## White Rose Mapping Guide Primary Mathematics

## About CENTURY

CENTURY is a learning platform that uses artificial intelligence to personalise learning for every learner. Our team of experienced teachers have created all of our content for English, maths, science, geography and physical education from years 2 to 11, as well as functional skills content for post-16 learners. All courses are aligned to the national curriculum and national standards.Learning materials and questions for primary, secondary and post-16 learnersTailored to each learner's skills and knowledgePowered by the world's leading
adaptive learning platformWeb-based learning for tablets, laptops and desktops


## How does CENTURY work?

## Diagnostics

Learners begin by completing diagnostics that quickly identify knowledge gaps and misconceptions, and help CENTURY recommend the best learning materials for each individual learner.


## Recommended Path

This constantly adapting personalised pathway contains micro-lessons designed to address gaps in knowledge, provide stretch and challenge and promote long-term memory retention.

## Leadership Dashboard

Senior and middle leaders get an overview of performance and engagement on a subject, class and learner level.


## Achievements

Learners get rewarded with badges and streaks for completing micro-lessons or for using CENTURY over a certain period of time to increase their motivation and engagement.


## Automated Marking

Teachers can view data in real time, to help quickly identify which learners require additional support or further stretch.


## Learner Dashboard \& Guardian Portal

Learners can identify their strengths and areas for improvement. Parents and guardians can monitor their learner's progress, completed work, and see work set.

## Course List

## Primary Mathematics

Our primary mathematics offering
includes specific courses for each year
group, from years 2 to 6 .
This mapping document shows how our content aligns with the White Rose scheme of learning.

$\rightarrow$ Primary - Year 2 Mathematics
Diagnostics 9 Strands $10 \quad$ Nuggets 87

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Year 2 White Rose Map
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$\rightarrow$ Primary - Year 3 Mathematics
Diagnostics $9 \quad$ Strands $11 \quad$ Nuggets 131
Year 3 White Rose Map
$\rightarrow$ Primary - Year 4 Mathematics
Diagnostics 10 Strands 12 Nuggets 206
Year 4 White Rose Map
$\rightarrow$ Primary - Year 5 Mathematics Diagnostics 10 Strands 12 Nuggets 206

Year 5 White Rose Map
$\rightarrow$ Primary - Year 6 Mathematics
Diagnostics 17 Strands 18 Nuggets 272

## Course Assignment

Primary Mathematics


## White Rose Mapping - Year 2

|  | White Rose Map | CENTURY Nuggets |  |
| :---: | :---: | :---: | :---: |
| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Numbers to 20 | PM10.16 | Reading and Writing Numbers to 20 |
| 01-04 | Count objects to 100 by making 10s | PM1.34 | 2-Digit: Recognising Place Value |
| Topic <br> Place Value | Recognise tens and ones | PM1.35 | 2-Digit: Representing Numbers |
|  | Use a place value chart | PM10.17 | Reading and Writing Numbers to 100 |
|  | Partition numbers to 100 | PM10.36 | Number Lines to 100 |
|  | Write numbers to 100 in words Flexibly partition numbers to 100 | PM10.15 | 2-Digit: Comparing Numbers with Greater Than and Less than symbols < > |
|  | Write numbers to 100 in expanded form | PM10.01 | Counting in Multiples of 2 |
|  | 10 s on the number line to 100 | PM10.03 | Counting in Multiples of 5 |
|  | 10 s and 1s on the number line to 100 | PM10.04 | Counting in Multiples of 10 |
|  | Estimate numbers on a number line | PM10.02 | Counting in Multiples of 3 |
|  | Compare objects | PM10.18 | Number and Place Value Checkpoint |
|  | Compare numbers |  |  |
|  | Order objects and numbers |  |  |
|  | Count in 2 s , 5 s and 10 s |  |  |
|  | Count in 3s |  |  |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
|  |  |  |  |
| Weeks 05-09 | Bonds to 10 | PM2.30 | Number Bonds to 20 |
|  | Fact families - addition and subtraction bonds within 20 | PM2.41 | Addition and Subtraction Fact Families |
| Topic <br> Addition and Subtraction | Related facts | PM2.42 | Commutativity in Addition |
|  | Bonds to 100 (tens) | PM2.31 | Number Bonds to 100 |
|  | Add and subtract 15 | PM10.11 | Single Digit Addition |
|  | Add by making 10 | PM2.32 | Adding Three 1-Digit Numbers |

Block 02 Continued

Weeks
05-09
Topic
Addition and
Subtraction

## White Rose Small Steps

Add three 1-digit numbers
Add to the next 10
Add across a 10
Subtract across a 10
Subtract from a 10
Subtract a 1-digit number from a 2-digit number (across a 10)
10 more, 10 less
Add and subtract 10 s
Add two 2-digit numbers (not across a 10)
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

## Nugget Code Nugget Name

PM2.33 2-Digit: Adding and Subtracting 1s (Not Crossing 10)
PM1.38 2-Digit: Finding 10 More or 10 Less
PM2.35 2-Digit: Adding 1 Digit Numbers (Crossing 10)
PM10.13 Single Digit Subtraction
PM2.36 2-Digit: Subtracting 1 Digit Numbers (Crossing 10)
PM2.34 2-Digit: Adding and Subtracting Multiples of 10
PM2.37 2-Digit: Adding 2 Digit Numbers (No Exchanging)
PM2.39 2-Digit: Adding 2 Digit Numbers (With Exchanging)
PM2.38 2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
PM2.40 2-Digit: Subtracting 2 Digit Numbers (With Exchanging)
2-Digit: Solving Missing Number Problems Using Fact Families
PM2.44 Addition and Subtraction Checkpoint

Block 03

Weeks
10-12

Topic
Geometry
Shape

## White Rose Small Steps

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

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM8.01 | Describing 2D shapes |
| PM8.02 | Describing 3D shapes |
| PM8.08 | Patterns and Sequences |

## White Rose Map

## White Rose Small Step

Count money - pence
Count money - pounds (notes and coins)
Count money - pounds and pence
Choose notes and coins
Make the same amount
Compare amounts of money
Calculate with money
Make a pound
Find change
Two-step problems

## Block 02

Weeks
03-07

Topic
Multiplication
and division

White Rose Small Steps
Recognise equal groups
Make equal groups
Add equal group
Introduce the multiplication symbol
Multiplication sentences
Use arrays
Make equal groups - grouping
Make equal groups - sharing
The 2 times-table
Divide by 2
Doubling and halving
Odd and even numbers
The 10 times-table
Divide by 10

CENTURY Nuggets

## Nugget Code Nugget Name

PM6.11 Counting Money (Pence)
PM6.12 Counting Money (Pounds)
PM6.15 Making Amounts (Pounds and Pence)
PM6.16 Making the Same Amount
PM6.14 Finding Change 1
PM6.17 Money Checkpoint

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM3.63 | Understanding Multiplication |
| PM3.67 | Commutativity in Multiplication |
| PM10.05 | Multiplyng by 2 |
| PM10.08 | Dividing by 2 |
| PM3.62 | Odd and Even Numbers |
| PM10.07 | Multiplying by 10 |
| PM10.10 | Dividing by 10 |
| PM10.06 | Multiplying by 5 |
| PM10.09 | Dividing by 5 |
| PM3.69 | Multiplication and Division Fact Families |
| PM3.66 | Mixed Multiplication 1 (2s, 5s, \& 10s) |
| PM3.68 | Mixed Division (2s, 5s, \& 10s) |
| PM3.70 | Multiplication and Division Checkpoint |

## Block 02

 ContinuedWeeks
03-07
Topic
Multiplication
and Division

## Block 03

Weeks
08-09
Topic
Length and
Height

Block 04
Weeks
10-12
Topic
Mass,
capacity and
temperature

## White Rose Small Steps

The 5 times-table
Divide by 5
The 5 and 10 times-tables

## White Rose Small Steps

Measure in centimetres
Measure in metres
Compare lengths and heights
Order lengths and heights
Four operations with lengths and heights

## White Rose Small Steps

Compare mass
Measure in grams
Measure in kilograms
Four operations with mass
Compare volume and capacity
Measure in mililitres
Measure in litres
Four operations with volume and capacity Temperature

Nugget Code Nugget Name
PM5.31
PM5.32 2-Digit: Solving Problems with Length and Height

## Nugget Code Nugget Name

PM5.33 2-Digit: Measuring Mass in Grams
PM5.34 2-Digit: Measuring Mass in Kilograms
PM5.35 2-Digit: Solving Problems with Mass
PM5.36 2-Digit: Measuring Volume and Capacity
PM5.37 2-Digit: Solving Problems with Volume and Capacity
PM5.38 Measuring Temperature
PM5.39 Measurement Checkpoint

## White Rose Map

## CENTURY Nuggets

| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Weeks | Introduction to parts and whole | PM4.37 | Recognising and Finding a Half |
| 01-03 | Equal and unequal parts | PM4.38 | Recognising and Finding Quarters |
|  | Recognise a half | PM4.39 | Recognising and Finding Thirds |
| Topic Fractions | Find a half | PM4.42 | Fractions Checkpoint |
|  | Recognise a quarter |  |  |
|  | Find a quarter |  |  |
|  | Recognise a third |  |  |
|  | Find a third |  |  |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | O'clock and half past | PM7.04 | Telling the Time to the Nearest 5 Minutes |
| 04-06 | Quarter past and quarter to | PM7.05 | Telling the Time to the Nearest 5 Minutes in Words |
|  | Tell the time past the hour | PM7.18 | Comparing Durations of Time |
| Topic | Tell the time to the hour | PM7.19 | Units of Time 1 |
|  | Tell the time to 5 minutes | PM7.10 | Estimating Time |
|  | Minutes in an hour | PM7.20 | Time Checkpoint |
|  | Hours in a day |  |  |
| Block 03 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Make tally charts | PM9.16 | Tally Charts |
| 07-08 | Tables | PM9.20 | Tables 1 |
|  | Block diagrams | PM9.14 | Block Diagrams |
| Topic <br> Statistics | Draw pictograms (1-1) | PM9.01 | Pictograms |
|  | Interpret pictograms (1-1) | PM9.21 | Statistics Checkpoint |
|  | Draw pictograms ( 2,5 and 10 ) |  |  |
|  | Interpret pictograms ( 2,5 and 10) |  |  |


| Block $\mathbf{0 4}$ | White Rose Small Steps | Nugget Code | Nugget Name |
| :--- | :--- | :---: | :--- |
| Weeks | Language of position | PM8.09 | Describing Position and Movement |
| $\mathbf{0 9 - 1 0}$ | Describe movement | PM804 | Angles in Turns 1 |
| Topic | Describe turns | PM7.20 | Geometry Checkpoint |
| Position and <br> Direction | Describe movement and turns | Shape patterns with turns |  |

## White Rose Mapping - Year 3

## Autumn Term

## White Rose Map

## CENTURY Nuggets

| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Weeks | Represent numbers to 100 | PM1.34 | 2-Digit: Recognising place value |
| 01-03 | Partition numbers to 100 | PM1.35 | 2-Digit: Representing numbers |
|  | Number line to 100 | PM1.36 | Number lines to 100 |
| Topic | Hundreds | PM1.05 | 3 -Digit: Recognising place value |
|  | Represent numbers to 1,000 | PM1.06 | 3 -Digit: Representing numbers |
|  | Partition numbers to 1,000 | PM1.04 | Counting in multiples of 100 |
|  | Flexible partitioning of numbers to 1,000 | PM1.38 | 2-Digit: Finding 10 more or 10 less |
|  | Hundreds, tens and ones | PM1.07 | 3 -Digit: Finding 10 more or 10 less |
|  | Find 1,10 or 100 more or less | PM1.08 | Finding 100 more or 100 less |
|  | Number line to 1,000 | PM1.37 | Number lines to 1000 |
|  | Estimate on a number line to 1,000 Compare numbers to 1,000 | PM1.09 | 3-Digit: Comparing numbers with greater than and less than symbols <> |
|  | Order numbers to 1,000 | PM1.10 | Ordering numbers up to 1000 |
|  | Count in 50s | PM1.03 | Counting in multiples of 50 |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Apply number bonds within 10 | PM2.01 | 3 -Digit: Adding and subtracting is |
| 04-08 | Apply number bonds within 10 | PM2.02 | 3-Digit: Adding and subtracting 10s |
| Topic | Add and subtract is | PM2.03 | 3 -Digit: Adding and subtracting 100s |
| Addition and | Add and subtract 10s | PM2.37 | 2-Digit: Adding 2-digit numbers (no exchanging) |
| Subtraction | Add and subtract 100s | PM2.38 | 2-Digit: Subtracting 2-digit numbers (no exchanging) |
|  | Spot the pattern | PM2.39 | 2-Digit: Adding 2-digit numbers (with exchanging) |
|  | Add 1s across a 10 | PM2.40 | 2-Digit: Subtracting 2-digit numbers (with exchanging) |
|  | Add 10s across a 100 | PM2.04 | 3-Digit: Column addition (no exchanging) |
|  | Subtract 1s across a 10 | PM2.06 | 3 -Digit: Column subtraction (no exchanging) |

Block 03 Continued

Weeks
04-08
Topic
Addition and Subtraction

## Block 04

Weeks
09-12
Topic
Multiplication and Division

## White Rose Small Steps

Subtract 10s across a 100
Make connections
Add two numbers (no exchange)
Subtract two numbers (no exchange)
Add two numbers (across a 10)
Add two numbers (across a 100)
Subtract two numbers (across a 10 )
Subtract two numbers (across a 100)
Add 2-digit and 3-digit numbers
Subtract a 2-digit number from a 3-digit number
Complements to 100
Estimate answers
Inverse operations
Make decisions

## White Rose Small Steps

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

## Nugget Code Nugget Name

PM2.06 3-Digit: Column subtraction (no exchanging)
PM2.05 3-Digit: Column addition (with exchanging)
PM2.08 Addition and subtraction practice 1
PM2.09 Addition and subtraction word problems 1
PM2.31 Number bonds to 100
PM2.10 Rounding to the nearest 10 and 100
PM2.11 Estimating using rounding
PM2.12 Checking answers using the inverse 1

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM3.63 | Understanding multiplication |
| PM10.01 | Counting in multiples of 2 |
| PM10.03 | Counting in multiples of 5 |
| PM10.04 | Counting in multiples of 10 |
| PM10.02 | Counting in multiples of 3 |
| PM3.01 | Multiplying by 3 |
| PM3.05 | Dividing by 3 |
| PM1.01 | Counting in multiples of 4 |
| PM3.02 | Multiplying by 4 |
| PM3.06 | Dividing by 4 |
| PM1.02 | Counting in multiples of 8 |
| PM3.03 | Multiplying by 8 |
| PM3.07 | Dividing by 8 |


| Block $\mathbf{0 1}$ |
| :--- |
| Weeks |
| $\mathbf{0 1 - 0 3}$ |
| Topic |
| Multiplication <br> and division | B

Block 02
Weeks
04-06
Topic
Length and
perimeter

## White Rose Small Steps

Multiples of 10
Related calculations
Reasoning about multiplication
Multiply a 2 -digit number by a 1 -digit number - no exchange
Multiply a 2-digit number by a 1-digit number - with exchange
Link multiplication and division
Divide a 2-digit number by a 1-digit number - no exchange
Divide a 2-digit number by a 1-digit number - flexible partitioning
Divide a 2-digit number by a 1-digit number - with remainders
Scaling
How many ways?

## White Rose Small Steps

Measure in metres and centimetres
Measure in millimetres
Measure in centimetres and millimetres
Metres, centimetres and millimetres
Equivalent lengths (metres and centimetres)
Equivalent lengths (centimetres and millimetres)
Compare lengths
Add lengths
Subtract lengths
What is perimeter?
Measure perimeter
Calculate perimeter

|  | CENTURY Nuggets |
| :---: | :--- |
| Nugget Code | Nugget Name |
| PM10.04 | Counting in Multiples of 10 |
| PM3.09 | Multiplying Multiples of 10 |
| PM3.64 | Comparing Statements |
| PM3.12 | 2-Digit: Multiplying by 1-Digit |
| PM3.60 | 2-Digit: Dividing Using Partitioning (no Remainders) |
| PM3.61 | 2-Digit: Dividing Using Partitioning (with Remainders) |
| PM3.65 | Scaling Problems 1 |
| PM3.15 | Multiplication and Division Practice 1 |
| PM3.16 | Multiplication and Division Word Problems 1 |
|  |  |
| Nugget Code |  |
| PM5.02 | 3-Digit: Length |
| PM5.03 | 3-Digit: Solving Length Problems |
| PM5.08 | Perimeter by Counting |
| PM5.09 | Calculating the Perimeter |

Block 03

Weeks
07-09
Topic
Fractions A

## Block 04

Weeks
10-12
Topic
Mass and
capacity

## White Rose Small Steps

Understand the denominators of unit fractions
Compare and order unit fractions
Understand the numerators of non-unit fractions
Understand the whole
Compare and order non-unit fractions
ractions and scale
Fractions on a number line
Count in fractions on a number line
Equivalent fractions on a number line
Equivalent fractions on a number line

## Nugget Code Nugget Name

PM4.01 Identifying Fractions
PM4.03 Comparing and Ordering Fractions
PM4.40 Counting in Fractions
PM4.05 Equivalent Fractions 1

## White Rose Small Steps

Use scales
Measure mass in grams
Measure mass in kilograms and grams
Equivalent masses (kilograms and grams)
Compare mass
Add and subtract mass
Measure capacity and volume in millilitres
Measure capacity and volume in litres and millilitres
Equivalent capacities and volumes (litres and millilitres)
Compare capacity and volume
Add and subtract capacity and volume

## Nugget Code Nugget Name

PM5.04 3-Digit: Mass and Weight
PM5.05 3-Digit: Solving Mass Problems
PM5.06 3-Digit: Volume and Capacity
PM5.07 3-Digit: Solving Volume and Capacity Problems

## White Rose Map

| Block $\mathbf{0 1}$ | White Rose Small Steps |
| :--- | :--- |
| Weeks | Add fractions |
| $\mathbf{0 1 - 0 2}$ | Subtract fractions |
| Topic | Partition the whole |
| Fractions B | Unit fractions of a set of objects |
|  | Non-unit fractions of a set of objects |
|  | Reasoning with fractions of an amount |


| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Weeks | Pounds and pence | PM6.15 | Making Amounts (Pounds and Pence) |
| 03-04 | Convert pounds and pence | PM6.13 | Converting Pounds and Pence |
|  | Add money | PM6.01 | Adding Amounts of Money |
| Topic | Subtract money | PM6.02 | Adding Amounts of Money 2 |
|  | Find change | PM6.04 | Subtracting Amounts of Money |
|  |  | PM6.14 | Finding Change 1 (from £1) |
|  |  | PM6.03 | Finding Change 2 |
|  |  | PM6.05 | Solving Money Problems |
| Block 03 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Roman numerals to 12 | PM7.07 | Roman Numerals (up to 20) |
| 05-07 | Tell the time to 5 minutes | PM7.03 | Telling the Time in Words |
|  | Tell the time to the minute | PM7.04 | Telling the Time to the Nearest 5 Minutes |
| Topic <br> Time | Read time on a digital clock | PM7.05 | Telling the Time to the Nearest 5 Minutes in Words |
|  | Use am and pm | PM7.01 | Units of Time 2 |
|  | Years, months and days | PM7.02 | Times of Day |
|  | Days and hours | PM7.12 | Start and End Times |

## Block 03

Continued
Weeks
05-07
Topic
Time

Block 04
Weeks
08-09
Topic
Shape

| Block 05 | White Rose Small Steps |
| :--- | :--- |
| Weeks | Interpret pictograms |
| $\mathbf{1 0 - 1 1}$ | Draw pictograms |
| Topic | Interpret bar charts |
| Statistics | Draw bar charts |
|  | Collect and represent data |
|  |  |

Two-way tables

## Nugget Code Nugget Name

PM7.18 Comparing Durations of Time
PM7.11 Finding the Duration

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM8.04 | Angles in Turns 1 |
| PM8.05 | Identifying Angles |
| PM8.06 | Identifying Lines |
| PM8.01 | Describing 2D Shapes |
| PM8.02 | Describing 3D Shapes |


| Nugget Code | Nugget Name |
| :---: | :--- |
| PM9.01 | Pictograms |
| PM9.03 | Bar Charts 1 |
| PM9.16 | Tally Charts |
| PM9.02 | Tables 2 |

## White Rose Mapping - Year 4



Block 02<br>Continued<br>Weeks<br>05-07<br>Topic<br>Addition and<br>Subtraction

## Block 03

Week
08
Topic
Area

## Block 04

Weeks
09-11
Topic
Multiplication and Division

## White Rose Small Steps

Subtract two 4-digit numbers - no exchange
Subtract two 4-digit numbers - one exchange
Subtract two 4-digit numbers - more than one exchange
Efficient subtraction
Estimate answers
Checking strategies

## White Rose Small Steps

What is area?
Count squares
Make shapes
Compare areas

## White Rose Small Steps

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

## Nugget Code Nugget Name

PM2.14 4- Digit: Column addition (with exchanging)
PM2.15 4-Digit: Column subtraction (no exchanging)
PM2.16 4-Digit: Column subtraction (with exchanging)
PM2.20 Estimating to check answers
PM2.19 Checking answers using the inverse 2

## Nugget Code Nugget Name

PM5.20 Area by counting

Nugget Code Nugget Name
PM3.01 Multiplying by 3
PM3.05 Dividing by 3
PM3.17 Multiplying by 6
PM3.23 Dividing by 6
PM3.19 Multiplying by 9
PM3.25 Dividing by 9
PM3.18 Multiplying by 7
PM3.24 Dividing by 7
PM3.20 Multiplying by 11
PM3.26 Dividing by 11
PM3.21 Multiplying by 12
PM3.27 Dividing by 12
PM3.29 Multiplying 3 numbers together

## Block 01

Weeks
$01-03$
01-03
Topic
Multiplication and division
B

## White Rose Small Steps

Factor pairs
Use factor pairs
Multiply by 10
Multiply by 100
Divide by 10
Divide by 100
Related facts - multiplication and division Informal written methods for multiplication

Multiply a 2-digit number by a 1 -digit number
Multiply a 3-digit number by a 1 -digit number
Divide a 2-digit number by a 1-digit number (1) Divide a 2-digit number by a 1-digit number (2)

Divide a 3-digit number by a 1 -digit number
Correspondence problems
Efficient multiplication

## Block 02

Weeks
04-05
Topic
Length and
perimeter

## White Rose Small Steps

Measure in kilometres and metres
Equivalent lengths (kilometres and metres)
Perimeter on a grid
Perimeter of a rectangle
Perimeter of rectilinear shapes
Find missing lengths in rectilinear shapes
Calculate perimeter of rectilinear shapes
Perimeter of regular polygons
Perimeter of polygons

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM3.30 | Factor Pairs |
| PM3.12 | 2-Digit: Multiplying by 1-Digit |
| PM3.31 | 2/3-Digit: Multiplying by 1-Digit |
| PM3.35 | 2/3-Digit: Dividing Using Partitioning (no Remainders) |
| PM3.36 | 2/3-Digit: Dividing Using Partitioning (with Remainders) |
| PM3.33 | Correspondence Problems 1 |
| PM3.34 | Correspondence Problems 2 |

## Nugget Code Nugget Name

PM5.10 Measuring Length
PM5.13 Converting m and km
PM5.08 Perimeter by Counting
PM5.09 Calculating the Perimeter

Block 03

Weeks
06-09

## Topic

Fractions

White Rose Small Steps
Understand the whole

## Count beyond 1

Partition a mixed number
Number lines with mixed numbers
Compare and order mixed numbers
Understand improper fractions
Convert mixed numbers to improper fractions
Convert improper fractions to mixed numbers
Equivalent fractions on a number line
Equivalent fraction families
Add two or more fractions
Add fractions and mixed numbers
Subtract two fractions
Subtract from whole amounts
Subtract from mixed numbers
Equivalent fraction families
Add two or more fractions
Add fractions and mixed numbers
Subtract two fractions
Subtract from whole amounts

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM4.01 | Identifying Fractions |
| PM4.40 | Counting in Fractions |
| PM4.05 | Equivalent Fractions 1 |
| PM4.04 | Adding and Subtracting Fractions |

Nugget Code Nugget Name

PM4.01

PM4.04 Adding and Subtracting Fractions

## Block 04

Weeks
10-12
Topic
Decimals A

## White Rose Small Steps

Tenths as fractions
Tenths as decimals
Tenths on a place value chart
Tenths on a number line
Divide a 1 -digit number by 10
Divide a 2-digit number by 10
Hundredths as fractions
Hundredths as decimals
Hundredths on a place value chart
Divide a 1 - or 2-digit number by 100

## Nugget Code Nugget Name

PM4.02 Tenths
PM4.09 Hundredths
PM4.10 Decimal Equivalents (Tenths/Hundredths)
PM4.12 Dividing and Multiplying by 10 and 100 (Including Decimals)

| Block $\mathbf{0 1}$ | White Rose Small Steps |
| :--- | :--- |
| Weeks | Make a whole with tenths |
| O1-02 | Make a whole with hundredths |
| Topic | Partition decimals |
| Decimals B | Flexibly partition decimals <br> Compare decimals |
|  | Order decimals |
|  | Round to the nearest whole number <br> Halves and quarters as decimals |


| Block $\mathbf{0 2}$ | White Rose Small Steps |
| :--- | :--- |
| Weeks | Write money using decimals |
| $\mathbf{0 3 - 0 4}$ | Convert between pounds and pence |
| Topic | Compare amounts of money |
| Money | Estimate with money <br>  |
|  | Calculate with money <br> Solve problems with money |

## Block 03

Weeks
05-06
Topic
Time

## White Rose Small Steps

Years, months, weeks and days
Hours, minutes and seconds
Convert between analogue and digital times
Convert to the 24 -hour clock
Convert from the 24 -hour clock

|  | CENTURY Nuggets |
| :---: | :---: |
| Nugget Code | Nugget Name |
| PM4.14 | Comparing Decimals |
| PM4.13 | Rounding Decimals to the Nearest Whole Number |
| PM4.11 | Decimal Equivalents |
| Nugget Code | Nugget Name |
| PM6.06 | Pounds and Pence |
| PM6.07 | Comparing Amounts of Money |
| PM6.08 | Estimating Amounts of Money |
| PM6.10 | Solving Money Problems 2 |
| Nugget Code | Nugget Name |
| PM7. 13 | Converting Weeks, Days, Years and Months |
| PM7.14 | Converting Seconds, Minutes and Hours |
| PM7.09 | 12 Hour and 24 Hour Clocks |


| Block 04 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Weeks | Understand angles as turns | PM8.04 | Angles in Turns 1 |
| 08-09 | Identify angles | PM8.05 | Identifying Angles |
|  | Compare and order angles | PM8.11 | Triangles |
| Topic Shape | Triangles | PM8.12 | Quadrilaterals |
|  | Quadrilaterals | PM8.07 | Lines of Symmetry |
|  | Polygons |  |  |
|  | Lines of symmetry |  |  |
|  | Complete a symmetric figure |  |  |
| Block 05 | White Rose Small Steps | Nugget Code | Nugget Name |
| Week | Interpret charts | PM9.01 | Pictograms |
|  | Comparison, sum and difference | PM9.03 | Bar Charts 1 |
|  | Interpret line graphs | PM9.04 | Line Graphs 1 |
| Topic Statistics | Draw line graphs |  |  |
| Block 06 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Describe position using coordinates | PM8.14 | Describing Position |
| 11-12 | Plot coordinates | PM8.15 | Plotting Points |
|  | Draw 2-D shapes on a grid | PM8.16 | Translation 1 |
| Topic <br> Position and direction | Translate on a grid <br> Describe translation on a grid |  |  |

## White Rose Mapping - Year 5



## Block 02

Continued

## Weeks

04-05
Topic
Addition and
Subtraction

## Block 03

Weeks
06-08

Topic
Multiplication
and Division A

## White Rose Small Steps

Multi-step addition and subtraction problems
Compare calculations
Find missing numbers

## White Rose Small Steps

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

## White Rose Small Steps

Find fractions equivalent to a unit fraction
Find fractions equivalent to a non-unit fraction
Recognise equivalent fractions
Convert improper fractions to mixed numbers
Convert mixed numbers to improper fractions
Compare fractions less than 1
Order fractions less than 1
Compare and order fractions greater than 1

## Nugget Code Nugget Name

PM2.23 4+ Digit: Column subtraction
PM2.20 Estimating to check answers
PM2.19 Checking answers using the inverse 2
PM2.21 Solving two-step problems

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM3.30 | Factor pairs |
| PM3.40 | Common factors |
| PM3.41 | Prime numbers |
| PM3.43 | Square numbers |
| PM3.44 | Cube numbers |
| PM3.09 | Multiplying multiples of 10 |
| PM3.47 | Mental strategies for multiplication 1 |
| PM3.49 | Mental strategies for division |

PM3.49 Mental strategies for division

Block 04
Continued
Weeks
09-12
Topic
Fractions A

White Rose Small Steps
Add and subtract fractions with the same denominator
Add fractions within 1
Add fractions with total greater than 1
Add to a mixed number
Add two mixed numbers
Subtract fractions
Subtract from a mixed number
Subtract from a mixed number - breaking the whole
Subtract two mixed numbers

Nugget Code Nugget Name
PM4.29 Adding and subtracting mixed numbers 1

## Spring Term

## White Rose Map

## White Rose Small Steps

Multiply up to a 4-digit number by a 1-digit number
Multiply a 2-digit number by a 2-digit number (area model)
Multiply a 2-digit number by a 2-digit numbe
Multiply a 3-digit number by a 2-digit number
Multiply a 4-digit number by a 2-digit number
Solve problems with multiplication
Short division
Divide a 4-digit number by a 1 -digit number
Divide with remainders
Efficient division
Solve problems with multiplication and division
Divide a 2-digit number by a 1-digit number (2)
Divide a 3-digit number by a 1-digit number
Correspondence problems
Efficient multiplication
Efficient multiplication

CENTURY Nuggets

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM3.50 | 3/4-Digit: Multiplying by 1-Digit |
| PM3.51 | 2-Digit: Multiplying by 2-Digits |
| PM3.52 | 3/4-Digit: Multiplying by 2-Digits |
| PM3.37 | 2/3-Digit: Dividing Using Written Methods |
| PM3.53 | 3/4-Digit: Dividing by 1-Digit Numbers Using Short Division <br> (without Remainders) |
| PM3.54 | 3/4-Digit: Dividing by 1-Digit Numbers Using Short Division <br> (with Remainders) |


| Block $\mathbf{0 2}$ | White Rose Small Steps |
| :--- | :--- |
| Weeks | Multiply a unit fraction by an integer |
| $\mathbf{0 4 - 0 5}$ | Multiply a non-unit fraction by an integer |
| Topic | Multiply a mixed number by an integer |
| Fractions B | Calculate a fraction of a quantity |
|  | Fraction of an amount |
|  | Find the whole |
|  | Use fractions as operators |

Nugget Name

Multiplying Fractions by Whole Numbers Multiplying Mixed Numbers by Whole Numbers Finding Unit Fractions of Amounts Finding Non-Unit Fractions of Amounts Finding Fractions of Amounts: Finding the Whole Fractions as Operators

Block 03

Weeks
06-08

Topic
Decimals and percentages

## White Rose Small Steps

Decimals up to 2 decimal places
Equivalent fractions and decimals (tenths)
Equivalent fractions and decimals (hundredths)
Equivalent fractions and decimals
Thousandths as fractions
Thousandths as decimals
Thousandths on a place value chart
Order and compare decimals (same number of decimal places)
Order and compare any decimals with up to 3 decimal places
Round to the nearest whole number
Round to 1 decimal place
Understand percentages
Percentages as fractions
Percentages as decimals
Equivalent fractions, decimals and percentages

## Nugget Code Nugget Name

PM1.21 2dp: Recognising Place Value in Decimals
PM4.10 Decimal Equivalents (Tenths/Hundredths)
PM4.11 Decimal Equivalents (Quarter, Half and Three Quarters)
PM12.01 Thousandths
PM12.02 3dp: Recognising Place Value in Decimals
PM4.14 Comparing Decimals
PM4.13 Rounding Decimals to the Nearest Whole Number
PM12.03 Rounding Decimals
PM12.05 Introduction to Percentages
PM12.06 Fractions, Decimals and Percentages 1
Block 05
Weeks
$\mathbf{0 9 - 1 0}$
Topic

| Perimeter |
| :--- |
| and area |

and area

Block 06
Weeks
11-12

Topic
Statistics

White Rose Small Steps
Perimeter of rectangles
Perimeter of rectilinear shapes
Perimeter of polygons
Area of rectangles
Area of compound shapes
Estimate area

## White Rose Small Steps

Draw line graphs
Read and interpret line graphs
Read and interpret tables
Two-way tables
Read and interpret timetables

Nugget Name
Calculating the Perimeter
PM5.09 Calculating the Perimeter
PM13.02 Area of Rectangles
PM13.03 Area of Compound Shapes
PM13.04 Estimating Area

Nugget Code Nugget Name
PM9.04 Line Graphs 1
PM9.08 Line Graphs 2
PM9.05 Tables 3
PM9.06 Two-Way Tables
PM9.07 Timetables
Block 01
Weeks
$\mathbf{0 1 - 0 3}$
Topic
Shape

Block 02
Weeks
$\mathbf{0 4}$ - 05
Topic
Position and
Direction

Block 03

Weeks
06-08
Topic
Decimals

## White Rose Small Steps

Understand and use degrees
Classify angles
Estimate angles
Measure angles up to $180^{\circ}$
Draw lines and angles accurately
Calcuate angles around a point
Calculate angles on a straight line
Lengths and angles in shapes
Regular and irregular polygons
3-D shapes

## White Rose Small Steps

Read and plot coordinates
Problem solving with coordinates
Translation
Translation with coordinates
Lines of symmetry
Reflection in horizontal and vertical lines

## White Rose Small Steps

Use known facts to add and subtract decimals within 1
Complements to 1
Add and subtract decimals across 1
Add decimals with the same number of decimal places
Subtract decimals with the same number of decimal places
Add decimals with different numbers of decimal places
Subtract decimals with different numbers of decimal places

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM14.05 | Identifying Angles 2 |
| PM14.07 | Estimating Angles |
| PM14.08 | Measuring Angles |
| PM14.09 | Drawing Angles |
| PM14.12 | Angles Around a Point |
| PM14.11 | Angles on a Straight Line |
| PM14.01 | Regular and Irregular Polygons |
| PM8.02 | Describing 3D Shapes |


| Nugget Code | Nugget Name |
| :---: | :--- |
| PM8.15 | Plotting Points |
| PM8.16 | Translation 1 |
| PM15.01 | Reflection 1 |

## Nugget Code Nugget Name

PM12.14 Adding and Subtracting Decimals (within 1)
PM4.41 2dp: Decimal Complements to 1
PM12.15 3dp: Decimal Complements to 1
PM12.04 Adding and Subtracting Decimals
PM4.12 Dividing and Multiplying by 10 and 100
Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p)

| Block 03 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Continued Weeks | Efficient strategies for adding and subtracting decimals Decimal sequences | PM3.46 | Dividing by 10, 100 and 1000 (Involving Decimals up to 3 d.p) |
| 06-08 | Multiply by 10,100 and 1,000 |  |  |
| Topic | Divide by by 10, 100 and 1,000 |  |  |
| Decimals | Multiply and divide decimals - missing values |  |  |
| Block 04 | White Rose Small Steps | Nugget Code | Nugget Name |
| Week | Understand negative numbers | PM1.18 | Negative Numbers 1 |
| 09 | Count through zero in 1 s | PM1.19 | Negative Numbers 2 (Including Addition and Subtraction) |
|  | Count through zero in multiples |  |  |
| Topic <br> Negative | Compare and order negative numbers |  |  |
| Numbers | Find the difference |  |  |
| Block 05 | White Rose Small Steps | Nugget Code | Nugget Name |
| Week | Kilograms and kilometres | PM5.11 | Converting mm and cm |
| 10 | Millimetres and Millilitres | PM5.12 | Converting cm and m |
|  | Convert units of length | PM5.13 | Converting mand km |
| Converting | Convert between metric and imperial units | PM5.23 | Solving Length Problems with Conversion |
| Units | Convert units of time | PM5.22 | Imperial Units of Length |
|  | Calculate with timetables | PM5.24 | Imperial Units of Mass |
|  |  | PM5.26 | Imperial Units of Volume and Capacity |
|  |  | PM7.15 | Converting Units of Time |
|  |  | PM9.07 | Timetables |
| Block 06 | White Rose Small Steps | Nugget Code | Nugget Name |
| Week | Cubic centimetres | PM13.06 | Volume of Shapes 1 |
| 11 | Compare volume |  |  |
|  | Estimate volume |  |  |
| Topic Volume | Estimate capacity |  |  |

## White Rose Mapping - Year 6

| Autumn Term |  |  |  |
| :---: | :---: | :---: | :---: |
| White Rose Map |  | CENTURY Nuggets |  |
| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Numbers to 1,000,000 | PM1.25 | Place value up to 1,000,000 |
| 01-02 | Numbers to 10,000,000 | PM1.31 | Place value up to 10,000,000 |
| Topic <br> Place Value | Read and write numbers to 10,000,000 | PM1.26 | Comparing and ordering numbers to 1,000,000 |
|  | Powers of 10 | PM1.23 | Rounding to the nearest 10, 100 and 1000 |
|  | Number line to 10,000,000 | PM1.28 | Rounding to the nearest 10,000 and 100,000 |
|  | Compare and order any integers | PM1.18 | Negative numbers 1 |
|  | Round any integer | PM1.19 | Negative numbers 2 (including addition and subtraction) |
|  | Negative numbers |  |  |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Add and subtract integers | PM2.22 | 4+ Digits: Column addition |
| 03-07 | Common factors | PM2.23 | 4+ Digits: Column subtraction |
| Topic <br> Addition, Subtraction, Multiplication and Division | Common multiples | PM3.40 | Common factors |
|  | Rules of divisibility | PM3.55 | Common multiples |
|  | Primes to 100 | PM3.41 | Prime numbers |
|  | Square and cube numbers | PM3.43 | Square numbers |
|  | Multiply up to a 4 -digit number by a 2 -digit number | PM3.44 | Cube numbers |
|  | Solve problems with multiplication | PM3.51 | 2-Digit: Multiplying by 2 -digits |
|  | Short division | PM3.52 | 3/4-Digit: Multiplying by 2 -digits |
|  | Division using factors | PM11.02 | Solving multistep problems 1 (with multiplication) |
|  | Introduction to long division | PM3.53 | 3/4-Digit: Dividing by 1 -digit numbers using short division (without remainders) |
|  | Long division with remainders | PM3.54 | 3/4-Digit: Dividing by 1 -digit numbers using short division (with remainders) |

Block 02
Continued
Weeks
03-07
Topic
Addition,
Subtraction,
Multiplication
and Division

Block 03
Weeks
08-09

Topic
Fractions A

Block 04
Weeks
10-11

Topic
Fractions B

## White Rose Small Steps

Solve problems with division
Solve multi-step problems
Order of operations
Mental calculations and estimation
Reason from known facts

## White Rose Small Steps

Equivalent fractions and simplifying
Equivalent fractions on a number line
Compare and order (denominator)
Compare and order (numerator)
Add and subtract simple fractions
Add and subtract any two fractions
Add mixed numbers
Subtract mixed numbers
Multi-step problems

## Nugget Code Nugget Name

PM3.57 Long division 1 (dividing by a single digit number)
PM3.58 Long division 2 (dividing by a 2-Digit number)
PM11.03 Solving Multistep Problems 2 (with Division)
PM11.05 Operations of equal priority
PM11.06 BIDMAS: 4 operations and brackets
PM11.07 BIDMAS: Indices

## Nugget Code Nugget Name

PM4.15 Equivalent fractions 2
PM4.34 Fractions on a number line 1
PM4.35 Fractions on a number line 2
PM4.23 Simplifying fractions
PM4.16 Comparing proper fractions 1
PM4.21 Comparing proper fractions 2
PM4.27 Adding and subtracting fractions with different denominators
PM4.32 Adding and subtracting fractions with different denominators 2
PM4.29 Adding and subtracting mixed numbers 1
PM4.33 Adding and subtracting mixed numbers 2

## Nugget Code Nugget Name

PM4.28 Multiplying fractions by whole numbers
PM4.24 Multiplying simple pairs of proper fractions
PM4.25 Dividing fractions by whole numbers
PM4.08 Finding fractions of amounts
PM4.36 Finding fractions of amounts: finding the whole


## Block 02

Weeks

## Topic

## Algebra

## White Rose Small Steps

1-step function machines
2-step function machines
Form expressions
Substitution
Formulae
Form equations
Solve 1 -step equations
Solve 2-step equations
Find pairs of values
Solve problems with two unknowns

Nugget Code Nugget Name
PM18.02 Function Machines
PM18.03 Forming Expressions 1
PM18.04 Forming Expressions 2
PM18.05 Forming Expressions 3
PM18.06 Substitution
PM18.07 Formulae
PM18.08 Solving 1 Step Equations
PM18.09 Solving 2 Step Equations
PM18.10 Satisfying Equations with 2 Variables

## Nugget Code Nugget Name

PM12.02 3dp: Recognising Place Value in Decimals
M12.03 Rounding Decimals
PM12.04 Adding and Subtracting Decimals
PM3.45 Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p.)
PM3.46 Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)
PM12.09 Multiplying Decimals
PM12.10 Dividing Decimals

## Block 04

Weeks

Topic
Fractions,
decimals and
percentages

## White Rose Small Steps

Decimal and fraction equivalents
Fractions as division
Understand percentages
Fractions to percentages
Equivalent fractions, decimals and percentages
Order fractions, decimals and percentages
Percentage of an amount - one step
Percentage of an amount - multi-step
Percentages - missing values

## White Rose Small Steps

Shapes - same area
Area and perimeter
Area of a triangle - counting squares
Area of a right-angled triangle
Area of any triangle
Area of a parallelogram
Volume - counting cubes
Volume of a cuboid

White Rose Small Steps
Line graphs
Dual bar charts
Read and interpret pie charts
Pie charts with percentages
Draw pie charts
The mean

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM12.11 | Converting Decimals to Fractions |
| PM12.12 | Fractions to Decimals Using Division |
| PM12.05 | Introduction to Percentages |
| PM12.07 | Finding Percentages 1 |
| PM12.08 | Finding Percentages 2 |
| PM12.06 | Fractions, Decimals and Percentages 1 |
| PM12.13 | Fractions, Decimals and Percentages 2 |
| PM16.01 | Finding Percentages of Amounts 1 (1\%, 10\%, 25\%, 50\%) |
| PM16.02 | Finding Percentages of Amounts 2 (2-9\%) |
| PM16.03 | Finding Percentages of Amounts 3 (multiples of 10) |
| PM16.04 | Finding Percentages of Amounts 4 (11-99\%) |
| PM16.05 | Percentages (Missing Values) |
| Nugget Code | Nugget Name |
| PM13.05 | Area and Perimeter |
| PM13.08 | Area of Right-Angled Triangles |
| PM13.09 | Area of Triangles |
| PM13.07 | Area of Parallelograms |
| PM13.06 | Volume of Shapes 1 |
| PM13.10 | Volume of Shapes 2 |

Nugget Code Nugget Name
PM9.09 Line Graphs 3

PM9.10 Pie Charts 1
PM9.11 Pie Charts 2
PM9.12 Finding the Mean

## Summer Term

| White Rose Map |  | CENTURY Nuggets |  |
| :---: | :---: | :---: | :---: |
| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Measure and classify angles | PM14.05 | Identifying Angles 2 |
| 01-03 | Calculate angles | PM14.08 | Measuring Angles |
|  | Vertically opposite angles | PM14.15 | Vertically Opposite Angles |
| Topic <br> Shape | Angles in a triangle | PM14.16 | Angles in Triangles |
|  | Angles in a triangle - special cases | PM14.17 | Angles in Quadrilaterals |
|  | Angles in a triangle - missing angles | PM14.13 | Circles |
|  | Angles in a quadrilateral | PM14.14 | Nets of Shapes 2 |
|  | Angles in polygons |  |  |
|  | Circles |  |  |
|  | Draw shapes accurately |  |  |
|  | Nets of 3-D shapes |  |  |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| Week | The first quadrant | PM8.15 | Plotting Points |
| 04 | Read and plot points in four quadrants | PM15.02 | Four Quadrants |
|  | Solve problems with coordinates | PM15.03 | Translation 2 |
| Position and | Translations | PM15.04 | Reflection 2 |
| Direction | Reflections |  |  |

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##  <br>  <br> ary <br> CENTURY

