

# Crockenhill Primary School



Calculation Policy  
2026 - 2027

These policies contain the key pencil and paper procedures that will be taught within Crockenhill Primary School. It has been written to ensure consistency and progression throughout the school and reflects a whole school agreement.

### **Intent Statement**

The Maths curriculum at Crockenhill Primary School has been designed to be accessible to all and to ensure the maximum development of every child's ability and academic achievement, in line with the national outcomes. We deliver lessons that are creative and engaging, using a range of stimuli such as books, Number Blocks and real-life problems, to hook the children and allow them to make links between their learning and everyday situations. Our curriculum aims to help children develop a love for Maths through growing confidence in their ability and enjoyment of what they are learning. We want children to make connections, develop their fluency, reason mathematically and solve problems with increasing sophistication. We understand that the way pupils speak and write about mathematics transforms their learning, so we plan in carefully sequenced and structured vocabulary to ensure that the children not only know what the answer is, but can confidently articulate their reasoning behind their understanding. Our intention is for our pupils to be able to apply their mathematical knowledge, understanding and skills in other subject areas to maximise their enjoyment and curiosity about the subject.

### **Implementation**

Maths is a core aspect of our curriculum and is taught daily in every year group. We are aware of the importance of the children being fluent in the fundamentals of mathematics as well as developing their problem solving and reasoning skills. At Crockenhill, we ensure learning is cumulative and progressive by following 'White Rose - small steps of learning'. This ensures our children are confident and secure in their understanding of each small concept, which enables all children to embed the learning and make progress. Our staff use a carefully adapted 'whole school overview' to ensure there is progression in knowledge and skills throughout the school. Using this, lessons are planned carefully to ensure links between Maths concepts are made when appropriate. Learning is taught through the Concrete, Pictorial and Abstract (CPA) ways of learning and mathematical vocabulary is taught explicitly and the children have regular opportunities to talk about maths and explain their thinking. We have adapted a mastery approach to the way that we deliver our Mathematics curriculum. During each lesson, children will receive teaching that is pitched and modelled appropriately, which focuses on their level of understanding. Our input starter activities support the children to:

- Recap skills that will support them in their new learning in the lesson
- Develop core skills such as number bonds, partitioning, rounding and times tables
- Reinforce and recap 'sticky knowledge' that has been previously taught in other topics of learning -  
Independently solve open ended problems/ challenges

During our daily Mathematics lessons, the children will work alongside the teachers and support staff to recap prior knowledge and are taught new learning, while receiving in lesson marking/ verbal feedback to ensure all children make progress and master each concept. Teachers use 'flexible grouping' to seat the children in order of understanding, to ensure the learning in each lesson is pitched appropriately. This means that extra support can be given to children that struggled the previous day and challenging questions given to children that are excelling. Marking, targeted questioning and children's own self assessments are used to ensure children are grouped appropriately. Children have a variety of strategies to support them during a lesson. An example of this is when they get stuck, they can use manipulatives to support them, look at the maths modelling on the working wall, talk to a buddy on their table or re-read the question and use an alternative method. If a pupil has demonstrated that they have not mastered a concept, they will receive additional support to secure their

understanding either later that day (same day intervention), during early morning work the next day or whole lessons may need to be re-taught, this ensures staff intervene quickly to tackle any key misconceptions, so that children keep up and don't have to catch- up!

At Crockenhill, we encourage our children to become confident problems solvers. We offer a range of opportunities to apply their mathematical knowledge, to show their ability to be systematic, logical, to find all possibilities and to find the rules and patterns that support their conjectures. It is also important that the children at Crockenhill are able to reason mathematically. We provide regular opportunities for the children to apply and explain their mathematical understanding and model this, in turn, so they can demonstrate real rigor and depth of knowledge. Teachers will challenge children who grasp concepts quickly by providing sophisticated problems, rather than accelerating them through new content from other year groups.

Strong roots in maths start early in our EYFS and Year 1 classrooms. In Reception and Year 1, the children learn through continuous provision. The children have access to a range of visuals and manipulatives to support them in consolidating learning, practising core skills, deepening their understanding through problem solving and reasoning challenges, as well as their love for Maths. The children have regular small, adult-led focus groups in which adults model and support the children to develop their oral fluency, automaticity and understanding. Children receive immediate, individual feedback to support them to secure their understanding and skills in each small concept of learning. The Maths provision area is used to further consolidate learning through adult directed enhancements and questioning as well as using the wider provision to develop and apply their understanding through meaningful experiences. In Reception, the children have one adult-led focus group a week. In the Autumn term of Year 1, the children will begin with two adult-led focus groups a week. During the Spring term this will increase so that in the Summer term of Year 1, the children learn through whole-class teaching, ready for the transition to Year 2.

At Crockenhill, we use online learning platforms to support the children's love of maths at home. Children are set tasks to help secure and master concepts taught, as well as to keep core skills on the boil. In addition to this, throughout the year there are 'Early Morning maths sessions', where children have the opportunity to come into school to practise core skills, solve mathematical problems and apply these skills to answer reasoning questions. Throughout the school, children use a range of manipulatives to support their understanding in Maths lessons, such as Numicon, dienes, bead strings, counters, 100 squares and multi-link, as well as different stimuli such as books, Number Blocks and real-life problems to ensure Maths is purposeful and enjoyable.

### **Impact**

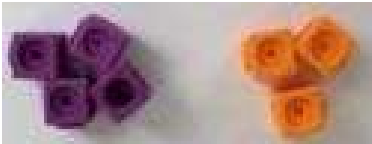
As a result of our Maths teaching at Crockenhill Primary School children are:

- **Enriched** - they make good progress during their time with us
- **Excited** - they can recognise and use a wide range of different representations of mathematical concepts
- **Engaged** - they are all challenged appropriately
- **Experienced** - they can use a variety of resources to support (and explain) their Maths learning
- **Equipped** - they can articulate their Maths learning and the links between mathematical concepts and how these will be used in their lives beyond the education setting

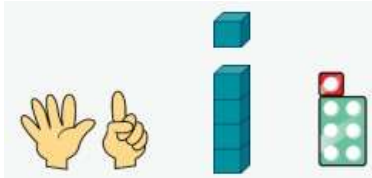
# EYFS Addition

In Reception, children develop a secure knowledge of number to 10. Children predominantly use a wide range of manipulatives, resources and everyday objects to support addition and number understanding. Children learn number and addition through singing songs and handling real-life objects and situations. There is a strong focus on learning to subitise, children are able to notice how many there are without having to count the objects. Children learn the composition of numbers to 10 in EYFS using resources. Children learn to count how many and add one more through songs and playing games.

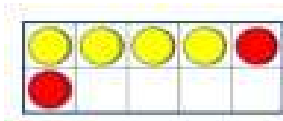
## Concrete



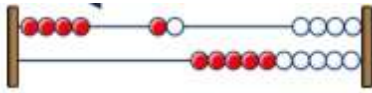
Combining sets of objects



How many ways can you make?



Tens frames



Bead strings

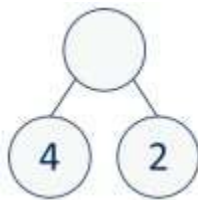


Subitising with real life objects

## Pictorial



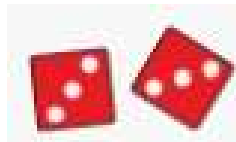
Number lines



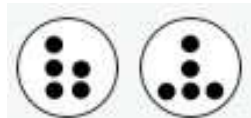
Part whole models using hoops



First, then and now



How many altogether?



What do you see?

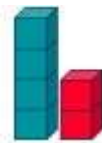
## Abstract

$$4 + 2 = 6$$

$$2 + 4 = 6$$

Verbally: four plus two is equal to six.

Children will move onto learning to write numbers to 10.

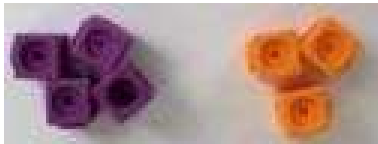


Eventually some children might be able to write the number sentence using digits and the correct symbols for add and equals.  $4 + 2 = 6$ .

# KS1 Addition

In Key Stage One, pupils are taught to add using concrete resources in order to identify and represent the different parts of a calculation. Addition is linked to counting on and through the use of number lines. Pupils add one and two digit numbers to 100. Pupils will be able to find missing numbers to addition calculations and have a secure understanding of the equal sign meaning 'the same as'. Much time is spent securing place value of tens and ones using dienes and place value counters. Children will fully understand that ten ones is equal to one ten. Children also leave KS1 with a fluent knowledge of number bonds to 10 and 20 through consistent use of Numicon, part-whole models and bar models.

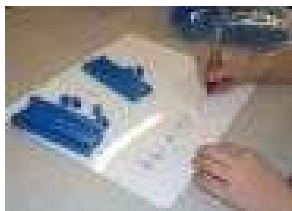
## Concrete



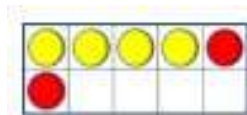
Combining sets of objects



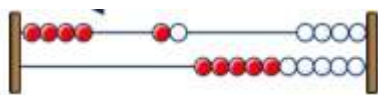
Numicon



Tens and ones

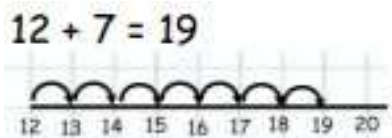


Tens frame

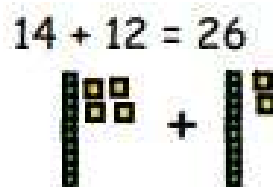


Bead strings

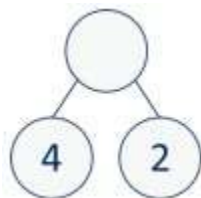
## Pictorial



Number lines



Tens and ones drawn into books as lines and dots



Part whole models drawn into books

## Abstract

$$12 + 7 = 19$$

Counting on in 1s mentally

$$14 + 12 = 26$$

Adding two digit numbers by partitioning and adding the ones first

$$5 + 2 = 7$$

$$15 + 2 = 17$$

$$3 + 2 = 5$$

$$30 + 20 = 50$$

Recognise known facts and number bonds and apply this knowledge to solve other calculations

$$2 + \square = 6$$

$$6 = 2 + \square$$

Solve missing number calculations

## KS2 Addition

In Key Stage Two, the fundamentals of place value are established by the end of year 2. So by the end of year 3, children practise and become fluent with columnar addition. This method is consolidated throughout KS2 and children become efficient with adding increasingly larger numbers. Pupils are also expected to now become fluent with the recall of single digit addition facts, allowing the individual calculations in each step to be quickly solved. In Year 4 children are introduced to decimals and connect this with their understanding of place value. As they move into upper KS2, they will begin to include decimal points in the columnar addition method in order to add numbers with up to 3 decimal places.

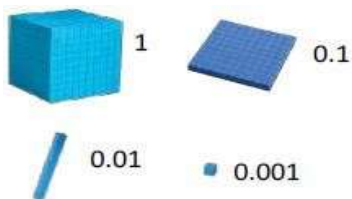
### Concrete



Place value counters to represent each digit.



Base 10 for columnar addition.



Base 10 to represent decimals.

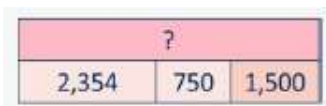


Base 10 to formally add.

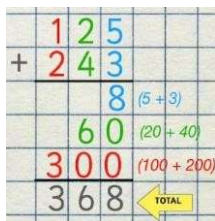
### Pictorial



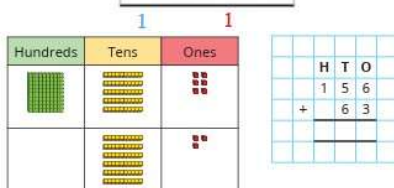
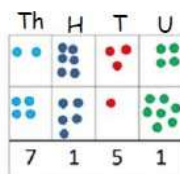
Number lines drawn in books.



Bar models drawn in books.



Expanded addition drawn in books.



Addition with dienes and counters drawn in books.

### Abstract

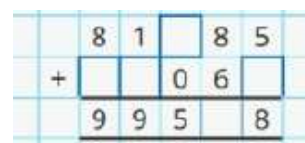
$$\begin{array}{r} 2634 \\ + 4517 \\ \hline 7151 \\ \hline \end{array}$$

Adding increasingly larger numbers and decimals using efficient methods. Carrying digits is noted below the equals.

$$\begin{array}{l} 235 + 3 = \\ 235 + 30 = \\ 235 + 300 = \end{array}$$

$$\begin{array}{l} 111 + \square = 118 \\ 604 + 20 = 111 + \square = 181 \\ 604 + 50 = 111 + \square = 811 \\ 604 + 90 = 111 + \square = 811 \end{array}$$

Recognise known facts and apply this knowledge to solve other calculations



Solve missing number calculations

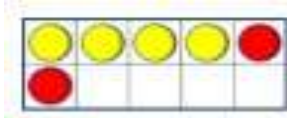
# EYFS Subtraction

In Reception, children develop a secure knowledge of number to 10. Children predominantly use a wide range of manipulatives, resources and everyday objects to support subtraction and number understanding. Children learn number and subtraction through singing songs and handling real-life objects and situations. There is a strong focus on learning to subitise, children are able to notice how many there are without having to count the objects. Children learn the composition of numbers to 10 in EYFS using resources. Children learn to count how many and take one away through songs and playing games. They will learn subtraction facts to consolidate and embed their understanding.

## Concrete



One more and one less of sets of objects.



Tens frames



One more and one less with real life objects

How many do we have now?

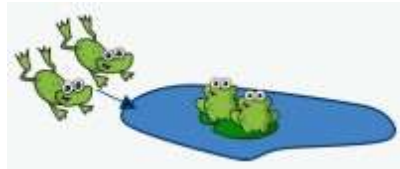


Take 1 away through stories, rhymes and songs.

## Pictorial



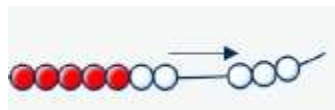
Number lines



First, then and now



What do you see?



Bead strings. First I have, I take ... away, now I have...

## Abstract

Verbally: I have six. I take one away. Now I have five

Children will move onto learning to write numbers to 10.

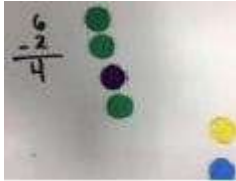
$$9 - 3 = 6$$

Eventually some children might be able to write the number sentence using digits and the correct symbols for minus/take away/subtract and equals.

# KS1 Subtraction

In Key Stage One, pupils are taught to subtract using concrete resources in order to identify and represent the different parts of a calculation. Subtraction is linked to counting on and through the use of number lines. Pupils subtract one and two digit numbers to 100. Pupils will be able to find missing numbers to subtraction calculations and have a secure understanding of the equal sign meaning 'the same as'. Much time is spent securing place value of tens and ones using dienes and place value counters. Children will fully understand that ten ones is equal to one ten. Children also leave KS1 with a fluent knowledge of number bonds to 10 and 20 through consistent use of Numicon, part-whole models and bar models.

## Concrete



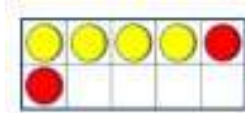
Subtracting using sets of objects



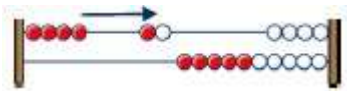
Numicon



Tens and ones



Tens frame

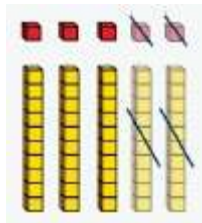


Bead strings

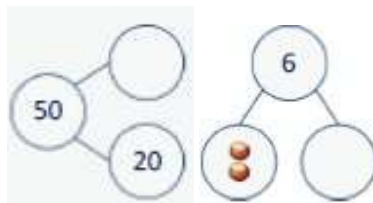
## Pictorial



Number lines drawn into books



Tens and ones drawn into books as lines and dots



Part whole models drawn into books

## Abstract

$$9 - 3 = 6$$

Counting back in 1s mentally

$$26 - 12 = 14$$

Subtracting ones, then tens.

$$8 - 3 = 5$$

$$18 - 3 = 15$$

$$5 = 8 - 3$$

$$15 = 18 - 3$$

Recognise known facts and number bonds and apply this knowledge to solve other calculations

$$6 - \square = 2$$

$$2 = 6 - \square$$

Solve missing number calculations

# KS2 Subtraction

In Key Stage Two, the fundamentals of place value are established by the end of year 2. So by the end of year 3, children practise and become fluent with columnar addition. This method is consolidated throughout KS2 and children become efficient with adding increasingly larger numbers. Pupils are also expected to now become fluent with the recall of single digit addition facts, allowing the individual calculations in each step to be quickly solved. In Year 4 children are introduced to decimals and connect this with their understanding of place value. As they move into upper KS2, they will begin to include decimal points in the columnar addition method in order to add numbers with up to 3 decimal places.

## Concrete



Place value counters to represent the value of each digit.



Base 10 for columnar addition.

| Ones  | Tenths      | Hundredths     |
|-------|-------------|----------------|
| 1 1 1 | 0.1 0.1 0.1 | 0.01 0.01 0.01 |
| 1 1 1 | 0.1 0.1 0.1 | 0.01 0.01 0.01 |
|       | 0.1 0.1 0.1 | 0.01 0.01      |

Place value counters to represent decimals.

| H | T | O |
|---|---|---|
| + |   |   |
|   |   | 2 |

Base 10 to support formal subtraction

## Pictorial



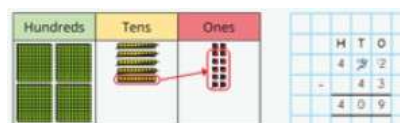
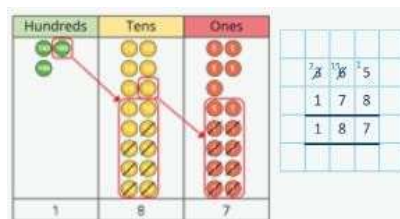
Number lines drawn in books.

|             |
|-------------|
| 4,604       |
| 2,354 750 ? |

Bar models drawn in books.

$$\begin{array}{r} 47 \\ - 23 \\ \hline \end{array} \quad \begin{array}{r} 40 + 7 \\ - 20 + 3 \\ \hline 20 + 4 = 24 \end{array}$$

Subtraction as the expanded method.



Subtraction with dienes and counters drawn in books.

## Abstract

$$\begin{array}{r} 3 \quad 1 \\ 4 \quad 5 \\ - 1 \quad 7 \\ \hline 2 \quad 8 \end{array}$$

Subtracting increasingly larger numbers using efficient methods. Exchange is noted by striking through. Carry digits below the equals.

$$\begin{array}{l} 235 - 3 = \\ 235 - 30 = \\ 235 - 300 = \end{array} \quad \begin{array}{l} 118 - \square = 111 \\ 181 - \square = 111 \\ 811 - \square = 111 \end{array}$$

Recognise known facts and apply this knowledge to solve other calculations

$$\begin{array}{r} 8 \quad 1 \quad \square \quad 8 \quad 5 \\ + \quad \square \quad \square \quad 0 \quad 6 \quad \square \\ \hline 9 \quad 9 \quad 5 \quad \square \quad 8 \end{array}$$

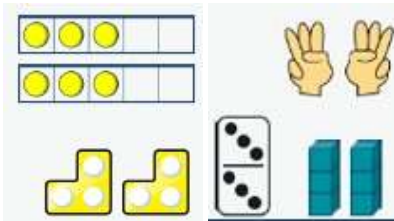
Solve missing number calculations

# EYFS Multiplication

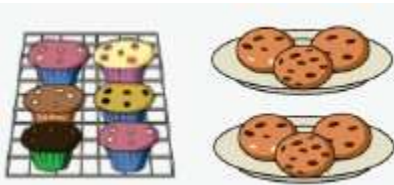
In Reception, children develop a secure knowledge of number to 10. Children predominantly use a wide range of manipulatives, resources and everyday objects to support addition and number understanding. There is a strong focus on learning to subitise, children are able to notice how many there are without having to count the objects. Children learn the composition of numbers to 10 in EYFS using resources. Children learn to double and start to make equal groups.

## Concrete

*Making doubles with maths manipulatives and using fingers*



*Making doubles with real life objects through play*



*Making equal groups with real life objects through play*



## Pictorial

*Making doubles with familiar pictures, drawing circles with dots and verbalising stem sentences .*



## Abstract

*Verbally: double 2 is 4. I know that because I have two cakes on this plate and two cakes on that plate.  $2+2 = 4$ .*

# KS1 Multiplication

In Key Stage One, pupils are taught to count in multiples of 2, 5, 10 and 3, using objects and images to represent this. Pupils are taught to understand multiplication as repeated addition and that the groups must be equal. Pupils make connections between number patterns, arrays and counting. Working practically also demonstrates that multiplication is commutative. Pupils learn to double numbers within 20, later using knowledge of place value to double tens and ones separately for 2 digit numbers.

## Concrete



Multilink cubes to make equal groups



Bead string to make equal groups



Coins to make equal groups

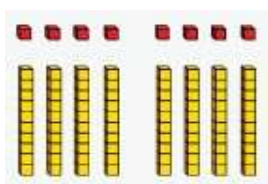


Making arrays with familiar objects

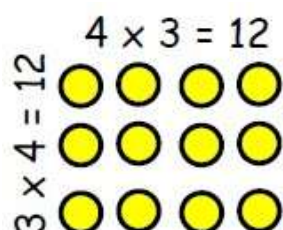


Use fingers and hands to show equal groups and to support counting times tables

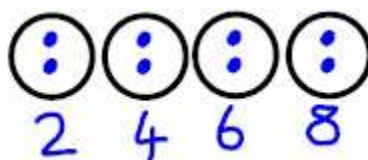
## Pictorial



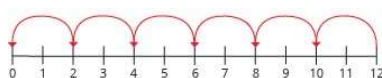
Draw tens and ones using lines and dots to draw doubles and equal groups



Draw counters in books to make arrays



Draw circles and dots to represent groups in books



Finding equal groups on a numberline

## Abstract

$$2 + 2 + 2 + 2 = 8$$

$$4 \times 2 = 8$$

Repeated addition

$$3 \times 5 = 15$$

$$5 \times 3 = 15$$

$$3 \times 5 = 5 \times 3$$

I can see, I can notice, use known facts to find commutative answers

$$\square \times 2 = 18$$

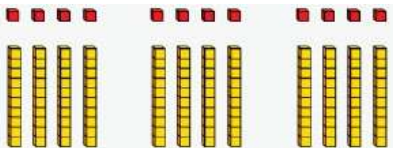
$$18 = 2 \times \square$$

Find missing numbers

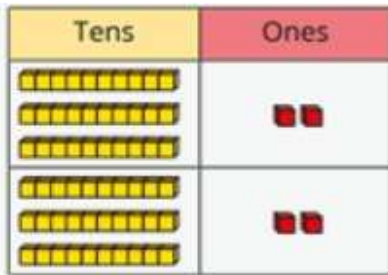
# KS2 (3&4) Multiplication

The first formal method pupils will come across for multiplication is the grid method in Year 3. This links well with their experience in using arrays and applies their knowledge of place value in order to accurately multiply. It is expected that in Year 4, pupils will learn the efficient formal method for multiplication. Year 4 will start by learning the expanded method whereby no exchanging of place value is required. By the end of year 4 children progress to the compact layout with a multiplier of 1 digit. By the end of Year 4 children will be fluent in all times tables facts up to  $12 \times 12$  and this will allow them to solve the individual steps involved quickly.

## Concrete



Base 10 for repeated addition



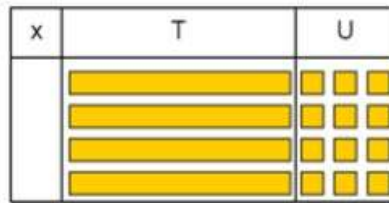
Base 10 for formal multiplication

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

Times tables grids to support the working out

## Pictorial

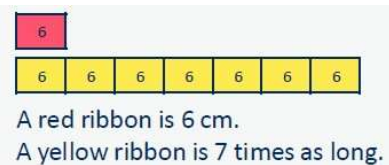
$$13 \times 4 =$$



Tens and ones drawn in the grid method

| x | 40                                                                      | 3                                         |
|---|-------------------------------------------------------------------------|-------------------------------------------|
| 5 | 10 10 10 10<br>10 10 10 10<br>10 10 10 10<br>10 10 10 10<br>10 10 10 10 | 1 1 1<br>1 1 1<br>1 1 1<br>1 1 1<br>1 1 1 |

Grid method with counters drawn into books



Bar models drawn into books

## Abstract

$$13 \times 4 = 52$$

|   | 10 | 3  |
|---|----|----|
| 4 | 40 | 12 |

Grid method with just the digits

|   |  |   |   |   |
|---|--|---|---|---|
|   |  | H | T | O |
|   |  |   | 3 | 4 |
| x |  |   |   | 5 |
|   |  |   | 2 | 0 |
|   |  | 1 | 5 | 0 |
|   |  | 1 | 7 | 0 |

Formal multiplication using the expanded method

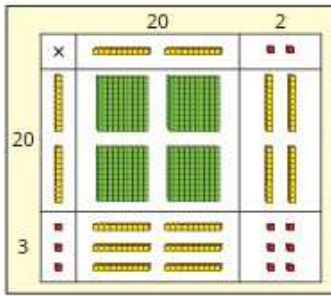
|   |  |   |   |   |
|---|--|---|---|---|
|   |  | H | T | O |
|   |  |   | 3 | 4 |
| x |  |   |   | 5 |
|   |  |   | 2 | 0 |
|   |  | 1 | 7 | 0 |
|   |  | 1 | 7 | 0 |

Formal multiplication (carry underneath the equals)

# KS2 (5&6) Multiplication

The first formal method pupils will come across for multiplication is the grid method in Year 3. This links well with their experience in using arrays and applies their knowledge of place value in order to accurately multiply. It is expected that in Year 4, pupils will learn the efficient formal method for multiplication. Year 4 will start by learning the expanded method whereby no exchanging of place value is required. By the end of year 4 children progress to the compact layout with a multiplier of 1 digit. By the end of Year 4 children will be fluent in all times tables facts up to  $12 \times 12$  and this will allow them to solve the individual steps involved quickly.

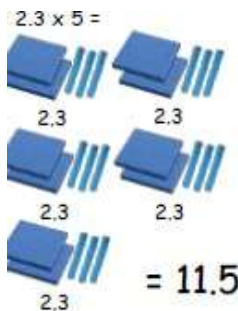
## Concrete



Base 10 for formal multiplication

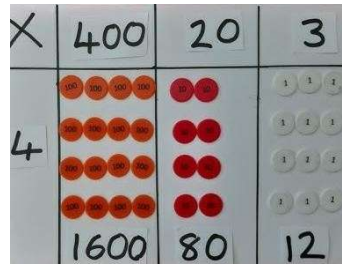
|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30  |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |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

Times tables grids

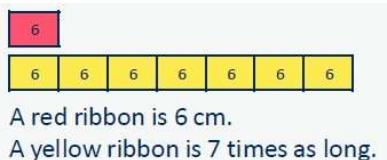


Base 10 for decimals

## Pictorial

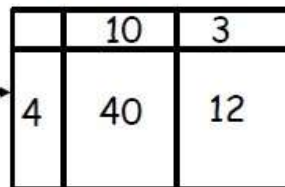


Grid method with counters drawn into books



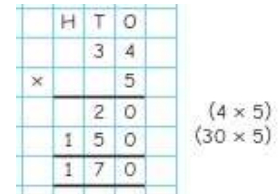
Bar models drawn into books

$$13 \times 4 = 52$$

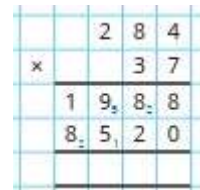


Grid method drawn into books

## Abstract



Formal multiplication using the expanded method



Formal multiplication (carry underneath the equals)



Find the missing digits

# EYFS Division

*In Reception, children develop a secure knowledge of number to 10. Children predominantly use a wide range of manipulatives, resources and everyday objects to support number understanding. Children initially learn division as sharing a given amount between a certain number equally. Conceptual understanding is embedded through games, songs and practical activities.*

## Concrete



*Sharing sets of objects.*



*Songs, rhymes and day to day activities that involve sharing.*



*Books such as: The Doorbell Rang by Pat Hutchins, One Hungry Cat by Joanne Rocklin and Ness the Nurse by Nick Sharratt*

## Pictorial



*Sharing sets of objects pictorially. Use familiar or classroom objects.*

## Abstract

*Verbally: I have six. If I share these between me and my friend, we will each have three.*

# KS1 Division

In Key Stage One, pupils are taught division by sharing an amount between a given number. Children will use concrete and pictorial representations to show this. Pupils will also learn to halve numbers to 20 by sharing into 2 equal groups. Children will also recognise that not all numbers can be halved, therefore odd and even will be explored. Pupils later use knowledge of place value to halve the tens and ones separately for a 2 digit number.

## Concrete



Sharing and grouping multilink cubes



Sharing and grouping familiar classroom objects



Numicon to explore odd and even

$$50 \div 10 =$$

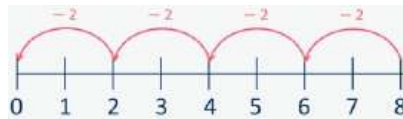


Creating groups of 10 to a target

## Pictorial



Share and group familiar objects



Number lines to show equal groups



Bar models to show equal groups

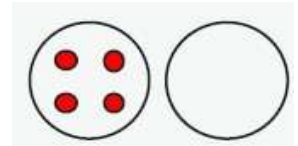


Drawing the number as a line to find half



Bar models — share 12 between 3

## Abstract

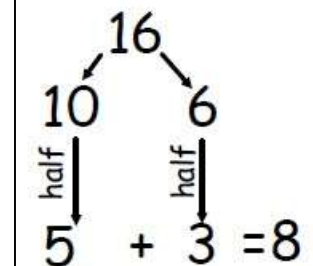


If 4 is half, what is the whole?



To find half, I need to share 14 into two equal groups

Half of 16 =



Partition the tens and ones

$$50 \div 10 = 5$$

Division written as a number sentence

# KS2 Division

In Key Stage Two, pupils are taught to link division to known multiplication facts. It is therefore essential that times tables facts to 12x are fluent. In years 3 and 4, children will start by partitioning numbers into hundreds, tens and ones to divide, and then recombine. Children will learn division by using known multiplication facts, grouping sets of amounts and moving onto formal methods such as short division (one digit divisor) and long division (two digit divisor in Year 5). Children will need repeated practical support alongside learning formal methods.

## Concrete

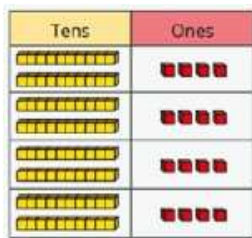
There are ... groups of 3 in ...  
...  $\div 3 =$



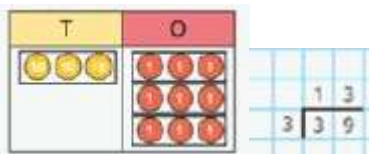
Sharing familiar objects and linking to commutativity



Grouping counters into equal parts

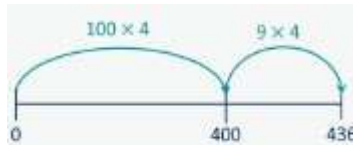


Dienes to group ( $96 \div 4$ )

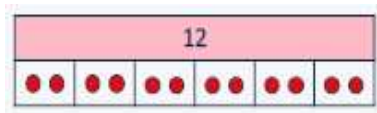


Place value counters alongside formal methods

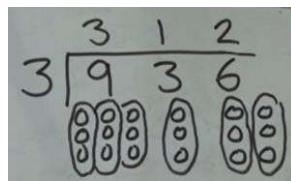
## Pictorial



Number lines drawn in books.



Bar models drawn in books.



Short division with counters drawn in books.



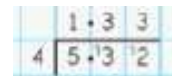
Bar models for division with whole numbers and fractions

## Abstract

$$300 \div 3 = 100$$

$$120 \div 3 = 40$$

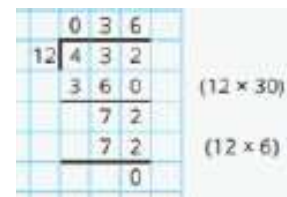
Using known facts



Short division with whole numbers and decimals



Short division with remainders



Long division by chunking. Chn write out the times tables when the divisor is over 12.

$$17 \overline{) 540} \begin{array}{r} 31 \\ 51 \downarrow \\ -30 \\ 17 \\ 17 \\ \hline 0 \end{array}$$

$$\begin{array}{l} 17 \times 1 = 17 \\ 17 \times 2 = 34 \\ 17 \times 3 = 51 \\ 17 \times 4 = 68 \end{array}$$

Long division with subtraction.

Dividend

Quotient

$$361 \div 5 = 72 \text{ R}1$$

Divisor

Remainder

