

**New**

Primary schemes of  
learning

Changes overview

**Autumn**

**White  
Rose  
Maths**

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# Introduction

Welcome to version 3.0 of the White Rose Maths primary schemes of learning! We have **listened to your feedback** and taken into account other national developments over the last few years to produce an even bigger and even better set of resources to support your teaching. In particular we have made progression even clearer, including more direct revisiting of previous years' work to close gaps caused by the pandemic and to align even more closely with the DFE's ready-to-progress criteria.

This document sets out the key changes to the steps in the Autumn term of our schemes. For each year group, we look at

- any changes of the blocks, such as order and timings.
- the changes to each individual block, directly comparing the steps in version 2.0 and the steps in version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction					Measurement: Money		Number: Multiplication and Division	Consolidation

Year 2 version 2.0

Year 2 version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value				Number Addition and subtraction				Geometry Shape			

# Year 1 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		
Spring	Consolidation	Number: Addition and Subtraction (within 20)		Number: Place Value (within 50)			Measurement: Length and Height	Measurement: Weight and Volume		Consolidation		
Summer	Consolidation	Number: Multiplication and Division		Number: Fractions	Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time			

The first place value block is now 5 weeks long instead of 4 in order to ensure a deep understanding of this crucial aspect of children's learning.

Numbers to 20 has been moved to the Spring term and the consolidation block has been moved from Spring to Autumn to support all children to keep up from the start.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value (within 10)					Number Addition and subtraction (within 10)					Geometry: Shape	Consolidation
Spring	Number Place value (within 20)		Number Addition and subtraction (within 20)		Number Place value (within 50)		Measurement Length and height		Measurement Weight and volume			
Summer	Number Multiplication and division		Number Fractions		Geometry: Position and direction	Number Place value (within 100)		Measurement: Money	Measurement: Time		Consolidation	

# Year 1 small steps (Autumn)

## Block 1 – Place value (within 10)

Current scheme steps	New scheme steps
Sort objects	Sort objects
Count objects	Count objects
Represent objects	Count objects from a larger group
Count, read and write forwards from any number	Represent objects
Count, read and write backwards from any number	Recognise numbers as words
Count one more	Count on from any number
Count one less	1 more
One to one correspondence	Count backwards within 10
Compare groups	1 less
Introduce <, > and = symbols	Compare groups by matching
Compare numbers	Fewer, more, same
Order groups of objects	Less than, greater than, equal to
Order numbers	Compare numbers
Ordinal numbers (1st, 2nd, 3rd)	Order objects and numbers
The number line	The number line

The recommended time for learning this block has been increased from 4 weeks to 5 weeks.

Counting objects from a larger group has been added.

Steps on counting forwards are now next to each other, **before** the steps on counting backwards.

Greater emphasis placed on **language**.

Ordinal numbers has been **moved** to the position and direction block.

# Year 1 small steps (Autumn)

## Block 2 – Addition and subtraction (within 10)

Current scheme steps	New scheme steps
Parts and wholes activity (groups of objects)	Introduce parts and wholes
Part-whole model	Part-whole model
Addition symbol	Write number sentences
Fact families - addition facts	Fact families - addition facts
Find number bonds for numbers within 10	Number bonds within 10
Systematic methods for number bonds within 10	Systematic number bonds within 10
Number bonds to 10	Number bonds to 10
Addition - adding together	Addition - add together
Addition - adding more	Addition - add more
Addition - using bonds	Addition problems
Finding a part	Find a part
Subtraction - find a part	Subtraction - find a part
Fact families - the 8 facts	Fact families - the eight facts
Subtraction - taking away - crossing out	Subtraction - take away/crossing out (How many left?)
Subtraction - taking away - using the symbol	Subtraction - take away (How many left?)
Subtraction - counting back	Subtraction on a number line
	Add or subtract 1 or 2

We have added more **emphasis** on the ideas of parts and wholes.

The pace of learning has been **slowed** down with the symbols for addition and subtraction introduced slightly later to keep the earlier focus on the structure and understanding of the operations.

Greater emphasis placed on **problem solving** with addition.

A small step on adding or subtracting 1 or 2 has been added.

# Year 1 small steps (Autumn)

## Block 3 – Shape

Current scheme steps	New scheme steps
Recognise and name 3-D shapes	Recognise and name 3-D shapes
Sort 3-D shapes	Sort 3-D shapes
Recognise and name 2-D shapes	Recognise and name 2-D shapes
Sort 2-D shapes	Sort 2-D shapes
Patterns with 2-D and 3-D shapes	Patterns with 2-D and 3-D shapes

No changes to this block

# Year 2 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Measurement: Money	Number: Multiplication and Division	Consolidation		
Spring	Number: Multiplication and Division			Statistics		Geometry: Properties of Shape		Number: Fractions				
Summer	Measurement: Length and Height	Geometry: Position and Direction		Consolidation and problem solving		Measurement: Time		Measurement: Mass, Capacity and Temperature		Consolidation		

Place value has been given an additional week.

The money block has been moved from autumn to spring

Shape has been moved from spring to autumn and given an extra week. This means that multiplication and division is now later and can be taught together rather than split over two terms.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value				Number: Addition and subtraction				Geometry: Shape			
Spring	Measurement: Money	Number: Multiplication and division					Measurement: Length and height		Measurement: Mass, capacity and temperature			
Summer	Number: Fractions			Measurement: Time		Statistics		Geometry: Position and direction		Consolidation		

# Year 2 small steps (Autumn)

## Block 1 – Place value

Current scheme steps	New scheme steps
Count objects to 100 and read and write numbers in numerals and words	Numbers to 20
Represent numbers to 100	Count objects to 100 by making 10s
Tens and ones with a part-whole model	Recognise tens and ones
Tens and ones using addition	Use a place value chart
Use a place value chart	Partition numbers to 100
Compare objects	Write numbers to 100 in words
Compare numbers	Flexibly partition numbers to 100
Order objects and numbers	Write numbers to 100 in expanded form
Count in 2s 5s 10s	10s on the number line to 100
Count in 3s	10s and 1s on the number line to 100
	Estimate numbers on a number line
	Compare objects
	Compare numbers
	Order objects and numbers
	Count in 2s, 5s and 10s
	Count in 3s

The recommended time for learning this block has been increased from 3 weeks to 4 weeks.

Consolidation of Year 1 material on the numbers to 100 is **more explicit**, and broken down into a greater number of steps.

There is increased emphasis on partitioning and **flexibility** in representing numbers in different forms. This will support coming material on addition and subtraction.

More use is made of the **number line** as a key representation, including to support comparing numbers.

# Year 2 small steps (Autumn)

## Block 2 – Addition and subtraction

Current scheme steps	New scheme steps
Fact families - addition and subtraction bonds to 20	Bonds to 10
Check calculations	Fact families – addition and subtraction bonds within 20
Compare number sentences	Related facts
Related facts	Bonds to 100 (tens)
Bonds to 100 (tens)	Add and subtract 1s
Add and subtract 1s	Add by making 10
10 more and 10 less	Add three 1-digit numbers
Add and subtract 10s	Add to the next 10
Add a 2-digit and 1-digit number - crossing ten	Add across a 10
Subtract a 1-digit number from a 2-digit number	Subtract across 10
Add two 2-digit numbers - not crossing ten	Subtract from a 10
Add two 2-digit numbers - crossing ten	Subtract a 1-digit number from a 2-digit number (across a 10)
Subtract a 2-digit number from a 2-digit number	10 more, 10 less
Subtract a 2-digit number from a 2-digit number	Add and subtract 10s
Bonds to 100 (tens and ones)	Add two 2-digit numbers (not across a 10)
Add three 1-digit numbers	Add two 2-digit numbers (across a 10)
	Subtract two 2-digit numbers (not across a 10)
	Subtract two 2-digit numbers (across a 10)
	Mixed addition and subtraction
	Compare number sentences
	Missing number problems

The key concepts in this block have been **broken down** into even smaller steps to support learning and to more easily identify exactly where any intervention is needed. Closing these gaps early on will help children to gain greater success.

Steps relating to each of addition and subtraction are grouped together more to support **development of understanding** of each concept.

The column methods for addition and subtraction have been **moved** to Year 3.

Adding **by making 10** now features in Year 2 having been moved here from Year 1. This is supported by its own step and a related next step which explores adding to the next 10

# Year 2 small steps (Autumn)

## Block 3 – Shape

Current scheme steps	New scheme steps
Recognise 2-D and 3-D shapes	Recognise 2-D and 3-D shapes
Count sides on 2-D shapes	Count sides on 2-D shapes
Count vertices on 2-D shapes	Count vertices on 2-D shapes
Draw 2-D shapes	Draw 2-D shapes
Lines of symmetry	Lines of symmetry on shapes
Sort 2-D shapes	Use lines of symmetry to complete shapes
Make patterns with 2-D shapes	Sort 2-D shapes
Count faces on 3-D shapes	Count faces on 3-D shapes
Count edges on 3-D shapes	Count edges on 3-D shapes
Count vertices on 3-D shapes	Count vertices on 3-D shapes
Sort 3-D shapes	Sort 3-D shapes
Make patterns with 3-D shapes	Make patterns with 2-D and 3-D shapes

More time is invested in **line symmetry** as this has been split into two steps to explore the different skills of identifying a line of symmetry and completing a shape given one “half” and the line of symmetry in more detail.

The steps on making patterns with 2-D and 3-D shapes have been **combined** as they cover the same skill. Both repeating (ABABAB) and symmetric (ABCBA and ABCCBA) patterns are explored.

# Year 3 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Number: Multiplication and Division				
Spring	Number: Multiplication and Division			Measurement: Money	Statistics		Measurement: Length and Perimeter		Number: Fractions		Consolidation	
Summer	Number: Fractions			Measurement: Time		Geometry: Properties of Shape		Measurement: Mass and Capacity				

The order of some of the other blocks has been changed to help alignment for mixed age classes.

No changes have been made to the blocks in the autumn term.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value			Number Addition and subtraction				Number Multiplication and division A				
Spring	Number Multiplication and division B			Measurement Length and perimeter		Number Fractions A		Measurement Mass and capacity				
Summer	Number Fractions B		Measurement Money	Measurement Time			Geometry Shape		Statistics		Consolidation	

# Year 3 small steps (Autumn)

## Block 1 – Place value

Current scheme steps	New scheme steps
Hundreds	Represent numbers to 100
Representing numbers to 1000	Partition numbers to 100
100s, 10s and 1s (1)	Number line to 100
100s, 10s and 1s (2)	Hundreds
Number line to 1000	Represent numbers to 1,000
Find 1/10/100 more or less	Partition numbers to 1,000
Compare objects to 1000	Flexible partitioning of numbers to 1000
Compare numbers to 1000	Hundreds, tens and ones
Order numbers	Find 1, 10 or 100 more or less
Count in 50s	Number line to 1,000
	Estimating on a number line to 1,000
	Compare numbers to 1,000
	Order numbers to 1,000
	Count in 50s

The first three steps **review** children's learning of numbers to 100 from key stage 1 to ensure they are ready to move onto numbers to 1,000.

Greater emphasis is placed on the different ways of **partitioning** numbers to 1,000 and the place value of each of the digits in the numbers.

There is more emphasis on the use of the number line to **deepen understanding** of the relative position of numbers in the linear number system.

# Year 3 small steps (Autumn)

## Block 2 – Addition and subtraction

Current scheme steps	New scheme steps
Add and subtract multiples of 100	Apply number bonds within 10
Add and subtract 3-digit and 1-digit numbers	Add and subtract 1s
Add 3-digit and 1-digit numbers – crossing 10	Add and subtract 10s
Subtract a 1-digit number from a 3-digit number	Add and subtract 100s
Add and subtract 3-digit and 2-digit numbers	Spot the pattern
Add 3-digit and 2-digit numbers – crossing 100	Add 1s across a 10
Subtract a 2-digit number from a 3-digit number	Add 10s across a 100
Add and subtract 100s	Subtract 1s across a 10
Spot the pattern – making it explicit	Subtract 10s across a 100
Add and subtract a 2-digit and 3-digit numbers	Make connections
Add a 2-digit and 3-digit numbers – crossing 10 or 100	Add two numbers (no exchange)
Subtract a 2-digit number from a 3-digit number	Subtract two numbers (no exchange)
Add two 3-digit numbers – not crossing 10 or 100	Add two numbers (across a 10)
Add two 3-digit numbers – crossing 10 or 100	Add two numbers (across a 100)
Subtract a 3-digit number from a 3-digit number	Subtract two numbers (across a 10)
Subtract a 3-digit number from a 3-digit number	Subtract two numbers (across a 100)
Estimate answers to calculations	Add 2-digit and 3-digit numbers
Check answers	Subtract a 2-digit number from a 3-digit number
	Complements to 100
	Estimate answers
	Inverse operations
	Make decisions

Children now learn to use the **formal column methods** of addition and subtraction for the first time. To support them to do this fluently, several steps are included to ensure they have the mental skills to perform the calculations and to prevent cognitive overload when working on these.

The formal methods are introduced **slowly** and carefully looking at calculations without exchanges before bringing in exchange, linking to the mental methods covered earlier in the block.

**Complements to 100** are explicitly explored in a new step.

The final step of the block encourages children to consider both the choice of operation when solving a problem, and what method would be **most efficient** so that they do not apply the formal method even when it is inappropriate to do so.

# Year 3 small steps (Autumn)

## Block 3 – Multiplication and division A

Current scheme steps	New scheme steps
Multiplication - equal groups	Multiplication - equal groups
Multiply by 3	Use arrays
Divide by 3	Multiples of 2
The 3 times-table	Multiples of 5 and 10
Multiply by 4	Sharing and grouping
Divide by 4	Multiply by 3
The 4 times-table	Divide by 3
Multiply by 8	The 3 times-table
Divide by 8	Multiply by 4
The 8 times-table	Divide by 4
	The 4 times-table
	Multiply by 8
	Divide by 8
	The 8 times-table
	The 2, 4 and 8 times-tables

Before moving on the new times tables for Year 3, more time is spent on **revisiting and reinforcing** the structure of multiplication and division, using arrays and developing children's understanding of sharing and grouping.

The word '**multiple**' is emphasised.

A new step is included to explicitly make the **links** between the 2, 4 and 8 times-tables

# Year 4 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction			Measurement: Length and Perimeter		Number: Multiplication and Division			
Spring	Number: Multiplication and Division		Measurement: Area	Number: Fractions				Number: Decimals			Consolidation	
Summer	Number: Decimals	Measurement: Money	Measurement: Time	Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		Consolidation			

Length and perimeter has been moved to the Spring term.

Area has been moved to the Autumn term. This now precedes the multiplication and division block as at this stage children are exploring the idea of area (by counting squares) rather than the formula, so multiplication facts are not a pre-requisite.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value				Number Addition and subtraction			Measurement Area	Number Multiplication and division			Consolidation
Spring	Number Multiplication and division			Measurement Length and perimeter		Number Fractions			Number Decimals			
Summer	Number Decimals	Measurement Money	Measurement Time	Consolidation	Geometry Shape		Statistics	Geometry Position and direction				

# Year 4 small steps (Autumn)

## Block 1 – Place value

Current scheme steps	New scheme steps
Round to the nearest 10	Represent numbers to 1,000
Round to the nearest 100	Partition numbers to 1,000
Count in 1000s	Number line to 1,000
1000s, 100s, 10s and 1s	Thousands
Partitioning	Represent numbers to 10,000
Number line to 10,000	Partition numbers to 10,000
1,000 more or less	Flexible partitioning of numbers to 10,000
Compare numbers	Find 1, 10, 100, 1,000 more or less
Order numbers	Number line to 10,000
Round to the nearest 1000	Estimate on a number line to 10,000
Count in 25s	Compare numbers to 10,000
Negative numbers	Order numbers to 10,000
Roman numerals	Roman numerals
	Round to the nearest 10
	Round to the nearest 100
	Round to the nearest 1,000
	Round to the nearest 10, 100 or 1,000

The steps on rounding have been put together at the end of the block rather than interspersed as present. This, together with the final extra step which explores rounding to different degrees of accuracy, will allow a **more focused** look at the concept of rounding.

The block starts with **revision** of the numbers to 1,000 studied in Year 3 to make sure these are secure before moving to 4-digit numbers.

The study of negative numbers has been **moved to Year 5** where it can be explored in greater depth rather than a single step.

# Year 4 small steps (Autumn)

## Block 2 – Addition and subtraction

Current scheme steps	New scheme steps
Add and subtract 1s, 10s, 100s and 1,000s	Add and subtract 1s, 10s, 100s and 1,000s
Add two 4-digit numbers - no exchange	Add up to two 4-digit numbers - no exchange
Add two 4-digit numbers - one exchange	Add two 4-digit numbers - one exchange
Add two 4-digit numbers	Add two 4-digit numbers- more than one exchange
Subtract two 4-digit numbers - no exchange	Subtract two 4-digit numbers - no exchange
Subtract two 4-digit numbers - one exchange	Subtract two 4-digit numbers - one exchange
Subtract two 4-digit numbers	Subtract two 4-digit numbers – more than one exchange
Efficient Subtraction	Efficient subtraction
Estimate answers	Estimate answers
Checking strategies	Checking strategies

There is a more **gradual introduction** to the addition and subtraction of numbers with four digits, with consideration of numbers with fewer digits revisited first in the steps.

There is more **explicit** consideration of cases where there are **no tens and no hundreds** when subtracting to support the difficulties sometimes encountered by children when exchanging in calculations like these.

# Year 4 small steps (Autumn)

## Block 3 – Area

Current scheme steps	New scheme steps
What is area?	What is area?
Counting squares	Counting squares
Make shapes	Make shapes
Compare area	Compare area

Note that this block now precedes the multiplication and division block. At this stage children are exploring the idea of area (by counting squares) rather than the formula, so multiplication facts are **not a prerequisite**.

# Year 4 small steps (Autumn)

## Block 4 – Multiplication and division A

Current scheme steps	New scheme steps
Multiply and divide by 6	Multiples of 3
6 times-table and division facts	Multiply and divide by 6
Multiply and divide by 9	6 times-table and division facts
9 times-table and division facts	Multiply and divide by 9
Multiply and divide by 7	9 times-table and division facts
7 times-table and division facts	The 3, 6 and 9 times-tables
11 and 12 times tables	Multiply and divide by 7
Multiply by 1 and 0	7 times-table and division facts
Divide by 1 and itself	11 times-table and division facts
Multiply three numbers	12 times-table and division facts
	Multiply by 1 and 0
	Divide by 1 and itself
	Multiply three numbers

Many steps have been swapped with the other multiplication and division block in Year 4 in the previous version of the schemes. For example, multiplication by 10 and 100 has been **moved to the later block** where understanding of this is needed to support the formal method of short multiplication.

Multiples of 3 are revisited before exploring the related 6 and 9 times-tables, and a step is included to look at the **connections** between these.

The **11 and 12** times-tables and division facts have been given a step each.

# Year 5 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction		Statistics		Number: Multiplication and Division			Measurement: Perimeter and Area		
Spring	Number: Multiplication and Division		Number: Fractions						Number: Decimals and Percentages		Consolidation	
Summer	Consolidation	Number: Decimals		Geometry: Properties of Shape		Geometry: Position and Direction		Measurement: Converting Units		Measurement: Volume		

The blocks on statistics and perimeter and area have been moved to later in the year.

The six-week fractions block from the Spring term in version 2 of the schemes has been split into two; with the steps on adding and subtracting fractions moved to here in the Autumn term and the steps on multiplication and division of fractions in a separate block in the Spring term.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value		Number: Addition and subtraction		Number: Multiplication and division			Number: Fractions A				
Spring	Number: Multiplication and division		Number: Fractions B		Number: Decimals and percentages			Measurement: Perimeter and area		Statistics		
Summer	Geometry: Shape		Geometry: Position and direction		Number: Decimals			Number: Negative numbers	Measurement: Converting units		Measurement: Volume	

# Year 5 small steps (Autumn)

## Block 1 – Place value

Current scheme steps	New scheme steps
Numbers to 10 000	Roman numerals to 1,000
Round to the nearest 10, 100 or 1000	Numbers to 10,000
Numbers to 100 000	Numbers to 100,000
Compare and order numbers to 100 000	Numbers to 1,000,000
Round Numbers to 100 000	Read and write numbers to 1,000,000
Numbers to a million	Powers of 10
Counting in 10s, 100s.... 100 000s	10/100/1,000/10,000/100,000 more or less
Compare and order numbers to 1 000 000	Partition numbers to 1,000,000
Round numbers to 1 000 000	Number line to 1,000,000
Negative numbers	Compare and order numbers to 100,000
Roman numerals to 1,000	Compare and order numbers to 1,000,000
	Round to the nearest 10, 100 or 1,000
	Round within 100,000
	Round within 1,000,000

Roman numerals is now first to serve as a **reminder of place** value with smaller numbers, and comparing systems.

The steps have been **grouped together** by type rather than swapping back and fore. The structure of numbers of all the sizes is covered first, and later comparing and ordering numbers followed is explored before rounding.

There is new step specifically aimed and reading and writing numbers to **1 million**.

**Negative numbers** are now covered in a separate short block later in the year.

# Year 5 small steps (Autumn)

## Block 2 – Addition and subtraction

Current scheme steps	New scheme steps
Add whole numbers with more than 4 digits	Mental strategies
Subtract whole numbers with more than 4-digits	Add whole numbers with more than four digits
Round to estimate and approximate	Subtract whole numbers with more than four digits
Inverse operations (addition and subtraction)	Round to check answers
Multi-step addition and subtraction problems	Inverse operations (addition and subtraction)
	Multi-step addition and subtraction problems
	Compare calculations
	Find missing numbers

Mental strategies are revised first. This revision of **key number relationships** will support the use of formal methods in the upcoming steps.

Although the steps focus on numbers with more than four digits, the key learning sections begin with numbers with fewer digits as **revision** and to identify any gaps/need for intervention before moving on these more involved calculations.

The step building on the rounding learning from the place value block is now more explicitly focused on **estimation** to check answers.

Two new steps have been added to support the **development of mental flexibility** through using known facts to deduce, rather than work out, other facts.

# Year 5 small steps (Autumn)

## Block 3 – Multiplication and division A

Current scheme steps	New scheme steps
Multiples	Multiples
Factors	Common multiples
Common factors	Factors
Prime numbers	Common factors
Square numbers	Prime numbers
Cube numbers	Square numbers
Multiply by 10, 100 and 1,000	Cube numbers
Divide by 10, 100 and 1,000	Multiply by 10, 100 and 1,000
Multiples of 10, 100 and 1,000	Divide by 10, 100 and 1,000
	Multiples of 10, 100 and 1,000

An extra step has been added in to focus on **common multiples**, mirroring the structure of the steps on factors.

There is another Year 5 block on multiplication and division, the first block in the Spring term. This second block focuses on the **formal methods** of multiplication and division and makes use of the times-tables facts and effect of multiplying by powers of 10 in this block.

# Year 5 small steps (Autumn)

## Block 4 – Fractions A

Current scheme steps	New scheme steps
Equivalent fractions	Find fractions equivalent to a unit fraction
Improper fractions to mixed numbers	Find fractions equivalent to a non-unit fraction
Mixed numbers to improper fractions	Recognise equivalent fractions
Number sequences	Convert improper fractions to mixed numbers
Compare and order fractions less than 1	Convert mixed numbers to improper fractions
Compare and order fractions greater than 1	Compare fractions less than 1
Add and subtract fractions	Order fractions less than 1
Add fractions within 1	Compare and order fractions greater than 1
Add 3 or more fractions	Add and subtract fractions with the same denominator
Add fractions	Add fractions within 1
Add mixed numbers	Add fractions with total greater than 1
Subtract fractions	Add to a mixed number
Subtract mixed numbers	Add two mixed numbers
Subtraction - breaking the whole	Subtract fractions
Subtract 2 mixed numbers	Subtract from a mixed number
	Subtract from a mixed number - breaking the whole
	Subtract two mixed numbers

More introductory work on **equivalent fractions** has been included.

**Mental methods** are emphasised alongside formal written methods.

Adding three or more fractions **incorporated** into other steps rather than treated separately.

The other Year 5 block on fractions is the second block in the **Spring** term.

# Year 6 overview

## Version 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division				Number: Fractions					Geometry: Position and Direction
Spring	Number: Decimals	Number: Percentages	Number: Algebra	Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio			Statistics		
Summer	Geometry: Properties of Shape		Consolidation or SATs preparation		Consolidation, investigations and preparations for KS3							

The block on position and direction has been moved to later in the year to help align Y5 and Y6 topics for mixed-age classes.

The four-week fractions block has been split into two parts, one covering addition and subtraction and the other multiplication and division.

Converting units has been brought forward from the Spring term to reinforce multiplication and division by powers of 10 covered in the Four operations block.

## Version 3.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value		Number: Four operations				Number: Fractions A		Number: Fractions B		Measurement: Converting units	
Spring	Number: Ratio	Number: Algebra	Number: Decimals	Number: Fractions, decimals and percentages		Measurement: Area, perimeter and volume		Statistics				
Summer	Geometry: Shape		Measurement: Position and direction	Themed projects, consolidation and problem solving								

# Year 6 small steps (Autumn)

## Block 1 – Place value

Current scheme steps	New scheme steps
Numbers to a million	Numbers to 1,000,000
Numbers to 10 million	Numbers to 10,000,000
Compare and order any number	Read and write numbers to 10,000,000
Round any number	Powers of 10
Negative numbers	Number line to 10,000,000
	Compare and order any integers
	Round any integers
	Negative numbers

There us more **revision** of numbers of the size children met in Year 5.

Place value charts are used more extensively to emphasise the structure of numbers in “**groups of threes**” – 1s, 10s, 100s followed by 1,000s, 10,000s and 100,000s

**Multiplicative connections** between numbers has more emphasis e.g. 100 times the size, one hundredth the size of..

Use of the **number line** has more emphasis, including dividing into 2,4, 5 and 10 sections.

# Year 6 small steps (Autumn)

## Block 2 – Addition, subtraction, multiplication and division

Current scheme steps	New scheme steps
Add and subtract integers	Add and subtract integers
Common factors	Common factors
Common multiples	Common multiples
Primes to 100	Rules of divisibility
Squares and cubes	Primes to 100
Multiply up to a 4-digit number by a 2-digit number	Square and cube numbers
Short division	Multiply up to a 4-digit number by a 2-digit number
Division using factors	Solve problems with multiplication
Long division (1)	Short division
Long division (2)	Division using factors
Long division (3)	Introduction to long division
Long division (4)	Long division with remainders
Order of operations	Solve problems with division
Mental calculations and estimation	Solve multi-step problems
Reason from known facts	Order of operations
	Mental calculations and estimation
	Reason from known facts

An explicit step has been included to check understanding of the **rules of divisibility**.

The progression in the block is now even clearer, for example the **sequence of learning** for long division has been improved.

More emphasis is placed on **problem solving**, including using the appropriate method for a calculation.

# Year 6 small steps (Autumn)

## Block 3 – Fractions A

Current scheme steps	New scheme steps
Simplify fractions	Equivalent fractions and simplifying
Fractions on a number line	Equivalent fractions on a number line
Compare and order (denominator)	Compare and order (denominator)
Compare and order (numerator)	Compare and order (numerator)
Add and subtract fractions (1)	Add and subtract simple fractions
Add and subtract fractions (2)	Add and subtract any two fractions
Add fractions	Add mixed numbers
Subtract fractions	Subtract mixed numbers
Mixed addition and subtraction	Multi-step problems

There is more introductory work on **equivalent fractions** before moving to simplifying.

The progression in the block is now even clearer, for example the **sequence of learning** for long division has been improved.

More emphasis is placed on **problem solving**, including using the appropriate method for a calculation.

# Year 6 small steps (Autumn)

## Block 4 – Fractions B

Current scheme steps	New scheme steps
Multiply fractions by integers	Multiply fractions by integers
Multiply fractions by fractions	Multiply fractions by fractions
Divide fractions by integers (1)	Divide a fraction by an integer
Divide fractions by integers (2)	Divide any fraction by an integer
Fraction of an amount	Mixed questions with fractions
Fraction of an amount - find the whole	Fraction of an amount
	Fraction of an amount - find the whole

An extra step has been included with **mixed questions** to support children to identify the correct operation and correct method of solution.

# Year 6 small steps (Autumn)

## Block 5 – Converting units

Current scheme steps	New scheme steps
Metric measures	Metric measures
Convert metric measures	Convert metric measures
Calculate with metric measures	Calculate with metric measures
Miles and kilometres	Miles and kilometres
Imperial measures	Imperial measures

There are **no major changes** to the content of this block.