 9 1 8 9 · 9 8 1

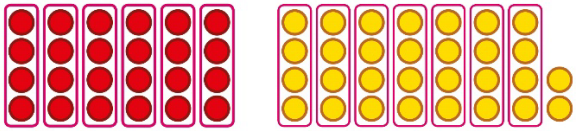
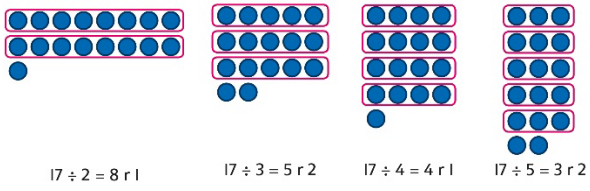
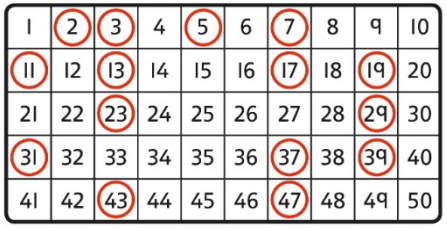
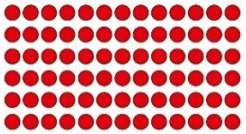
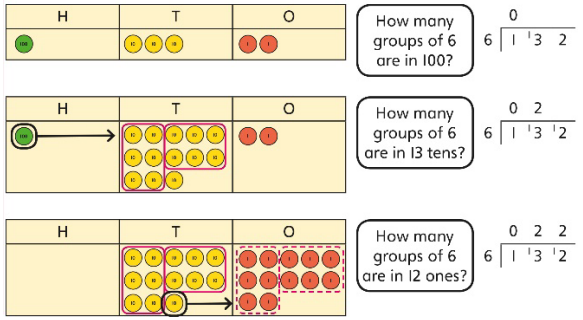
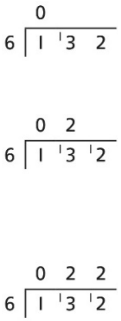
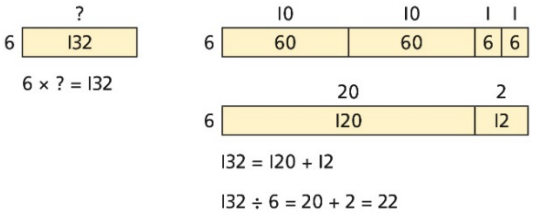
Selecting mental methods for larger numbers where appropriate	Represent 7-digit numbers on a place value grid, and use this to support thinking and mental methods.  *2,411,301 + 500,000 = ?* *This would be 5 more counters in the HTh place.* *So, the total is 2,911,301.* *2,411,301 + 500,000 = 2,911,301*	Use a bar model to support thinking in addition problems. *257,000 + 99,000 = ?*  *I added 100 thousands then subtracted 1 thousand.* *257 thousands + 100 thousands = 357 thousands* *257,000 + 100,000 = 357,000* *357,000 – 1,000 = 356,000* *So, 257,000 + 99,000 = 356,000*	Use place value and unitising to support mental calculations with larger numbers. *195,000 + 6,000 = ?* *195 + 5 + 1 = 201* *195 thousands + 6 thousands = 201 thousands* *So, 195,000 + 6,000 = 201,000*
Understanding order of operations in calculations	Use equipment to model different interpretations of a calculation with more than one operation. Explore different results. *3 × 5 − 2 = ?*  	Model calculations using a bar model to demonstrate the correct order of operations in multi-step calculations.  	Understand the correct order of operations in calculations without brackets. Understand how brackets affect the order of operations in a calculation. *4 + 6 × 16* *4 + 96 = 100* *(4 + 6) × 16* *10 × 16 = 160*

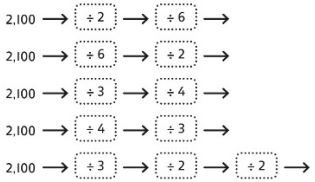
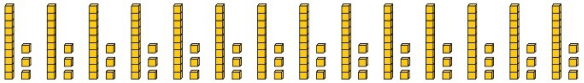
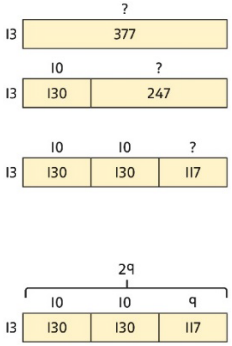
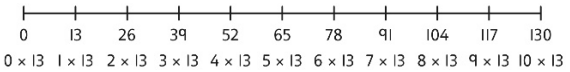
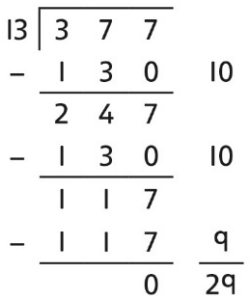
Year 6 Subtraction			
Comparing and selecting efficient methods	Use counters on a place value grid to represent subtractions of larger numbers. 	Compare subtraction methods alongside place value representations.   Th H T O 2 6 7 9 − 5 3 4 2 1 4 5 Use a bar model to represent calculations, including 'find the difference' with two bars as comparison. 	Compare and select methods. Use column subtraction when mental methods are not efficient. Use two different methods for one calculation as a checking strategy.   Use column subtraction for decimal problems, including in the context of measure. H T O · Tth Hth 3 0 9 · 6 0 − 2 0 6 · 4 0 1 0 3 · 2 0
Subtracting mentally with larger numbers		Use a bar model to show how unitising can support mental calculations. *950,000 − 150,000* *That is 950 thousands − 150 thousands*  *So, the difference is 800 thousands.* *950,000 − 150,000 = 800,000*	Subtract efficiently from powers of 10. *10,000 − 500 = ?*

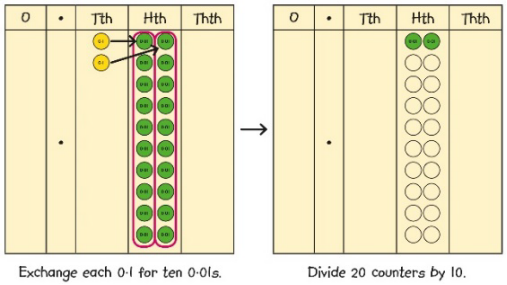
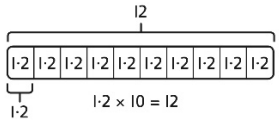
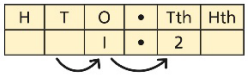
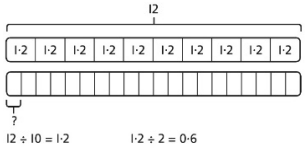
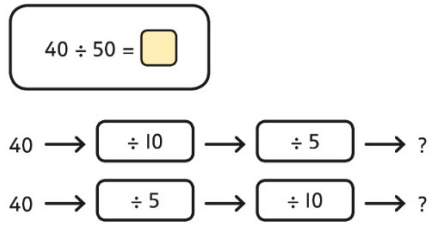
Year 6 Multiplication			
Multiplying up to a 4-digit number by a single digit number	Use equipment to explore multiplications.  *4 groups of 2,345* *This is a multiplication:* *4 × 2,345* *2,345 × 4*	Use place value equipment to compare methods. **Method 1**  3 2 2 5 3 2 2 5 3 2 2 5 + 3 2 2 5 1 2 9 0 0 1 1 2 **Method 2**  4 × 3,000 4 × 200 4 × 20 4 × 5 12,000 + 800 + 80 + 20 = 12,900	Understand area model and short multiplication. Compare and select appropriate methods for specific multiplications. **Method 3** 3,000 200 20 5 4 | 12,000 | 800 | 80 | 20 12,000 + 800 + 80 + 20 = 12,900 **Method 4** 3 2 2 5 × 4 1 2 9 0 0 1 2
Multiplying up to a 4-digit number by a 2-digit number		Use an area model alongside written multiplication. **Method 1** 1,000 200 30 5 20 | 20,000 | 4,000 | 600 | 100 1 | 1,000 | 200 | 30 | 5 1 2 3 5 × 2 1 5 1 × 5 3 0 1 × 30 2 0 0 1 × 200 1 0 0 0 1 × 1,000 1 0 0 20 × 5 6 0 0 20 × 30 4 0 0 0 20 × 200 2 0 0 0 0 20 × 1,000 2 5 9 3 5 21 × 1,235	Use compact column multiplication with understanding of place value at all stages. 1 2 3 5 × 2 1 1 2 3 5 1 × 1,235 2 4 7 0 0 20 × 1,235 2 5 9 3 5 21 × 1,235

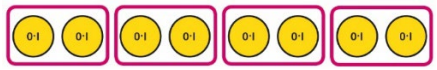
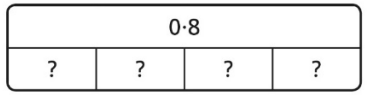
Using knowledge of factors and partitions to compare methods for multiplications	Use equipment to understand square numbers and cube numbers.  $5 \times 5 = 5^2 = 25$ $5 \times 5 \times 5 = 5^3 = 25 \times 5 = 125$	Compare methods visually using an area model. Understand that multiple approaches will produce the same answer if completed accurately.  Represent and compare methods using a bar model.	Use a known fact to generate families of related facts.  Use factors to calculate efficiently. 15×16 $= 3 \times 5 \times 2 \times 8$ $= 3 \times 8 \times 2 \times 5$ $= 24 \times 10$ $= 240$
Multiplying by 10, 100 and 1,000	Use place value equipment to explore exchange in decimal multiplication.  $0{\cdot}3 \times 10 = ?$ $0{\cdot}3$ is 3 tenths. 10 × 3 tenths are 30 tenths. 30 tenths are equivalent to 3 ones.	Understand how the exchange affects decimal numbers on a place value grid.  $0{\cdot}3 \times 10 = 3$	Use knowledge of multiplying by 10, 100 and 1,000 to multiply by multiples of 10, 100 and 1,000. $8 \times 100 = 800$ $8 \times 300 = 800 \times 3$ $= 2{,}400$ $2{\cdot}5 \times 10 = 25$ $2{\cdot}5 \times 20 = 2{\cdot}5 \times 10 \times 2$ $= 50$

Multiplying decimals	Explore decimal multiplications using place value equipment and in the context of measures.  *3 groups of 4 tenths is 12 tenths.* *4 groups of 3 tenths is 12 tenths.*  *4 × 1 cm = 4 cm* *4 × 0·3 cm = 1.2 cm* *4 × 1·3 = 4 + 1·2 = 5·2 cm*	Represent calculations on a place value grid. 3 × 3 = 9 3 × 0·3 = 0·9  Understand the link between multiplying decimals and repeated addition.   	Use known facts to multiply decimals. *4 × 3 = 12* *4 × 0·3 = 1·2* *4 × 0·03 = 0·12* *20 × 5 = 100* *20 × 0·5 = 10* *20 × 0·05 = 1* Find families of facts from a known multiplication. *I know that 18 × 4 = 72.* *This can help me work out:* *1·8 × 4 = ?* *18 × 0·4 = ?* *180 × 0·4 = ?* *18 × 0·04 = ?* Use a place value grid to understand the effects of multiplying decimals. H T O • Tth Hth 2 × 3: 6 • 0·2 × 3: 0 • 6 0·02 × 3: •

Year 6 Division			
Understanding factors	Use equipment to explore different factors of a number.  24 ÷ 4 = 6 30 ÷ 4 = 7 remainder 2 *4 is a factor of 24 but is not a factor of 30.*	Recognise prime numbers as numbers having exactly two factors. Understand the link with division and remainders.  17 ÷ 2 = 8 r 1 17 ÷ 3 = 5 r 2 17 ÷ 4 = 4 r 1 17 ÷ 5 = 3 r 2	Recognise and know primes up to 100. Understand that 2 is the only even prime, and that 1 is not a prime number.  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
Dividing by a single digit	Use equipment to make groups from a total.  *There are 78 in total.* *There are 6 groups of 13.* *There are 13 groups of 6.*	 H T O How many groups of 6 are in 100? How many groups of 6 are in 13 tens? How many groups of 6 are in 12 ones?	Use short division to divide by a single digit.  Use an area model to link multiplication and division.  6 × ? = 132 132 = 120 + 12 132 ÷ 6 = 20 + 2 = 22

Dividing by a 2-digit number using factors	Understand that division by factors can be used when dividing by a number that is not prime.	Use factors and repeated division. *1,260 ÷ 14 = ?*  *1,260 ÷ 2 = 630* *630 ÷ 7 = 90* *1,260 ÷ 14 = 90*	Use factors and repeated division where appropriate. *2,100 ÷ 12 = ?* 
Dividing by a 2-digit number using long division	Use equipment to build numbers from groups.  *182 divided into groups of 13.* *There are 14 groups.*	Use an area model alongside written division to model the process. *377 ÷ 13 = ?*  *377 ÷ 13 = 29*	Use long division where factors are not useful (for example, when dividing by a 2-digit prime number). Write the required multiples to support the division process. *377 ÷ 13 = ?*   *377 ÷ 13 = 29*

			A slightly different layout may be used, with the division completed above rather than at the side. 21 | 798 − 630 168 21 | 798 − 630 168 − 168 0 Divisions with a remainder explored in problem-solving contexts.
Dividing by 10, 100 and 1,000	Use place value equipment to explore division as exchange.  Exchange each 0·1 for ten 0·01s. Divide 20 counters by 10. *0·2 is 2 tenths.* *2 tenths is equivalent to 20 hundredths.* *20 hundredths divided by 10 is 2 hundredths.*	Represent division to show the relationship with multiplication. Understand the effect of dividing by 10, 100 and 1,000 on the digits on a place value grid.   Understand how to divide using division by 10, 100 and 1,000. *12 ÷ 20 = ?*  	Use knowledge of factors to divide by multiples of 10, 100 and 1,000.  *40 ÷ 5 = 8* *8 ÷ 10 = 0·8* *So, 40 ÷ 50 = 0·8*

Dividing decimals	Use place value equipment to explore division of decimals.  *8 tenths divided into 4 groups. 2 tenths in each group.*	Use a bar model to represent divisions.  $4 \times 2 = 8$ $\quad 8 \div 4 = 2$ So, $4 \times 0{\cdot}2 = 0{\cdot}8$ $\quad 0{\cdot}8 \div 4 = 0{\cdot}2$	Use short division to divide decimals with up to 2 decimal places. $8 \overline{)\,4 \cdot 2\,4}$ $\begin{array}{r} 0\,\cdot \\ 8\overline{)\,4 \cdot {}^{4}2\;4} \end{array}$ $\begin{array}{r} 0 \cdot 5 \\ 8\overline{)\,4 \cdot {}^{4}2\;{}^{2}4} \end{array}$ $\begin{array}{r} 0 \cdot 5\;3 \\ 8\overline{)\,4 \cdot {}^{4}2\;{}^{2}4} \end{array}$

Power Maths Year 1, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Book A (Term 1)	Number – number and place value	1	Numbers to 10	14
	Number – addition and subtraction	2	Part-whole within 10	7
	Number – addition and subtraction	3	Addition awithin 10	4
	Number – addition and subtraction	4	Subtraction within 10	8
	Geometry – properties of shape	5	2D and 3D shapes	5
Textbook B / Practice Book B (Term 2)	Number – number and place value	6	Numbers to 20	12
	Number – addition and subtraction	7	Addition and subtraction within 20	11
	Number – number and place value	8	Numbers to 50	7
	Measurement	9	Introducing length and height	4
	Measurement	10	Introducing weight and volume	7
Textbook C / Practice Book C (Term 3)	Number – multiplication and division	11	Multiplication and division	9
	Number – fractions	12	Halves and quarters	4
	Geometry – position and direction	13	Position and direction	5
	Number – number and place value	14	Numbers to 100	6
	Measurement	15	Money	3
	Measurement	16	Time	5

Power Maths Year 1, Textbook 1A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Numbers to 10	1	Sort objects	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	Unit 1	Numbers to 10	2	Count objects to 10	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
Number – number and place value	Unit 1	Numbers to 10	3	Represent numbers to 10	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
Number – number and place value	Unit 1	Numbers to 10	4	Count objects from a larger group	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
Number – number and place value	Unit 1	Numbers to 10	5	Count on from any number	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
Number – number and place value	Unit 1	Numbers to 10	6	One more	Given a number, identify one more and one less	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
Number – number and place value	Unit 1	Numbers to 10	7	Count backwards from 10 to 0	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	
Number – number and place value	Unit 1	Numbers to 10	8	One less	Given a number, identify one more and one less	
Number – number and place value	Unit 1	Numbers to 10	9	Compare groups	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	Unit 1	Numbers to 10	10	Fewer or more?	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	Unit 1	Numbers to 10	11	<, > or =	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	Unit 1	Numbers to 10	12	Compare numbers	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Numbers to 10	13	Order objects and numbers	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	Unit 1	Numbers to 10	14	The number line	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – addition and subtraction	Unit 2	Part-whole within 10	1	Parts and wholes	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Represent and use number bonds and related subtraction facts within 20
Number – addition and subtraction	Unit 2	Part-whole within 10	2	The part-whole model	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 2	Part-whole within 10	3	Write number sentences	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs	Represent and use number bonds and related subtraction facts within 20
Number – addition and subtraction	Unit 2	Part-whole within 10	4	Fact families – addition facts	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs	Represent and use number bonds and related subtraction facts within 20
Number – addition and subtraction	Unit 2	Part-whole within 10	5	Number bonds	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 2	Part-whole within 10	6	Find number bonds	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 2	Part-whole within 10	7	Number bonds to 10	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 3	Addition within 10	1	Add together	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 3	Addition within 10	2	Add more	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 3	Addition within 10	3	Addition problems	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9	
Number – addition and subtraction	Unit 3	Addition within 10	4	Find the missing number	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 4	Subtraction within 10	1	How many are left? (1)	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 4	Fractions (1)	2	How many are left? (2)	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 4	Fractions (1)	3	Break apart (1)	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 4	Fractions (1)	4	Break apart (2)	Represent and use number bonds and related subtraction facts within 20	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 4	Fractions (1)	5	Fact families	Represent and use number bonds and related subtraction facts within 20	
Number – addition and subtraction	Unit 4	Fractions (1)	6	Subtraction on a number line	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = [ ] – 9	
Number – addition and subtraction	Unit 4	Fractions (1)	7	Add or subtract 1 or 2	Add and subtract one-digit and two-digit numbers to 20, including zero	
Number – addition and subtraction	Unit 4	Fractions (1)	8	Solve word problems – addition and subtraction	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = [ ] – 9	
Geometry – properties of shape	Unit 5	2D and 3D shapes	1	Recognise and name 3D shapes	Recognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]	
Geometry – properties of shape	Unit 5	2D and 3D Shapes	2	Sort 3D shapes	Recognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]	
Geometry – properties of shape	Unit 5	2D and 3D Shapes	3	Recognise and name 2D shapes	Recognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]	
Geometry – properties of shape	Unit 5	2D and 3D Shapes	4	Sort 2D shapes	Recognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]	
Geometry – properties of shape	Unit 5	2D and 3D Shapes	5	Make patterns with shapes	Recognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]	Non-statutory guidance: They recognise and create repeating patterns with objects and with shapes

Power Maths Year 1, Textbook 1B (Term 2) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	6	Numbers to 20	1	Count to 20	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (to 20)	Read and write numbers from 1 to 20 in numerals and words.
Number – number and place value	6	Numbers to 20	2	Understand 10	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (to 20)	
Number – number and place value	6	Numbers to 20	3	11, 12 and 13	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Recognise the place value of each digit in a two-digit number (tens, ones) (year 2)
Number – number and place value	6	Numbers to 20	4	14, 15 and 16	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Recognise the place value of each digit in a two-digit number (tens, ones) (year 2)
Number – number and place value	6	Numbers to 20	5	17, 18 and 19	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Recognise the place value of each digit in a two-digit number (tens, ones) (year 2)
Number – number and place value	6	Numbers to 20	6	Understand 20	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Read and write numbers from 1 to 20 in numerals and words
Number – number and place value	6	Numbers to 20	7	One more and one less	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Given a number, identify one more and one less
Number – number and place value	6	Numbers to 20	8	The number line to 20	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	6	Numbers to 20	9	Label number lines	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	6	Numbers to 20	10	Estimate on a number line	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	6	Numbers to 20	11	Compare numbers to 20	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	6	Numbers to 20	12	Order numbers to 20	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (to 20)	Read and write numbers from 1 to 20 in numerals and words

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	7	Addition and subtraction within 20	1	Add by counting on within 20	Add and subtract one-digit and two-digit numbers to 20, including zero	
Number – addition and subtraction	7	Addition and subtraction within 20	2	Add ones using number bonds	Represent and use number bonds and related subtraction facts within 20 (within 10)	Add and subtract one-digit and two-digit numbers to 20, including zero
Number – addition and subtraction	7	Addition and subtraction within 20	3	Find and make number bonds to 20	Represent and use number bonds and related subtraction facts within 20 (within 10)	
Number – addition and subtraction	7	Addition and subtraction within 20	4	Doubles	Represent and use number bonds and related subtraction facts within 20 (within 10)	
Number – addition and subtraction	7	Addition and subtraction within 20	5	Near doubles	Represent and use number bonds and related subtraction facts within 20 (within 10)	
Number – addition and subtraction	7	Addition and subtraction within 20	6	Subtract ones using number bonds	Add and subtract one-digit and two-digit numbers to 20, including zero	Represent and use number bonds and related subtraction facts within 20 (within 10)
Number – addition and subtraction	7	Addition and subtraction within 20	7	Subtraction – count back	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9	Add and subtract one-digit and two-digit numbers to 20, including zero
Number – addition and subtraction	7	Addition and subtraction within 20	8	Subtraction - find the difference	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9	
Number – addition and subtraction	7	Addition and subtraction within 20	9	Related facts – fact families	Represent and use number bonds and related subtraction facts within 20 (within 10)	
Number – addition and subtraction	7	Addition and subtraction within 20	10	Missing number problems	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9	
Number – addition and subtraction	7	Addition and subtraction within 20	11	Solve word and picture problems – addition and subtraction	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9	
Number – number and place value	8	Numbers to 50	1	Count to 50	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
Number – number and place value	8	Numbers to 50	2	Numbers to 50	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
Number – number and place value	8	Numbers to 50	3	20, 30, 40 and 50	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Recognise the place value of each digit in a two-digit number (tens, ones) (Year 2)
Number – number and place value	8	Numbers to 50	4	Count by making groups of 10s	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	8	Numbers to 50	5	Groups of 10s and 1s	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	8	Numbers to 50	6	Partition into 10s and 1s	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	8	Numbers to 50	7	One more, one less	Given a number, identify one more and one less	
Measurement	9	Introducing length and height	1	Compare lengths and heights	Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]	
Measurement	9	Introducing length and height	2	Measure length (non-standard units of measure)	Measure and begin to record the following: lengths and heights	
Measurement	9	Introducing length and height	3	Measure length (using a ruler)	Measure and begin to record the following: lengths and heights	
Measurement	9	Introducing length and height	4	Solve word problems – length	Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]	
Measurement	10	Introducing mass and capacity	1	Heavier and lighter	Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]	
Measurement	10	Introducing mass and capacity	2	Measure mass	Measure and begin to record the following: mass/weight	
Measurement	10	Introducing mass and capacity	3	Compare mass	Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]	
Measurement	10	Introducing mass and capacity	4	Full and empty	Compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]	Measure and begin to record the following: capacity and volume
Measurement	10	Introducing mass and capacity	5	Measure capacity	Measure and begin to record the following: capacity and volume	
Measurement	10	Introducing mass and capacity	6	Compare capacity	Compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]	
Measurement	10	Introducing mass and capacity	7	Solve word problems – mass and capacity	Compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]	

Power Maths Year I, Textbook IC (Term 3) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	11	Multiplication and division	1	Count in 2s	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	
Number – multiplication and division	11	Multiplication and division	2	Count in 10s	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	
Number – multiplication and division	11	Multiplication and division	3	Count in 5s	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	
Number – multiplication and division	11	Multiplication and division	4	Equal groups	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	
Number – multiplication and division	11	Multiplication and division	5	Add equal groups	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	
Number – multiplication and division	11	Multiplication and division	6	Make arrays	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	
Number – multiplication and division	11	Multiplication and division	7	Make doubles	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	Non statutory guidance: through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities
Number – multiplication and division	11	Multiplication and division	8	Grouping	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	
Number – multiplication and division	11	Multiplication and division	9	Sharing	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	
Number – fractions	12	Fractions	1	Recognise and find a half of a shape	Recognise, find and name a half as one of two equal parts of an object, shape or quantity	
Number – fractions	12	Fractions	2	Recognise and find a half of a quantity	Recognise, find and name a half as one of two equal parts of an object, shape or quantity	
Number – fractions	12	Fractions	3	Recognise and find a quarter of a shape	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	
Number – fractions	12	Fractions	4	Recognise and find a quarter of a quantity	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – position and direction	13	Position and direction	1	Describe turns	Describe position, direction and movement, including whole, half, quarter and three-quarter turns	
Geometry – position and direction	13	Position and direction	2	Describe position – left and right	Non statutory guidance: Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside	
Geometry – position and direction	13	Position and direction	3	Describe position – forwards and backwards	Non statutory guidance: Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.	
Geometry – position and direction	13	Position and direction	4	Describe position – above and below	Non statutory guidance: Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.	
Geometry – position and direction	13	Position and direction	5	Ordinal numbers	Non-statutory guidance: Pupils practise counting (1, 2, 3…), ordering (for example, first, second, third…), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent.	
Number – number and place value	14	Numbers to 100	1	Count from 50 to 100	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	
Number – number and place value	14	Numbers to 100	2	10s to 100	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	
Number – number and place value	14	Numbers to 100	3	Partition into 10s and 1s	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	Recognise the place value of each digit in a two-digit number (tens, ones) (year 2)
Number – number and place value	14	Numbers to 100	4	Number line to 100	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Number – number and place value	14	Numbers to 100	5	One more and one less	Given a number, identify one more and one less	
Number – number and place value	14	Numbers to 100	6	Compare numbers	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Measurement	15	Money	1	Recognise coins	Recognise and know the value of different denominations of coins and notes	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	15	Money	2	Recognise notes	Recognise and know the value of different denominations of coins and notes	
Measurement	15	Money	3	Count in coins	Recognise and know the value of different denominations of coins and notes	
Measurement	16	Time	1	Before and after	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	
Measurement	16	Time	2	Days of the week	Recognise and use language relating to dates, including days of the week, weeks, months and years	
Measurement	16	Time	3	Months of the year	Recognise and use language relating to dates, including days of the week, weeks, months and years	
Measurement	16	Time	4	Tell the time to the hour	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	
Measurement	16	Time	5	Tell the time to the half hour	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	

Power Maths Year 2, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Book A (Term 1)	Number – number and place value	1	Numbers to 100	17
	Number – addition and subtraction	2	Addition and subtraction (1)	13
	Number – addition and subtraction	3	Addition and subtraction (2)	12
	Geometry – properties of shape	4	Properties of shapes	12
Textbook B / Practice Book B (Term 2)	Measurement	5	Money	10
	Number – multiplication and division	6	Multiplication and division (1)	8
	Number – multiplication and division	7	Multiplication and division (2)	10
	Measurement	8	Length and height	5
	Measurement	9	Mass, capacity and temperature	8
	Statistics	10	Statistics	7
Textbook C / Practice Book C (Term 3)	Number – fractions	11	Fractions	15
	Geometry – position and direction	12	Position and direction	5
	Measurement	13	Time	8
	Number – addition and subtraction	14	Problem solving and efficient methods	12

Power Maths Year 2, Textbook 2A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Numbers to 100	1	Numbers to 20	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (Year 1)	Read and write numbers from 1 to 20 in numerals and words (Year 1)
Number – number and place value	Unit 1	Numbers to 100	2	Count in 10s	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens (Year 1)	
Number – number and place value	Unit 1	Numbers to 100	3	Count in 10s and 1s	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	4	Recognise 10s and 1s	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	5	Build a number from 10s and 1s	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	6	Use a place value grid	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	7	Partition numbers to 100	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	8	Partition numbers flexibly within 100	Recognise the place value of each digit in a two-digit number (tens, ones)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	9	Write numbers to 100 in expanded form	Recognise the place value of each digit in a two-digit number (tens, ones)	Read and write numbers to at least 100 in numerals and in words
Number – number and place value	Unit 1	Numbers to 100	10	10s on a number line to 100	Identify, represent and estimate numbers using different representations, including the number line	
Number – number and place value	Unit 1	Numbers to 100	11	10s and 1s on a number line to 100	Identify, represent and estimate numbers using different representations, including the number line	Recognise the place value of each digit in a two-digit number (tens, ones)
Number – number and place value	Unit 1	Numbers to 100	12	Estimate numbers on a number line	Identify, represent and estimate numbers using different representations, including the number line	
Number – number and place value	Unit 1	Numbers to 100	13	Compare numbers (1)	Compare and order numbers from 0 up to 100; use <, > and = signs	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Numbers to 100	14	Compare numbers (2)	Compare and order numbers from 0 up to 100; use <, > and = signs	
Number – number and place value	Unit 1	Numbers to 100	15	Order numbers	Compare and order numbers from 0 up to 100; use <, > and = signs	
Number – number and place value	Unit 1	Numbers to 100	16	Count in 2s, 5s and 10s	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	
Number – number and place value	Unit 1	Numbers to 100	17	Count in 3s	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	1	Fact families	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	2	Learn number bonds	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	3	Add two multiples of 10	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	4	Complements to 100 (tens)	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	5	Add and subtract 1s	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	6	Add by making 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	7	Add using a number line	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	8	Add three 1-digit numbers	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	9	Add to the next 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	10	Add across a 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	11	Subtract across a 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	12	Subtract from a 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	13	Subtract a 1-digit number from a 2-digit number – across 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	1	10 more, 10 less	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	2	Add and subtract 10s	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	3	Add two 2-digit numbers – add 10s and add 1s	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	4	Add two 2-digit numbers – add more 10s then more 1s	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	5	Subtract a 2-digit number from a 2-digit number – not across 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	6	Subtract a 2-digit number from a 2-digit number – across 10	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	7	How many more? How many fewer?	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	8	Subtraction – find the difference	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	9	Compare number sentences	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	10	Missing number problems	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	11	Mixed addition and subtraction	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	12	Two-step problems	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Geometry – properties of shape	Unit 4	Properties of shapes	1	Recognise 2D and 3D shapes	Compare and sort common 2D and 3D shapes and everyday objects.	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – properties of shape	Unit 4	Properties of shapes	2	Count sides on 2D shapes	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line	
Geometry – properties of shape	Unit 4	Properties of shapes	3	Count vertices on 2D shapes	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line	
Geometry – properties of shape	Unit 4	Properties of shapes	4	Draw 2D shapes	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line	
Geometry – properties of shape	Unit 4	Properties of shapes	5	Lines of symmetry on shapes	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line	
Geometry – properties of shape	Unit 4	Properties of shapes	6	Sort 2D shapes	Compare and sort common 2D and 3D shapes and everyday objects	
Geometry – properties of shape	Unit 4	Properties of shapes	7	Make patterns with 2D shapes	Order and arrange combinations of mathematical objects in patterns and sequences	
Geometry – properties of shape	Unit 4	Properties of shapes	8	Count faces on 3D shapes	Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces	
Geometry – properties of shape	Unit 4	Properties of shapes	9	Count edges on 3D shapes	Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces	
Geometry – properties of shape	Unit 4	Properties of shapes	10	Count vertices on 3D shapes	Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces	
Geometry – properties of shape	Unit 4	Properties of shapes	11	Sort 3D shapes	Compare and sort common 2D and 3D shapes and everyday objects	
Geometry – properties of shape	Unit 4	Properties of shapes	12	Make patterns with 3D shapes	Order and arrange combinations of mathematical objects in patterns and sequences	

Power Maths Year 2, Textbook 2B (Term 2) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	5	Money	1	Count money – pence	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Recognise and know the value of different denominations of coins and notes (year 1)
Measurement	5	Money	2	Count money – pounds (notes and coins)	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Recognise and know the value of different denominations of coins and notes (year 1)
Measurement	5	Money	3	Count money – pounds and pence	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Recognise and know the value of different denominations of coins and notes (year 1)
Measurement	5	Money	4	Choose notes and coins	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	
Measurement	5	Money	5	Make the same amount	Find different combinations of coins that equal the same amounts of money	
Measurement	5	Money	6	Compare amounts of money	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
Measurement	5	Money	7	Calculate with money	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
Measurement	5	Money	8	Make £1	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	
Measurement	5	Money	9	Find change	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
Measurement	5	Money	10	Two-step problems	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
Number – multiplication and division	6	Multiplication and division (1)	1	Recognise equal groups	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	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 (year 1)
Number – multiplication and division	6	Multiplication and division (1)	2	Make equal groups	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	
Number – multiplication and division	6	Multiplication and division (1)	3	Add equal groups	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	
Number – multiplication and division	6	Multiplication and division (1)	4	The × sign	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	
Number – multiplication and division	6	Multiplication and division (1)	5	Multiplication sentences	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	6	Multiplication and division (1)	6	Use arrays	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
Number – multiplication and division	6	Multiplication and division (1)	7	Make equal groups – grouping	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	
Number – multiplication and division	6	Multiplication and division (1)	8	Make equal groups – sharing	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	
Number – multiplication and division	7	Multiplication and division (2)	1	2 times-table	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	2	Divide by 2	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	3	Double and halve	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Number – multiplication and division	7	Multiplication and division (2)	4	Odd and even numbers	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	5	10 times-table	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	6	Divide by 10	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	7	5 times-table	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	8	Divide by 5	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
Number – multiplication and division	7	Multiplication and division (2)	9	Bar modelling – grouping	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	
Number – multiplication and division	7	Multiplication and division (2)	10	Bar modelling – sharing	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	8	Length and height	1	Measure in cm	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	8	Length and height	2	Measure in m	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	8	Length and height	3	Compare lengths and heights	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	
Measurement	8	Length and height	4	Order lengths and heights	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	
Measurement	8	Length and height	5	Four operations with lengths and heights	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	
Measurement	9	Mass, capacity and temperature	1	Compare mass	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	
Measurement	9	Mass, capacity and temperature	2	Measure in grams	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	9	Mass, capacity and temperature	3	Measure in kilograms	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	9	Mass, capacity and temperature	4	Compare volume and capacity	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	
Measurement	9	Mass, capacity and temperature	5	Measure in millilitres	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	9	Mass, capacity and temperature	6	Measure in litres	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	9	Mass, capacity and temperature	7	Measure temperature using a thermometer	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	
Measurement	9	Mass, capacity and temperature	8	Read thermometers	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	

Power Maths Year 2, Textbook 2C (Term 3) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions	10	Fractions	1	Introducing parts and wholes	Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)
Number – fractions	10	Fractions	2	Equal and unequal parts	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)	
Number – fractions	10	Fractions	3	Recognise a half	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)	
Number – fractions	10	Fractions	4	Find a half	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)	
Number – fractions	10	Fractions	5	Recognise a quarter	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)	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
Number – fractions	10	Fractions	6	Find a quarter	Recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)	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
Number – fractions	10	Fractions	7	Thirds	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	
Number – fractions	10	Fractions	8	Find the whole	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	
Number – fractions	10	Fractions	9	Unit and non-unit fractions	Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	
Number – fractions	10	Fractions	10	Recognise the equivalence of a half and two quarters	Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	
Number – fractions	10	Fractions	11	Recognise three quarters	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	
Number – fractions	10	Fractions	12	Count in fractions up to a whole	Non-statutory guidance: Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line (for example, $1\frac{1}{2}$, $1\frac{2}{4}$ (or $1\frac{1}{2}$), $1\frac{3}{4}$, 2)	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	11	Time	1	O'clock and half past	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times (Year 1)	
Measurement	11	Time	2	Quarter past and quarter to	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	
Measurement	11	Time	3	Tell the time to 5 minutes	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	
Measurement	11	Time	4	Minutes in an hour	Know the number of minutes in an hour and the number of hours in a day	
Measurement	11	Time	5	Hours in a day	Know the number of minutes in an hour and the number of hours in a day	
Number – addition and subtraction	12	Problem solving and efficient methods	1	My way, your way!	Use place value and number facts to solve problems	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Number – addition and subtraction	12	Problem solving and efficient methods	2	Use number facts	Use place value and number facts to solve problems	
Number – addition and subtraction	12	Problem solving and efficient methods	3	Use a 100 square	Use place value and number facts to solve problems	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Number – addition and subtraction	12	Problem solving and efficient methods	4	Getting started	Use place value and number facts to solve problems	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Number – addition and subtraction	12	Problem solving and efficient methods	5	Missing numbers	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	12	Problem solving and efficient methods	6	Mental addition and subtraction (1)	Use place value and number facts to solve problems	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	12	Problem solving and efficient methods	7	Mental addition and subtraction (2)	Use place value and number facts to solve problems	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	12	Problem solving and efficient methods	8	Efficient subtraction	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	
Number – addition and subtraction	12	Problem solving and efficient methods	9	Solve problems – addition and subtraction	Use place value and number facts to solve problems	Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods
Number – addition and subtraction	12	Problem solving and efficient methods	10	Solve problems – multiplication and division	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	
Number – addition and subtraction	12	Problem solving and efficient methods	11	Solve problems – using the four operations	Use place value and number facts to solve problems	
Geometry – position and direction	13	Position and direction	1	Language of position	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)	
Geometry – position and direction	13	Position and direction	2	Describe movement	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)	
Geometry – position and direction	13	Position and direction	3	Describe 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)	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – position and direction	13	Position and direction	4	Describe movement and 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)	
Geometry – position and direction	13	Position and direction	5	Make patterns by turning shapes	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)	Order and arrange combinations of mathematical objects in patterns and sequences
Statistics	14	Statistics	1	Make tally charts	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	
Statistics	14	Statistics	2	Tables	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	
Statistics	14	Statistics	3	Block diagrams	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	
Statistics	14	Statistics	4	Draw pictograms (1 to 1)	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	
Statistics	14	Statistics	5	Interpret pictograms (1 to 1)	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
Statistics	14	Statistics	6	Draw pictograms (1 to 2, 5 or 10)	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	
Statistics	14	Statistics	7	Interpret pictograms (1 to 2, 5 or 10)	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

Power Maths Year 3, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 1,000	13
	Number – addition and subtraction	2	Addition and subtraction (1)	10
	Number – addition and subtraction	3	Addition and subtraction (2)	13
	Number – multiplication and division	4	Multiplication and division (1)	5
	Number – multiplication and division	5	Multiplication and division (2)	13
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	6	Multiplication and division (3)	13
	Measurement	7	Length and perimeter	11
	Number – fractions	8	Fractions (1)	10
	Measurement	9	Mass	7
	Measurement	10	Capacity	6
Textbook C / Practice Workbook C (Term 3)	Number – fractions	11	Fractions (2)	8
	Measurement	12	Moneys	5
	Measurement	13	Time	12
	Geometry – properties of shapes	14	Angles and properties of shapes	9
	Statistics	15	Statistics	7

Power Maths Year 3, Textbook 3A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Place value within 1,000	1	Represent and partition numbers to 100	Recognise the place value of each digit in a two-digit number (tens, ones) (Year 2)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Place value within 1,000	2	Number line to 100	Compare and order numbers up to 1,000	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Place value within 1,000	3	100s	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
Number – number and place value	Unit 1	Place value within 1,000	4	Represent numbers to 1,000	Identify, represent and estimate numbers using different representations, including the number line	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
Number – number and place value	Unit 1	Place value within 1,000	5	Partition numbers to 1,000	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Place value within 1,000	6	Partition numbers to 1,000 flexibly	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)	
Number – number and place value	Unit 1	Place value within 1,000	7	100s, 10s and 1s	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)	Identify, represent and estimate numbers using different representations, including the number line
Number – number and place value	Unit 1	Place value within 1,000	8	Use a number line to 1,000	Identify, represent and estimate numbers using different representations, including the number line	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)
Number – number and place value	Unit 1	Place value within 1,000	9	Estimate on a number line to 1,000	Identify, represent and estimate numbers using different representations, including the number line	
Number – number and place value	Unit 1	Place value within 1,000	10	Find 1, 10 and 100 more or less	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)
Number – number and place value	Unit 1	Place value within 1,000	11	Compare numbers to 1,000	Compare and order numbers up to 1,000	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)
Number – number and place value	Unit 1	Place value within 1,000	12	Order numbers to 1,000	Compare and order numbers up to 1,000	Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)
Number – number and place value	Unit 1	Place value within 1,000	13	Count in 50s	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	1	Apply number bonds within 10	Recognise the place value of each digit in a two-digit number (10s, 1s) (Year 2)	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	2	Add/subtract 1s	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	3	Add/subtract 10s	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds	
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	4	Add/subtract 100s	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	5	Spot the pattern	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	6	Add 1s across 10	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	7	Add 10s across 100	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	8	Subtract 1s across 10	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	9	Subtract 10s across 100	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 2	Addition and subtraction (1)	10	Making connections	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	1	Add two numbers	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	2	Subtract two numbers	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	3	Add two numbers (across 10)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	4	Add two numbers (across 100)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	5	Subtract two numbers (across 10)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	6	Subtract two numbers (across 100)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	7	Add a 3-digit and 2-digit number	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	8	Subtract a 2-digit number from a 3-digit number	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	9	Complements to 100	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	10	Estimate answers	Estimate the answer to a calculation and use inverse operations to check answers	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	11	Inverse operations	Estimate the answer to a calculation and use inverse operations to check answers	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	12	Problem solving (1)	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	
Number – addition and subtraction	Unit 3	Addition and subtraction (2)	13	Problem solving (2)	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	
Number – multiplication and division	Unit 4	Multiplication and division (1)	1	Multiplication – equal groups	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	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Number – multiplication and division	Unit 4	Multiplication and division (1)	2	Use arrays	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	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Number – multiplication and division	Unit 4	Multiplication and division (1)	3	Multiples of 2	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	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Number – multiplication and division	Unit 4	Multiplication and division (1)	4	Multiples of 5 and 10	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	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Number – multiplication and division	Unit 4	Multiplication and division (1)	5	Sharing and grouping	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	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Number – multiplication and division	Unit 5	Multiplication and division (2)	1	Multiply by 3	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	Unit 5	Multiplication and division (2)	2	Divide by 3	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	3	The 3 times-table	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	4	Multiply by 4	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	5	Divide by 4	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)6	6	The 4 times-table	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	7	Multiply by 8	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	8	Divide by 8	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	9	The 8 times-table	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	10	Problem solving – multiplication and division (1)	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	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

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	Unit 5	Multiplication and division (2)	11	Problem solving – multiplication and division (2)	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	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	12	Understand divisibility (1)	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	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
Number – multiplication and division	Unit 5	Multiplication and division (2)	13	Understand divisibility (2)	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	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

Power Maths Year 3, Textbook 3B (Term 2) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	6	Multiplication and division (3)	1	Multiples of 10	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	
Number – multiplication and division	6	Multiplication and division (3)	2	Related calculations	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	
Number – multiplication and division	6	Multiplication and division (3)	3	Reasoning about multiplication	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	
Number – multiplication and division	6	Multiplication and division (3)	4	Multiply 2-digits by 1-digit – no exchange	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	
Number – multiplication and division	6	Multiplication and division (3)	5	Multiply 2-digits by 1-digit – exchange	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	
Number – multiplication and division	6	Multiplication and division (3)	6	Expanded written method	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	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	6	Multiplication and division (3)	7	Link multiplication and division	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	
Number – multiplication and division	6	Multiplication and division (3)	8	Divide 2-digits by 1-digit – no exchange	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	
Number – multiplication and division	6	Multiplication and division (3)	9	Divide 2-digits by 1-digit –flexible partitioning	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	
Number – multiplication and division	6	Multiplication and division (3)	10	Divide 2-digits by 1-digit with remainders	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	
Number – multiplication and division	6	Multiplication and division (3)	11	How many ways?	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	
Number – multiplication and division	6	Multiplication and division (3)	12	Problem solving – mixed problems (1)	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	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
Number – multiplication and division	6	Multiplication and division (3)	13	Problem solving – mixed problems (2)	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	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

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	7	Length and perimeter	1	Measure in m and cm	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	2	Measure in cm and mm	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	3	Metres, centimetres and millimetres	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	4	Equivalent lengths (m and cm)	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	5	Equivalent lengths (mm and cm)	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	6	Compare lengths	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	7	Add lengths	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	8	Subtract lengths	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	7	Length and perimeter	9	Measure perimeter	Measure the perimeter of simple 2D shapes	
Measurement	7	Length and perimeter	10	Calculate perimeter	Measure the perimeter of simple 2D shapes	
Measurement	7	Length and perimeter	11	Problem solving – length	Measure the perimeter of simple 2D shapes	
Number – fractions	8	Fractions (1)	1	Understand the denominator of unit fractions	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	
Number – fractions	8	Fractions (1)	2	Compare and order unit fractions	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	
Number – fractions	8	Fractions (1)	3	Understand the numerator of non-unit fractions	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	
Number – fractions	8	Fractions (1)	4	Understand the whole	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions	8	Fractions (1)	5	Compare and order non-unit fractions	Compare and order unit fractions, and fractions with the same denominators	
Number – fractions	8	Fractions (1)	6	Divisions on a number line	Compare and order unit fractions, and fractions with the same denominators	
Number – fractions	8	Fractions (1)	7	Count in fractions on a number line	Compare and order unit fractions, and fractions with the same denominators	
Number – fractions	8	Fractions (1)	8	Equivalent fractions as bar models	Recognise and show, using diagrams, equivalent fractions with small denominators	
Number – fractions	8	Fractions (1)	9	Equivalent fractions on a number line	Recognise and show, using diagrams, equivalent fractions with small denominators	
Number – fractions	8	Fractions (1)	10	Equivalent fractions	Recognise and show, using diagrams, equivalent fractions with small denominators	
Measurement	9	Mass	1	Use scales	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	2	Measure mass	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	3	Measure mass in kilograms and grams	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	4	Equivalent masses	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	5	Compare mass	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	6	Add and subtract mass	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	9	Mass	7	Problem solving – mass	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	10	Capacity	1	Measure capacity and volume in litres and millilitres	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	10	Capacity	2	Measure in litres and millilitres	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	10	Capacity	3	Equivalent capacities and volumes (litres and millilitres)	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	10	Capacity	4	Compare capacity and volume	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	10	Capacity	5	Add and subtract capacity and volume	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
Measurement	10	Capacity	6	Problem solving – capacity	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	

Power Maths Year 3, Textbook 3C (Term 3) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions	11	Fractions (2)	1	Add fractions	Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$]	
Number – fractions	11	Fractions (2)	2	Subtract fractions	Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$]	
Number – fractions	11	Fractions (2)	3	Partition the whole	Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$]	
Number – fractions	11	Fractions (2)	4	Problem solving – add and subtract fractions	Solve problems that involve all of the above	
Number – fractions	11	Fractions (2)	5	Unit fractions of a set of objects	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	
Number – fractions	11	Fractions (2)	6	Non-unit fractions of a set of objects	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	
Number – fractions	11	Fractions (2)	7	Reason with fractions of an amount	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	
Number – fractions	11	Fractions (2)	8	Problem solving – fractions of measures	Solve problems that involve all of the above	
Measurement	12	Money	1	Pounds and pence	Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Measurement	12	Money	2	Convert pounds and pence	Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Measurement	12	Money	3	Add money	Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Measurement	12	Money	4	Subtract money	Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Measurement	12	Money	5	Find change	Add and subtract amounts of money to give change, using both £ and p in practical contexts	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	13	Time	1	Roman numerals to 12	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	
Measurement	13	Time	2	Tell the time to 5 minutes	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	
Measurement	13	Time	3	Tell the time to the minute	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight
Measurement	13	Time	4	Read time on a digital clock	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
Measurement	13	Time	5	Use am and pm	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
Measurement	13	Time	6	Years, months and days	Know the number of seconds in a minute and the number of days in each month, year and leap year	
Measurement	13	Time	7	Days and hours	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	13	Time	8	Hours and minutes – start and end times	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	Compare durations of events [for example to calculate the time taken by particular events or tasks]
Measurement	13	Time	9	Hours and minutes – durations	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 and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight
Measurement	13	Time	10	Hours and minutes – compare durations	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	Compare durations of events [for example to calculate the time taken by particular events or tasks]
Measurement	13	Time	11	Minutes and seconds	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	
Measurement	13	Time	12	Solve problems with time	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	
Geometry – properties of shapes	14	Angles and properties of shapes	1	Turns and angles	Recognise angles as a property of shape or a description of a turn	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

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – properties of shapes	14	Angles and properties of shapes	2	Right angles in shapes	Recognise angles as a property of shape or a description of a turn	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
Geometry – properties of shapes	14	Angles and properties of shapes	3	Compare 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	Recognise angles as a property of shape or a description of a turn
Geometry – properties of shapes	14	Angles and properties of shapes	4	Measure and draw accurately	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Geometry – properties of shapes	14	Angles and properties of shapes	5	Horizontal and vertical	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	
Geometry – properties of shapes	14	Angles and properties of shapes	6	Parallel and perpendicular	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	
Geometry – properties of shapes	14	Angles and properties of shapes	7	Recognise, draw and describe 2D shapes	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	
Geometry – properties of shapes	14	Angles and properties of shapes	8	Recognise and describe 3D shapes	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	
Geometry – properties of shapes	14	Angles and properties of shapes	9	Make 3D shapes	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	
Statistics	15	Statistics	1	Interpret pictograms (1)	Interpret and present data using bar charts, pictograms and tables	Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Statistics	15	Statistics	2	Interpret pictograms (2)	Interpret and present data using bar charts, pictograms and tables	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Statistics	15	Statistics	3	Draw pictograms	Interpret and present data using bar charts, pictograms and tables	Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Statistics	15	Statistics	4	Interpret bar charts (1)	Interpret and present data using bar charts, pictograms and tables	
Statistics	15	Statistics	5	Interpret bar charts (2)	Interpret and present data using bar charts, pictograms and tables	Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Statistics	15	Statistics	6	Collect and represent data in a bar chart	Interpret and present data using bar charts, pictograms and tables	
Statistics	15	Statistics	7	Simple two-way tables	Interpret and present data using bar charts, pictograms and tables	

Power Maths Year 4, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value – 4-digit numbers (1)	8
	Number – number and place value	2	Place value – 4-digit numbers (2)	8
	Number – addition and subtraction	3	Addition and subtraction	16
	Measurement	4	Measure – area	5
	Number – multiplication and division	5	Multiplication and division (1)	12
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	6	Multiplication and division (2)	16
	Measurement	7	Length and perimeter	6
	Number – fractions	8	Fractions (1)	9
	Number – fractions	9	Fractions (2)	8
	Number – fractions (including decimals and percentages	10	Decimals (1)	12
Textbook C / Practice Workbook C (Term 3)	Number – fractions (including decimals and percentages	11	Decimals (2)	7
	Measurement	12	Money	6
	Measurement	13	Time	5
	Geometry – properties of shapes	14	Geometry – angles and 2D shapes	8
	Statistics	15	Statistics	6
	Geometry – position and direction	16	Geometry – position and direction	6

Power Maths Year 4, Textbook 4A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	1	Represent and partition numbers to 1,000	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	2	Number line to 1,000	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	3	Multiples of 1,000	Count in multiples of 6, 7, 9, 25 and 1,000	
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	4	4-digit numbers	Identify, represent and estimate numbers using different representations	
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	5	Partition 4-digit numbers flexibly	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	6	Partition 4-digit numbers flexibly	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	Identify, represent and estimate numbers using different representations
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	7	1, 10, 100, 1,000 more or less	Find 1,000 more or less than a given number	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
Number – number and place value	Unit 1	Place value – 4-digit numbers (1)	8	1,000s, 100s, 10s and 1s	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	Identify, represent and estimate numbers using different representations
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	1	Number line to 10,000	Identify, represent and estimate numbers using different representations	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	2	Between two multiples	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	Count in multiples of 6, 7, 9, 25 and 1000
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	3	Estimate on a number line to 10,000	Order and compare numbers beyond 1,000	Identify, represent and estimate numbers using different representations
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	4	Compare and order numbers to 10,000	Order and compare numbers beyond 1,000	Identify, represent and estimate numbers using different representations
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	5	Round to the nearest 1,000	Round any number to the nearest 10, 100 or 1,000	
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	6	Round to the nearest 100	Round any number to the nearest 10, 100 or 1,000	
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	7	Round to the nearest 10	Round any number to the nearest 10, 100 or 1,000	
Number – number and place value	Unit 2	Place value – 4-digit numbers (2)	8	Round to the nearest 1,000, 100 or 10	Round any number to the nearest 10, 100 or 1,000	
Number – addition and subtraction	Unit 3	Addition and subtraction	1	Add and subtract 1s, 10s, 100s, 1,000s	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	Solve number and practical problems that involve all of the above and with increasingly large positive numbers
Number – addition and subtraction	Unit 3	Addition and subtraction	2	Add two 4-digit numbers – one exchange	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	3	Add two 4-digit numbers – one exchange	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 3	Addition and subtraction	4	Add with more than one exchange	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	5	Subtract two 4-digit numbers	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	6	Subtract two 4-digit numbers – one exchange	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	7	Subtract two 4-digit numbers – more than one exchange	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	8	Exchange across two columns	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	
Number – addition and subtraction	Unit 3	Addition and subtraction	9	Efficient methods	Estimate and use inverse operations to check answers to a calculation	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
Number – addition and subtraction	Unit 3	Addition and subtraction	10	Equivalent difference	Estimate and use inverse operations to check answers to a calculation	
Number – addition and subtraction	Unit 3	Addition and subtraction	11	Estimate answers	Estimate and use inverse operations to check answers to a calculation	
Number – addition and subtraction	Unit 3	Addition and subtraction	12	Check strategies	Estimate and use inverse operations to check answers to a calculation	
Number – addition and subtraction	Unit 3	Addition and subtraction	13	Problem solving – one step	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	14	Problem solving – comparison	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	15	Problem solving – two steps	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	16	Problem solving – multi-step problems	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	
Measurement	Unit 4	Measure – area	1	What is area?	Find the area of rectilinear shapes by counting squares	
Measurement	Unit 4	Measure – area	2	Measure area using squares	Find the area of rectilinear shapes by counting squares	
Measurement	Unit 4	Measure – area	3	Count squares	Find the area of rectilinear shapes by counting squares	
Measurement	Unit 4	Measure – area	4	Make shapes	Find the area of rectilinear shapes by counting squares	
Measurement	Unit 4	Measure – area	5	Compare area	Estimate, compare and calculate different measures, including money in pounds and pence	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	Unit 5	Multiplication and division (1)	1	Multiples of 3	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	2	Multiply and divide by 6	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	3	6 times-table and division facts	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	4	Multiply and divide by 9	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	5	9 times-table and division facts	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	6	The 3, 6 and 9 times-tables	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	7	Multiply and divide by 7	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	8	7 times-table and division facts	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	9	11 and 12 times-tables and division facts	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	Unit 5	Multiplication and division (1)	10	Multiply by 1 and 0	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	
Number – multiplication and division	Unit 5	Multiplication and division (1)	11	Divide by 1 and itself	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	
Number – multiplication and division	Unit 5	Multiplication and division (1)	12	Multiply three numbers	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	

Power Maths Year 4, Textbook 4B (Term 2) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	6	Multiplication and division (2)	1	Factor pairs	Recognise and use factor pairs and commutativity in mental calculations	
Number – multiplication and division	6	Multiplication and division (2)	2	Multiply and divide by 10	Recall multiplication and division facts for multiplication tables up to 12 × 12	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
Number – multiplication and division	6	Multiplication and division (2)	3	Multiply and divide by 100	Recall multiplication and division facts for multiplication tables up to 12 × 12	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
Number – multiplication and division	6	Multiplication and division (2)	4	Related facts – multiplication	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	6	Multiplication and division (2)	5	Related facts – division	Recall multiplication and division facts for multiplication tables up to 12 × 12	
Number – multiplication and division	6	Multiplication and division (2)	6	Multiply and add	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	
Number – multiplication and division	6	Multiplication and division (2)	7	Informal written methods	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	
Number – multiplication and division	6	Multiplication and division (2)	8	Multiply 2 digits by 1 digit	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	
Number – multiplication and division	6	Multiplication and division (2)	9	Multiply 3 digits by 1 digit	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	
Number – multiplication and division	6	Multiplication and division (2)	10	Solve multiplication problems	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	
Number – multiplication and division	6	Multiplication and division (2)	11	Basic division	Recognise and use factor pairs and commutativity in mental calculations	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
Number – multiplication and division	6	Multiplication and division (2)	12	Division and remainders	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	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
Number – multiplication and division	6	Multiplication and division (2)	13	Divide 2-digit numbers	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	
Number – multiplication and division	6	Multiplication and division (2)	14	Divide 3-digit numbers	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	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	6	Multiplication and division (2)	15	Correspondence problems	Recognise and use factor pairs and commutativity in mental calculations	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
Number – multiplication and division	6	Multiplication and division (2)	16	Efficient multiplication	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	Recognise and use factor pairs and commutativity in mental calculations
Measurement	7	Length and perimeter	1	Measure in km and m	Convert between different units of measure [for example, kilometre to metre; hour to minute]	
Measurement	7	Length and perimeter	2	Perimeter on a grid	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
Measurement	7	Length and perimeter	3	Perimeter of a rectangle	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
Measurement	7	Length and perimeter	4	Perimeter of rectilinear shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
Measurement	7	Length and perimeter	5	Find missing lengths in rectilinear shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
Measurement	7	Length and perimeter	6	Perimeter of polygons	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
Number – fractions	8	Fractions (1)	1	Count beyond 1	Non-statutory guidance: They practise counting using simple fractions and decimals, both forwards and backwards	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
Number – fractions	8	Fractions (1)	2	Partition a mixed number	Ready to progress criteria (4F–1): Reason about the location of mixed numbers in the linear number system	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
Number – fractions	8	Fractions (1)	3	Number lines with mixed numbers	Ready to progress criteria (4F–1): Reason about the location of mixed numbers in the linear number system	Compare and order unit fractions, and fractions with the same denominators
Number – fractions	8	Fractions (1)	4	Compare and order mixed numbers	Ready to progress criteria (4F–1): Reason about the location of mixed numbers in the linear number system	Compare and order unit fractions, and fractions with the same denominators
Number – fractions	8	Fractions (1)	5	Convert mixed numbers to improper fractions	Ready to progress criteria (4F–2): Convert mixed numbers to improper fractions and vice versa	Recognise and show, using diagrams, equivalent fractions with small denominators
Number – fractions	8	Fractions (1)	6	Convert improper fractions to mixed numbers	Ready to progress criteria (4F–2): Convert mixed numbers to improper fractions and vice versa	Recognise and show, using diagrams, equivalent fractions with small denominators
Number – fractions	8	Fractions (1)	7	Equivalent fractions	Recognise and show, using diagrams, families of common equivalent fractions	Compare and order unit fractions, and fractions with the same denominators
Number – fractions	8	Fractions (1)	8	Equivalent fraction families	Recognise and show, using diagrams, families of common equivalent fractions	Recognise and show, using diagrams, equivalent fractions with small denominators
Number – fractions	8	Fractions (1)	9	Simplify fractions	Recognise and show, using diagrams, families of common equivalent fractions	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions	9	Fractions (2)	1	Add and subtract two or more fractions	Add and subtract fractions with the same denominator	
Number – fractions	9	Fractions (2)	2	Add fractions and mixed numbers	Add and subtract fractions with the same denominator	
Number – fractions	9	Fractions (2)	3	Subtract from mixed numbers	Add and subtract fractions with the same denominator	
Number – fractions	9	Fractions (2)	4	Subtract from whole amounts	Add and subtract fractions with the same denominator	
Number – fractions	9	Fractions (2)	5	Problem solving – add and subtract fractions (1)	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	
Number – fractions	9	Fractions (2)	6	Problem solving – add and subtract fractions (2)	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	
Number – fractions	9	Fractions (2)	7	Fraction of an amount	Non-stat lesson. It is not specifically mentioned in the curriculum	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
Number – fractions	9	Fractions (2)	8	Problem solving – fraction of an amount	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	
Number – fractions (including decimals and percentages)	10	Decimals (1)	1	Tenths as fractions	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	2	Tenths as decimals	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	3	Tenths on a place value grid	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	4	Tenths on a number line (1)	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	5	Tenths on a number line (2)	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	6	Divide 1 digit by 10	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	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	10	Decimals (1)	7	Divide 2 digits by 10	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	
Number – fractions (including decimals and percentages)	10	Decimals (1)	8	Hundredths as fractions	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	9	Hundredths as decimals	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	10	Hundredths on a place value grid	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	10	Decimals (1)	11	Divide 1 or 2 digits by 100	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	
Number – fractions (including decimals and percentages)	10	Decimals (1)	12	Divide by 10 and 100	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	

Power Maths Year 4, Textbook 4C (Term 3) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	11	Decimals (2)	1	Make a whole	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	11	Decimals (2)	2	Partition decimals	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	11	Decimals (2)	3	Flexibly partition decimals	Recognise and write decimal equivalents of any number of tenths or hundredths	
Number – fractions (including decimals and percentages)	11	Decimals (2)	4	Compare decimals	Compare numbers with the same number of decimal places up to two decimal places	
Number – fractions (including decimals and percentages)	11	Decimals (2)	5	Order decimals	Compare numbers with the same number of decimal places up to two decimal places	
Number – fractions (including decimals and percentages)	11	Decimals (2)	6	Round to the nearest whole	Round decimals with one decimal place to the nearest whole number	
Number – fractions (including decimals and percentages)	11	Decimals (2)	7	Halves and quarters as decimals	Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$	
Measurement	12	Money	1	Write money using decimals	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	12	Money	2	Convert between pounds and pence	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	12	Money	3	Compare amounts of money	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	12	Money	4	Estimate with money	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	12	Money	5	Calculate with money	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	12	Money	6	Solve problems with money	Estimate, compare and calculate different measures, including money in pounds and pence	
Measurement	13	Time	1	Years, months, weeks and days	Convert between different units of measure [for example, kilometre to metre; hour to minute]	
Measurement	13	Time	2	Hours, minutes and seconds	Convert between different units of measure [for example, kilometre to metre; hour to minute]	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	13	Time	3	Convert between analogue and digital times	Convert between different units of measure [for example, kilometre to metre; hour to minute]	
Measurement	13	Time	4	Convert to the 24 hour clock	Convert between different units of measure [for example, kilometre to metre; hour to minute]	
Measurement	13	Time	5	Problem solving – convert units of time	Convert between different units of measure [for example, kilometre to metre; hour to minute]	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	1	Identify angles	Identify acute and obtuse angles and compare and order angles up to two right angles by size	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	2	Compare and order angles	Identify acute and obtuse angles and compare and order angles up to two right angles by size	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	3	Triangles	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	4	Quadrilaterals	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	5	Polygons	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	6	Reason about polygons	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	7	Lines of symmetry	Identify lines of symmetry in 2D shapes presented in different orientations	
Geometry – properties of shapes	14	Geometry – angles and 2D shapes	8	Complete a symmetric figure	Complete a simple symmetric figure with respect to a specific line of symmetry	
Statistics	15	Statistics	1	Interpret charts	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	
Statistics	15	Statistics	2	Solve problems with charts (1)	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	
Statistics	15	Statistics	3	Solve problems with charts (2)	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	
Statistics	15	Statistics	4	Interpret line graphs (1)	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	
Statistics	15	Statistics	5	Interpret line graphs (2)	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	
Statistics	15	Statistics	6	Draw line graphs	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – position and direction	16	Geometry – position and direction	1	Describe position	Describe positions on a 2D grid as coordinates in the first quadrant	
Geometry – position and direction	16	Geometry – position and direction	2	Describe position using coordinates	Describe positions on a 2D grid as coordinates in the first quadrant	
Geometry – position and direction	16	Geometry – position and direction	3	Plot coordinates	Plot specified points and draw sides to complete a given polygon	Describe positions on a 2D grid as coordinates in the first quadrant
Geometry – position and direction	16	Geometry – position and direction	4	Draw 2D shapes on a grid	Plot specified points and draw sides to complete a given polygon	
Geometry – position and direction	16	Geometry – position and direction	5	Translate on a grid	Describe movements between positions as translations of a given unit to the left/right and up/down	
Geometry – position and direction	16	Geometry – position and direction	6	Describe translation on a grid	Describe movements between positions as translations of a given unit to the left/right and up/down	

Power Maths Year 5, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 1,000,000 (1)	8
	Number – number and place value	2	Place value within 1,000,000 (2)	6
	Number – addition and subtraction	3	Addition and subtraction	12
	Number – multiplication and division	4	Multiplication and division (1)	10
	Number – fractions (including decimals and percentages)	5	Fractions (1)	8
	Number – fractions (including decimals and percentages)	6	Fractions (2)	11
Textbook B / Practice Workbook B (Term 2)	Number – multiplication and division	7	Multiplication and division (2)	10
	Number – fractions (including decimals and percentages)	8	Fractions (3)	7
	Number – fractions (including decimals and percentages)	9	Decimals and percentages	15
	Measurement	10	Measure – perimeter and area	8
	Statistics	11	Graphs and tables	6
Textbook C / Practice Workbook C (Term 3)	Geometry – properties of shapes	12	Geometry – properties of shapes	12
	Geometry – position and direction	13	Geometry – position and direction	6
	Number – fractions (including decimals and percentages)	14	Decimals	15
	Number – number and place value	15	Negative numbers	4
	Measurement	16	Measure – converting units	10
	Measurement	17	Measure – volume and capacity	3

Power Maths Year 5, Textbook 5A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	1	Roman numerals	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	2	Numbers to 10,000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	3	Numbers to 100,000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	4	Numbers to 1,000,000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	5	Read and write 5- and 6-digit numbers	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	6	Powers of 10	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	7	10/100/1,000/ 10,000/100,000 more or less	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	8	Partition numbers to 1,000,000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	1	Number line to 1,000,000	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	2	Compare and order numbers to 100,000	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	3	Compare and order numbers to 1,000,000	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	4	Round numbers to the nearest 100,000	Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	5	Round numbers to the nearest 10,000	Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	
Number – number and place value	Unit 2	Place value within 1,000,000 (2)	6	Round numbers to the nearest 10, 100 and 1,000	Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	
Number – addition and subtraction	Unit 3	Addition and subtraction	1	Mental strategies (addition)	Add and subtract numbers mentally with increasingly large numbers	
Number – addition and subtraction	Unit 3	Addition and subtraction	2	Mental strategies (subtraction)	Add and subtract numbers mentally with increasingly large numbers	
Number – addition and subtraction	Unit 3	Addition and subtraction	3	Add whole numbers with more than 4 digits (1)	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
Number – addition and subtraction	Unit 3	Addition and subtraction	4	Add whole numbers with more than 4 digits (2)	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 3	Addition and subtraction	5	Subtract whole numbers with more than 4 digits (1)	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
Number – addition and subtraction	Unit 3	Addition and subtraction	6	Subtract whole numbers with more than 4 digits (2)	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
Number – addition and subtraction	Unit 3	Addition and subtraction	7	Round to check answers	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	
Number – addition and subtraction	Unit 3	Addition and subtraction	8	Inverse operations (addition and subtraction)	Estimate and use inverse operations to check answers to a calculation	
Number – addition and subtraction	Unit 3	Addition and subtraction	9	Multi-step addition and subtraction problems (1)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	10	Multi-step addition and subtraction problems (2)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	11	Solve missing number problems	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition and subtraction	Unit 3	Addition and subtraction	12	Solve comparison problems	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – multiplication and division	Unit 4	Multiplication and division (1)	1	Multiples	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	
Number – multiplication and division	Unit 4	Multiplication and division (1)	2	Common multiples	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	
Number – multiplication and division	Unit 4	Multiplication and division (1)	3	Factors	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	
Number – multiplication and division	Unit 4	Multiplication and division (1)	4	Common factors	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	
Number – multiplication and division	Unit 4	Multiplication and division (1)	5	Prime numbers	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	
Number – multiplication and division	Unit 4	Multiplication and division (1)	6	Square numbers	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	
Number – multiplication and division	Unit 4	Multiplication and division (1)	7	Cube numbers	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	
Number – multiplication and division	Unit 4	Multiplication and division (1)	8	Multiply by 10, 100 and 1,000	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	Unit 4	Multiplication and division (1)	9	Divide by 10, 100 and 1,000	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Number – multiplication and division	Unit 4	Multiplication and division (1)	10	Multiples of 10, 100 and 1,000	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	1	Equivalent fractions 1	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	2	Equivalent fractions 2 – unit and non-unit fractions	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	3	Equivalent fractions 3 – families of equivalent fractions	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	4	Improper fractions to mixed numbers	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	5	Mixed numbers to improper fractions	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	6	Compare fractions less than 1	Compare and order fractions whose denominators are all multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	7	Order fractions less than 1	Compare and order fractions whose denominators are all multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (1)	8	Compare and order fractions greater than 1	Compare and order fractions whose denominators are all multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	1	Add and subtract fractions	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	2	Add fractions within 1	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	3	Add fractions with total greater than 1	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	4	Add to a mixed number	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	5	Add two mixed numbers	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	6	Subtract fractions within 1	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	7	Subtract from a mixed number	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	8	Subtract from a mixed number – breaking the whole	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	9	Subtract two mixed numbers	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	10	Solve fraction problems	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	11	Solve multi-step fraction problems	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	

Power Maths Year 5, Textbook 5B (Term 2) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – multiplication and division	7	Multiplication and division (2)	1	Multiply a number up to 4 digits by a 1-digit number	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	
Number – multiplication and division	7	Multiplication and division (2)	2	Multiply 2-digit numbers (area model)	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 and divide numbers mentally drawing upon known facts
Number – multiplication and division	7	Multiplication and division (2)	3	Multiply 2-digit numbers	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 and divide numbers mentally drawing upon known facts
Number – multiplication and division	7	Multiplication and division (2)	4	Multiply a 3-digit number by a 2-digit number	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	
Number – multiplication and division	7	Multiplication and division (2)	5	Multiply a 4-digit number by a 2-digit number	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	
Number – multiplication and division	7	Multiplication and division (2)	6	Divide a number up to 4 digits by a 1-digit number (1)	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	
Number – multiplication and division	7	Multiplication and division (2)	7	Divide a number up to 4 digits by a 1-digit number (2)	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	
Number – multiplication and division	7	Multiplication and division (2)	8	Divide with remainders	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	
Number – multiplication and division	7	Multiplication and division (2)	9	Efficient division	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	
Number – multiplication and division	7	Multiplication and division (2)	10	Solve problems with multiplication and division	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
Number – fractions (including decimals and percentages)	8	Fractions (3)	1	Multiply unit fractions by an integer	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	8	Fractions (3)	2	Multiply non-unit fractions by an integer	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	8	Fractions (3)	3	Multiply mixed numbers by integers (1)	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	8	Fractions (3)	4	Multiply mixed numbers by integers (2)	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
Number – fractions (including decimals and percentages)	8	Fractions (3)	5	Fraction of an amount	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
Number – fractions (including decimals and percentages)	8	Fractions (3)	6	Finding the whole	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
Number – fractions (including decimals and percentages)	8	Fractions (3)	7	Using fractions as operators	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$
Number – fractions (including decimals and percentages)	9	Decimals and percentages	1	Write decimals up to 2 decimal places – less than 1	Read, write, order and compare numbers with up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	2	Write decimals up to 2 decimals places – greater than 1	Read, write, order and compare numbers with up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	3	Equivalent fractions and decimals – tenths	Read and write decimal numbers as fractions [for example, 0·71 = 71/100]	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	4	Equivalent fractions and decimals – hundredths	Read and write decimal numbers as fractions [for example, 0·71 = 71/100]	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	5	Equivalent fractions and decimals	Read and write decimal numbers as fractions [for example, 0·71 = 71/100]	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	6	Thousandths as fractions	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	7	Thousandths as decimals	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	9	Decimals and percentages	8	Thousandths on a place value grid	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	9	Compare and order decimals – same number of decimal places	Read, write, order and compare numbers with up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	10	Compare and order any decimals with up to 3 decimal places	Read, write, order and compare numbers with up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	11	Round to the nearest whole number	Round decimals with two decimal places to the nearest whole number and to one decimal place	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	12	Round to one decimal place	Round decimals with two decimal places to the nearest whole number and to one decimal place	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	13	Understand percentages	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	14	Percentages as fractions and decimals	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	
Number – fractions (including decimals and percentages)	9	Decimals and percentages	15	Equivalent fractions, decimals and percentages	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25
Measurement	10	Measure – perimeter and area	1	Perimeter of rectangles	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Measurement	10	Measure – perimeter and area	2	Perimeter of rectilinear shapes (1)	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Measurement	10	Measure – perimeter and area	3	Perimeter of rectilinear shapes (2)	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Measurement	10	Measure – perimeter and area	4	Perimeter of polygons	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	
Measurement	10	Measure – perimeter and area	5	Area of rectangles (1)	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	10	Measure – perimeter and area	6	Area of rectangles (2)	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	
Measurement	10	Measure – perimeter and area	7	Area of compound shapes	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	
Measurement	10	Measure – perimeter and area	8	Estimate area	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	
Statistics	11	Graphs and tables	1	Draw line graphs	Solve comparison, sum and difference problems using information presented in a line graph	
Statistics	11	Graphs and tables	2	Read and interpret line graphs (1)	Solve comparison, sum and difference problems using information presented in a line graph	
Statistics	11	Graphs and tables	3	Read and interpret line graphs (2)	Solve comparison, sum and difference problems using information presented in a line graph	
Statistics	11	Graphs and tables	4	Read and interpret tables	Complete, read and interpret information in tables, including timetables	
Statistics	11	Graphs and tables	5	Two-way tables	Complete, read and interpret information in tables, including timetables	
Statistics	11	Graphs and tables	6	Timetables	Complete, read and interpret information in tables, including timetables	

Power Maths Year 5, Textbook 5C (Term 3) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – properties of shapes	12	Geometry – properties of shapes	1	Understand and use degrees	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) – other multiples of 90°
Geometry – properties of shapes	12	Geometry – properties of shapes	2	Measure acute angles	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
Geometry – properties of shapes	12	Geometry – properties of shapes	3	Measure angles up to 180°	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Draw given angles, and measure them in degrees (°)
Geometry – properties of shapes	12	Geometry – properties of shapes	4	Draw lines and angles accurately	Draw given angles, and measure them in degrees (°)	
Geometry – properties of shapes	12	Geometry – properties of shapes	5	Calculate angles around a point	Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) – other multiples of 90°	
Geometry – properties of shapes	12	Geometry – properties of shapes	6	Calculate angles on a straight line	Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) – other multiples of 90°	
Geometry – properties of shapes	12	Geometry – properties of shapes	7	Lengths and angles in shapes	Use the properties of rectangles to deduce related facts and find missing lengths and angles	
Geometry – properties of shapes	12	Geometry – properties of shapes	8	Regular and irregular polygons	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	
Geometry – properties of shapes	12	Geometry – properties of shapes	9	Parallel lines	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Year 3)	
Geometry – properties of shapes	12	Geometry – properties of shapes	10	Perpendicular lines	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Year 3)	
Geometry – properties of shapes	12	Geometry – properties of shapes	11	Investigate lines	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Year 3)	
Geometry – properties of shapes	12	Geometry – properties of shapes	12	3D shapes	Identify 3D shapes, including cubes and other cuboids, from 2D representations	
Geometry – position and direction	13	Geometry – position and direction	1	Read and plot coordinates	Describe positions on a 2D grid as coordinates in the first quadrant (Year 4)	Plot specified points and draw sides to complete a given polygon (Year 4)
Geometry – position and direction	13	Geometry – position and direction	2	Problem solving with coordinates	Describe positions on a 2D grid as coordinates in the first quadrant (Year 4)	Plot specified points and draw sides to complete a given polygon (Year 4)
Geometry – position and direction	13	Geometry – position and direction	3	Translate shapes	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	
Geometry – position and direction	13	Geometry – position and direction	4	Translate points	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	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – position and direction	13	Geometry – position and direction	5	Reflection	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	
Geometry – position and direction	13	Geometry – position and direction	6	Reflection in horizontal and vertical lines	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	
Number – fractions (including decimals and percentages)	14	Decimals	1	Add and subtract decimals within 1 (1)	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	2	Add and subtract decimals within 1 (2)	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	3	Complements to 1	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	4	Add and subtract decimals across 1	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	5	Add decimals with the same number of decimal places	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	6	Subtract decimals with the same number of decimal places	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	7	Add decimals with a different number of decimal places	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	8	Subtract decimals with a different number of decimal places	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	9	Problem solving with decimals (1)	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	10	Problem solving with decimals (2)	Solve problems involving number up to three decimal places	
Number – fractions (including decimals and percentages)	14	Decimals	11	Decimal sequences	Read, write, order and compare numbers with up to three decimal places	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	14	Decimals	12	Multiply by 10	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Solve problems involving number up to three decimal places
Number – fractions (including decimals and percentages)	14	Decimals	13	Multiply by 10, 100 and 1,000	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Solve problems involving number up to three decimal places
Number – fractions (including decimals and percentages)	14	Decimals	14	Divide by 10	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Solve problems involving number up to three decimal places
Number – fractions (including decimals and percentages)	14	Decimals	15	Divide by 10, 100 and 1,000	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Solve problems involving number up to three decimal places
Number – number and place value	15	Negative numbers	1	Understand negative numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
Number – number and place value	15	Negative numbers	2	Count through zero	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
Number – number and place value	15	Negative numbers	3	Compare and order negative numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
Number – number and place value	15	Negative numbers	4	Find the difference	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
Measurement	16	Measure – converting units	1	Kilograms and kilometres	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	
Measurement	16	Measure – converting units	2	Millimetres and millilitres	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	
Measurement	16	Measure – converting units	3	Convert units of length	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	
Measurement	16	Measure – converting units	4	Imperial units of length	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	
Measurement	16	Measure – converting units	5	Imperial units of mass	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	16	Measure – converting units	6	Imperial units of capacity	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	
Measurement	16	Measure – converting units	7	Convert units of time	Solve problems involving converting between units of time	
Measurement	16	Measure – converting units	8	Timetables – calculating	Solve problems involving converting between units of time	
Measurement	16	Measure – converting units	9	Problem solving – units of measure (1)	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
Measurement	16	Measure – converting units	10	Problem solving – units of measure (2)	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
Measurement	17	Measure – volume	1	Cubic centimetres	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	
Measurement	17	Measure – volume	2	Compare volumes	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	
Measurement	17	Measure – volume	3	Estimate volume	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	

Power Maths Year 6, yearly overview

Textbook	Strand	Unit		Number of lessons
Textbook A / Practice Workbook A (Term 1)	Number – number and place value	1	Place value within 10,000,000	8
	Number – addition, subtraction, multiplication and division	2	Four operations (1)	8
	Number – addition, subtraction, multiplication and division	3	Four operations (2)	12
	Number - fractions	4	Fractions (1)	9
	Number - fractions	5	Fractions (2)	9
	Measurement	6	Measure – imperial and metric measures	5
Textbook B / Practice Workbook B (Term 2)	Ratio and proportion	7	Ratio and proportion	9
	Algebra	8	Algebra	11
	Number - fractions (including decimals and percentages)	9	Decimals	9
	Number - fractions (including decimals and percentages)	10	Percentages	8
	Measurement	11	Measure – perimeter, area and volume	11
Textbook C / Practice Workbook C (Term 3)	Statistics	12	Statistics	11
	Geometry – properties of shapes	13	Geometry – properties of shapes	12
	Geometry – position and direction	14	Geometry – position and direction	5
	Number – addition, subtraction, multiplication and division	15	Problem solving	14

Power Maths Year 6, Textbook 6A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – number and place value	Unit 1	Place value within 10,000,000	1	Numbers to 1,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	2	Numbers to 10,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	3	Partition numbers to 10,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	4	Powers of 10	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	5	Number line to 10,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	6	Compare and order any number	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Solve number and practical problems
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	7	Round any number	Round any whole number to a required degree of accuracy	
Number – number and place value	Unit 1	Place value within 1,000,000 (1)	8	Negative numbers	Use negative numbers in context, and calculate intervals across zero	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	1	Add integers	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	2	Subtract integers	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	3	Problem solving – addition and subtraction	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	4	Common factors	Identify common factors, common multiples and prime numbers	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	5	Common multiples	Identify common factors, common multiples and prime numbers	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	6	Rules of divisibility	Identify common factors, common multiples and prime numbers	Use their knowledge of the order of operations to carry out calculations involving the four operations
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	7	Primes to 100	Identify common factors, common multiples and prime numbers	
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	8	Squares and cubes	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) (year 5)	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition and subtraction	Unit 3	Four operations (2)	1	Multiply by a 1-digit number	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	
Number – addition and subtraction	Unit 3	Addition and subtraction	2	Multiply up to a 4-digit number by a 2-digit number	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	
Number – addition and subtraction	Unit 3	Addition and subtraction	3	Short division	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	
Number – addition and subtraction	Unit 3	Addition and subtraction	4	Division using factors	Identify common factors, common multiples and prime numbers	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
Number – addition and subtraction	Unit 3	Addition and subtraction	5	Divide a 3-digit number by 2-digit (long division)	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	
Number – addition and subtraction	Unit 3	Addition and subtraction	6	Divide a 4-digit number by 2-digit (long division)	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to 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
Number – addition and subtraction	Unit 3	Addition and subtraction	7	Long division with remainders	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to 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
Number – addition and subtraction	Unit 3	Addition and subtraction	8	Order of operations	Use their knowledge of the order of operations to carry out calculations involving the four operations	
Number – addition and subtraction	Unit 3	Addition and subtraction	9	Brackets	Use their knowledge of the order of operations to carry out calculations involving the four operations	
Number – addition and subtraction	Unit 3	Addition and subtraction	10	Mental calculations (1)	Perform mental calculations, including with mixed operations and large numbers	
Number – addition and subtraction	Unit 3	Addition and subtraction	11	Mental calculations (2)	Perform mental calculations, including with mixed operations and large numbers	
Number – addition and subtraction	Unit 3	Addition and subtraction	12	Reason from known facts	Use their knowledge of the order of operations to carry out calculations involving the four operations	Solve problems involving addition, subtraction, multiplication and division
Number – fraction	Unit 4	Fractions (1)	1	Equivalent fractions and simplifying	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	
Number – fraction	Unit 4	Fractions (1)	2	Equivalent fractions on a number line	Compare and order fractions, including fractions > 1	
Number – fraction	Unit 4	Fractions (1)	3	Compare and order fractions (	Compare and order fractions, including fractions > 1	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fraction	Unit 4	Fractions (1)	4	Add and subtract simple fractions	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fraction	Unit 4	Fractions (1)	5	Add and subtract any two fractions	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fraction	Unit 4	Fractions (1)	6	Add mixed numbers	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fraction	Unit 4	Fractions (1)	7	Subtract mixed numbers	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fraction	Unit 4	Fractions (1)	8	Multi-step problems	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fraction	Unit 4	Fractions (1)	9	Problem solving - add and subtract fractions	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	1	Multiply fractions by integers	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	2	Multiply fractions by fractions (1)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	3	Multiply fractions by fractions (2)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	4	Divide a fraction by an integer (1)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	5	Divide a fraction by an integer (2)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	6	Divide a fraction by an integer (2)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	7	Mixed questions with fractions	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	8	Fraction of an amount	Use written division methods in cases where the answer has up to two decimal places	

Strand	Unit		Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	Unit 5	Fractions (2)	9	Fraction of an amount – find the whole	Use written division methods in cases where the answer has up to two decimal places	
Measurement	Unit 6	Measure – imperial and metric measures	1	Metric measures	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	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	2	Convert metric measures	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	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	3	Calculate with metric measures	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	4	Miles and kilometres	Convert between miles and kilometres	
Number – fractions (including decimals and percentages)	Unit 6	Fractions (2)	5	Imperial measures	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	

Power Maths Year 6, Textbook 6B (Term 2) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Ratio and proportion	7	Ratio and proportion	1	Use ratio language	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	
Ratio and proportion	7	Ratio and proportion	2	Introduce the ratio symbol	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	
Ratio and proportion	7	Ratio and proportion	3	Use ratio	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	
Ratio and proportion	7	Ratio and proportion	4	Scale drawing	Solve problems involving similar shapes where the scale factor is known or can be found	
Ratio and proportion	7	Ratio and proportion	5	Scale factors	Solve problems involving similar shapes where the scale factor is known or can be found	
Ratio and proportion	7	Ratio and proportion	6	Similar shapes	Solve problems involving similar shapes where the scale factor is known or can be found	
Ratio and proportion	7	Ratio and proportion	7	Ratio problems	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	
Ratio and proportion	7	Ratio and proportion	8	Problem solving – ratio and proportion (1)	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
Ratio and proportion	7	Ratio and proportion	9	Problem solving – ratio and proportion (2)	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
Algebra	8	Algebra	1	Find a rule – one step	Generate and describe linear number sequences	
Algebra	8	Algebra	2	Find a rule – two steps	Generate and describe linear number sequences	
Algebra	8	Algebra	3	Form expressions	Generate and describe linear number sequences	
Algebra	8	Algebra	4	Substitution (1)	Express missing number problems algebraically	Generate and describe linear number sequences
Algebra	8	Algebra	5	Substitution (2)	Express missing number problems algebraically	Generate and describe linear number sequences
Algebra	8	Algebra	6	Formulae	Use simple formulae	
Algebra	8	Algebra	7	Form and solve equations	Express missing number problems algebraically	
Algebra	8	Algebra	8	Solve one-step equations	Express missing number problems algebraically	
Algebra	8	Algebra	9	Solve two-step equations	Express missing number problems algebraically	
Algebra	8	Algebra	10	Find pairs of values	Find pairs of numbers that satisfy an equation with two unknowns	
Algebra	8	Algebra	11	Solve problems with two unknowns	Enumerate possibilities of combinations of two variables	Find pairs of numbers that satisfy an equation with two unknowns

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	9	Decimals	1	Place value to 3 decimal places	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	Solve problems which require answers to be rounded to specified degrees of accuracy
Number – fractions (including decimals and percentages)	9	Decimals	2	Round decimals	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	Solve problems which require answers to be rounded to specified degrees of accuracy
Number – fractions (including decimals and percentages)	9	Decimals	3	Add and subtract decimals	Solve problems which require answers to be rounded to specified degrees of accuracy	
Number – fractions (including decimals and percentages)	9	Decimals	4	Multiply by 10, 100 and 1,000	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals	5	Divide by 10, 100 and 1,000	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	
Number – fractions (including decimals and percentages)	9	Decimals	6	Multiply decimals by integers	Multiply one-digit numbers with up to two decimal places by whole numbers	
Number – fractions (including decimals and percentages)	9	Decimals	7	Divide decimals by integers	Use written division methods in cases where the answer has up to two decimal places	Solve problems which require answers to be rounded to specified degrees of accuracy
Number – fractions (including decimals and percentages)	9	Decimals	8	Fractions to decimals	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
Number – fractions (including decimals and percentages)	9	Decimals	9	Fractions as division	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	
Number – fractions (including decimals and percentages)	10	Percentages	1	Understand percentages	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	
Number – fractions (including decimals and percentages)	10	Percentages	2	Fractions to percentages	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – fractions (including decimals and percentages)	10	Percentages	3	Equivalent fractions, decimals and percentages	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	
Number – fractions (including decimals and percentages)	10	Percentages	4	Order fractions, decimals and percentages	Compare and order fractions, including fractions > 1	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Number – fractions (including decimals and percentages)	10	Percentages	5	Simple percentage of an amount	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Number – fractions (including decimals and percentages)	10	Percentages	6	Percentage of an amount – 1%	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Number – fractions (including decimals and percentages)	10	Percentages	7	Percentages of an amount	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Number – fractions (including decimals and percentages)	10	Percentages	8	Percentages (missing values)	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	Multiply one-digit numbers with up to two decimal places by whole numbers
Measurement	11	Measure – perimeter, area and volume	1	Shapes – same area	Recognise that shapes with the same areas can have different perimeters and vice versa	
Measurement	11	Measure – perimeter, area and volume	2	Area and perimeter	Recognise that shapes with the same areas can have different perimeters and vice versa	
Measurement	11	Measure – perimeter, area and volume	3	Area and perimeter – missing lengths	Recognise that shapes with the same areas can have different perimeters and vice versa	
Measurement	11	Measure – perimeter, area and volume	4	Area of a triangle – counting squares	Calculate the area of parallelograms and triangles	
Measurement	11	Measure – perimeter, area and volume	5	Area of a right-angled triangle	Calculate the area of parallelograms and triangles	
Measurement	11	Measure – perimeter, area and volume	6	Area of any triangle	Calculate the area of parallelograms and triangles	
Measurement	11	Measure – perimeter, area and volume	7	Area of a parallelogram	Recognise when it is possible to use formulae for area and volume of shapes	Calculate the area of parallelograms and triangles
Measurement	11	Measure – perimeter, area and volume	8	Problem solving – area	Calculate the area of parallelograms and triangles	
Measurement	11	Measure – perimeter, area and volume	9	Problem solving – perimeter	Recognise that shapes with the same areas can have different perimeters and vice versa	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Measurement	11	Measure – perimeter, area and volume	10	Volume – count cubes	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]	Recognise when it is possible to use formulae for area and volume of shapes
Measurement	11	Measure – perimeter, area and volume	11	Volume of a cuboid	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]	Recognise when it is possible to use formulae for area and volume of shapes

Power Maths Year 6, Textbook 6C (Term 3) overview

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Statistics	12	Statistics	1	Interpret line graphs	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	2	Draw line graphs	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	3	Advanced bar charts	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Statistics	12	Statistics	4	Understand and complete pie charts	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	5	Read and interpret pie charts	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	6	Pie charts and fractions (1)	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	7	Pie charts and fractions (2)	Interpret and construct pie charts and line graphs and use these to solve problems	
Statistics	12	Statistics	8	Pie charts and percentages	Interpret and construct pie charts and line graphs and use these to solve problems	Pupils connect their work on angles, fractions and percentages to the interpretation of pie charts [non-stat]
Statistics	12	Statistics	9	Introduction to the mean	Calculate and interpret the mean as an average	
Statistics	12	Statistics	10	Calculate the mean	Calculate and interpret the mean as an average	
Statistics	12	Statistics	11	Problem solving – mean	Calculate and interpret the mean as an average	
Geometry – properties of shapes	13	Geometry – properties of shapes	1	Measure and classify angles	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	
Geometry – properties of shapes	13	Geometry – properties of shapes	2	Vertically opposite angles	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	
Geometry – properties of shapes	13	Geometry – properties of shapes	3	Angles in a triangle	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	Draw 2D shapes using given dimensions and angles

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – properties of shapes	13	Geometry – properties of shapes	4	Angles in a triangle – missing angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
Geometry – properties of shapes	13	Geometry – properties of shapes	5	Angles in a triangle – special cases	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
Geometry – properties of shapes	13	Geometry – properties of shapes	6	Angles in quadrilaterals	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
Geometry – properties of shapes	13	Geometry – properties of shapes	7	Angles in polygons	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
Geometry – properties of shapes	13	Geometry – properties of shapes	8	Circles	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	
Geometry – properties of shapes	13	Geometry – properties of shapes	9	Parts of a circle	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	
Geometry – properties of shapes	13	Geometry – properties of shapes	10	Draw shapes accurately	Draw 2D shapes using given dimensions and angles	
Geometry – properties of shapes	13	Geometry – properties of shapes	11	Nets of 3D shapes (1)	Recognise, describe and build simple 3D shapes, including making nets	
Geometry – properties of shapes	13	Geometry – properties of shapes	12	Nets of 3D shapes (2)	Recognise, describe and build simple 3D shapes, including making nets	
Geometry – position and direction	14	Geometry – position and direction	1	The first quadrant	Describe positions on the full coordinate grid (all four quadrants)	
Geometry – position and direction	14	Geometry – position and direction	2	Read and plot points in four quadrants	Describe positions on the full coordinate grid (all four quadrants)	
Geometry – position and direction	14	Geometry – position and direction	3	Translations	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	
Geometry – position and direction	14	Geometry – position and direction	4	Reflections	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Geometry – position and direction	14	Geometry – position and direction	5	Solve problems with coordinates	Describe positions on the full coordinate grid (all four quadrants)	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Number – addition, subtraction, multiplication and division	15	Problem solving	1	Problem solving – place value	Solve number and practical problems that involve all of the above	
Number – addition, subtraction, multiplication and division	15	Problem solving	2	Problem solving – negative numbers	Solve number and practical problems that involve all of the above	
Number – addition, subtraction, multiplication and division	15	Problem solving	3	Problem solving – addition and subtraction	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Number – addition, subtraction, multiplication and division	15	Problem solving	4	Problem solving – four operations (1)	Solve problems involving addition, subtraction, multiplication and division	Use their knowledge of the order of operations to carry out calculations involving the four operations
Number – addition, subtraction, multiplication and division	15	Problem solving	5	Problem solving – four operations (2)	Solve problems involving addition, subtraction, multiplication and division	
Number – addition, subtraction, multiplication and division	15	Problem solving	6	Problem solving – fractions	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	
Number – addition, subtraction, multiplication and division	15	Problem solving	7	Problem solving – decimals	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	
Number – addition, subtraction, multiplication and division	15	Problem solving	8	Problem solving – percentages	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	
Number – addition, subtraction, multiplication and division	15	Problem solving	9	Problem solving – ratio and proportion	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
Number – addition, subtraction, multiplication and division	15	Problem solving	10	Problem solving – time (1)	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	

Strand	Unit	Unit title	Lesson number	Lesson title	NC Objective 1	NC Objective 2
Number – addition, subtraction, multiplication and division	15	Problem solving	11	Problem solving – time (2)	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	
Number – addition, subtraction, multiplication and division	15	Problem solving	12	Problem solving – position and direction	Describe positions on the full coordinate grid (all four quadrants)	
Number – addition, subtraction, multiplication and division	15	Problem solving	13	Problem solving – properties of shapes (1)	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
Number – addition, subtraction, multiplication and division	15	Problem solving	14	Problem solving – properties of shapes (2)	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons