Course Mapping Guide
Primary Mathematics
Course Mapping Guide
Primary Mathematics

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## 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 .

There is also a multiplication tables course, which is suitable for all year groups, and an arithmetic course which is suitable for years 5 and 6.

This mapping document shows how our content is mapped to the English national curriculum, as well as how it aligns with the White Rose scheme of learning.

Year group courses
$\rightarrow$ Primary - Year 2 Mathematics
Diagnostics 9 Strands 10 Nuggets 87
Year 2 National Curriculum Map
Year 2 White Rose Map
$\rightarrow$ Primary - Year 3 Mathematics
Diagnostics $9 \quad$ Strands $11 \quad$ Nuggets 131

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Year 3 National Curriculum Map Year 3 White Rose Map
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$\rightarrow$ Primary - Year 4 Mathematics
Diagnostics 10 Strands 12 Nuggets 206
Year 4 National Curriculum Map
Year 4 White Rose Map
$\rightarrow$ Primary - Year 5 Mathematics
Diagnostics 10 Strands 12 Nuggets 206

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

Additional courses
$\rightarrow$ Primary - Multiplication Tables
Diagnostics 1 Strands 6 Nuggets 52
View course content
$\rightarrow$ Primary - Year 5-6 Arithmetic
Diagnostics 8 Strands 9 Nuggets 60
View course content


## Course Assignment

Primary Mathematics


## National Curriculum Map <br> Year 2 Mathematics

Course Primary - Year 2 Mathematics
Diagnostics 9 Strands 10 Nuggets 87

## Strands - Primary - Year 2 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 9 |
| Number and Place Value | 11 |
| Addition and Subtraction | 18 |
| Multiplication and Division | 13 |
| Fractions | 4 |


| Strand | No. of nuggets |
| :--- | :---: |
| Measurement | 9 |
| Money | 6 |
| Time | 6 |
| Geometry | 6 |
| Statistics | 5 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning

|  | National Curriculum |  | CENTURY |
| :---: | :---: | :---: | :---: |
| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
|  | count in steps of 2,3 , and 5 from 0 , and in tens from any number, forward and backward | PM10.01 | Counting in Multiples of 2 |
|  |  | PM10.02 | Counting in Multiples of 3 |
|  |  | PM10.03 | Counting in Multiples of 5 |
|  | - | PM10.04 | Counting in Multiples of 10 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | recognise the place value of each digit in a two-digit number (tens, ones) | PM1.34 | 2-Digit: Recognising Place Value |
|  |  |  |  |
|  |  | PM1.35 | 2-Digit: Representing Numbers |
|  | identify, represent and estimate numbers using different representations, including the number line | PM1.36 | Number Lines to 100 |
|  | compare and order numbers from 0 up to 100; use <, > and = signs | PM10.15 | 2-Digit: Comparing Numbers with Greater Than and Less Than Symbols <> |
|  | read and write numbers to at least 100 in numerals and in words | PM10.16 | Reading and Writing Numbers to 20 |
|  |  | PM10.17 | Reading and Writing Numbers to 100 |
|  | use place value and number facts to solve problems |  | Included in nuggets above |
|  | - | PM10.18 | Number and Place Value Checkpoint |
|  | solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures <br> solve problems with addition and subtraction applying their increasing knowledge of mental and written methods |  | Included in nuggets below |
|  |  | PM2.30 | Number Bonds to 20 |
|  |  | PM2.31 | Number Bonds to 100 |
|  |  | PM10.11 | Single Digit Addition |
|  | add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers | PM10.13 | Single Digit Subtraction |
|  | subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers | PM2.32 | Adding Three 1-Digit Numbers |
|  | subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers | PM2.33 | 2-Digit: Adding and Subtracting 1s (Not Crossing 10) |
|  |  | PM1.38 | 2-Digit: Finding 10 More or 10 Less |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  |  | PM2.34 | 2-Digit: Adding and Subtracting Multiples of 10 |
|  |  | PM2.35 | 2-Digit: Adding 1 Digit Numbers (Crossing 10) |
|  | add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers | PM2.36 | 2-Digit: Subtracting 1 Digit Numbers (Crossing 10) |
|  | subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers | PM2.37 | 2-Digit: Adding 2 Digit Numbers (No Exchanging) |
|  | subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit | PM2.38 | 2-Digit: Subtracting 2 Digit Numbers (No Exchanging) |
|  |  | PM2.39 | 2-Digit: Adding 2 Digit Numbers (With Exchanging) |
|  |  | PM2.40 | 2-Digit: Subtracting 2 Digit Numbers (With Exchanging) |
|  | show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot | PM2.42 | Commutativity in Addition |
|  | recognise and use the inverse relationship between addition and subtraction and use this to check | PM2.41 | Addition and Subtraction Fact Families |
|  | - Calculations and solve missing number problems | PM2.43 | 2-Digit: Solving Missing Number Problems Using Fact Families |
|  | - | PM2.44 | Addition and Subtraction Checkpoint |
|  | recall and use multiplication and division facts for the 2,5 and 10 multiplication tables | PM3.63 | Understanding Multiplication |
|  |  | PM10.05 | Multiplying by 2 |
|  |  | PM10.06 | Multiplying by 5 |
|  |  | PM10.07 | Multiplying by 10 |
|  |  | PM3.66 | Mixed Multiplication 1 (2s,5s \& 10s) |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | recall and use multiplication and division facts for the 2,5 and 10 multiplication tables | PM3.67 | Commutativity in Multiplication |
|  |  | PM10.08 | Dividing by 2 |
|  |  | PM10.09 | Dividing by 5 |
|  |  | PM10.10 | Dividing by 10 |
|  |  | PM3.68 | Mixed Division 1 (2s, 5 s \& 10s) |
|  | recognising odd and even numbers | PM3.62 | Odd and Even Numbers |
|  | calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division ( $\div$ ) and equals (=) signs |  | Included in nuggets above |
|  | solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. | PM3.69 | Multiplication and Division Fact Families |
|  | - | PM3.70 | Multiplication and Division Checkpoint |
|  | recognise, find, name and write fractions $1 / 31 / 42 / 4$ and $3 / 4$ of a length, shape, set of objects or quantity write simple fractions for example, $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$ | PM4.37 | Recognising and Finding a Half |
|  |  | PM4.38 | Recognising and Finding Quarters |
|  |  | PM4.39 | Recognising and Finding Thirds |
|  | - | PM4.42 | Fractions Checkpoint |
|  | choose and use appropriate standard units to estimate and measure length/height in any direction ( m / $\mathrm{cm})$; mass ( $\mathrm{kg} / \mathrm{g}$ ); temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels | PM5.31 | 2-Digit: Measuring in Centimetres |
|  |  | PM5.32 | 2-Digit: Solving Problems with Length and Height |
|  |  | PM5.33 | 2-Digit: Measuring Mass in Grams |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | choose and use appropriate standard units to estimate and measure length/height in any direction ( m / cm ); mass ( $\mathrm{kg} / \mathrm{g}$ ); temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels | 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 |
|  | compare and order lengths, mass, volume/capacity and record the results using >, < and = |  | Included in nuggets above |
|  | - | PM5.39 | Measurement Checkpoint |
| $\begin{aligned} & \stackrel{\rightharpoonup}{\stackrel{1}{2}} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value | PM6.11 | Counting Money (Pence) |
|  |  | PM6.12 | Counting Money (Pounds) |
|  | find different combinations of coins that equal the same amounts of money | PM6.16 | Making the Same Amount |
|  | solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | PM6.15 | Making Amounts (Pounds and Pence) |
|  |  | PM6.14 | Finding Change 1 (from £1) |
|  | - | PM6.17 | Money Checkpoint |
| $\stackrel{\circ}{\stackrel{\circ}{5}}$ | compare and sequence intervals of time | PM7.10 | Estimating Time |
|  |  | PM7.18 | Comparing Durations of Time |
|  | tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times | PM7.04 | Telling the Time to the Nearest 5 Minutes |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| $\stackrel{\underset{i}{\mathrm{E}}}{\underline{\mathrm{E}}}$ | tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times | PM7.05 | Telling the Time to the Nearest 5 Minutes in Words |
|  | know the number of minutes in an hour and the number of hours in a day | PM7.19 | Units of Time 1 |
|  | - | PM7.20 | Time Checkpoint |
|  | identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line | PM8.01 | Describing 2D Shapes |
|  | identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces | PM8.02 | Describing 3D Shapes |
|  | identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] |  | Included in nugget above |
|  | order and arrange combinations of mathematical objects in patterns and sequences | PM8.08 | Patterns and Sequences |
|  | use mathematical vocabulary to describe position, direction and movement, including movement in a | PM8.09 | Describing Position and Movement |
|  | three-quarter turns (clockwise and anticlockwise) | PM8.04 | Angles in Turns |
|  | - | PM7.20 | Geometry Checkpoint |
|  | interpret and construct simple pictograms, tally charts, block diagrams and simple tables <br> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <br> ask and answer questions about totalling and comparing categorical data | PM9.16 | Tally Charts |
|  |  | PM9.14 | Block Diagrams |
|  |  | PM9.01 | Pictograms |
|  |  | PM9.20 | Tables 1 |
|  | - | PM9.21 | Statistics Checkpoint |

## White Rose Mapping - Year 2



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)
0 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

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 <br> 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 |
| 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 |  |

## National Curriculum Map <br> Year 3 Mathematics

Course Primary - Year 3 Mathematics
Diagnostics 9 Strands 11 Nuggets 131

## Strands - Primary - Year 3 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 9 |
| Number and Place Value | 20 |
| Addition and Subtraction | 26 |
| Multiplication and Division | 28 |
| Fractions | 12 |
| Measurement | 9 |


| Strand | No. of nuggets |
| :--- | :---: |
| Money | 10 |
| Time | 12 |
| Geometry | 7 |
| Statistics | 5 |
| End of Year Assessments | 2 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning

|  | National Curriculum |  | CENTURY |
| :---: | :---: | :---: | :---: |
| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
|  | count from 0 in multiples of 4, 8,50 and 100 | PM1.01 | Counting in Multiples of 4 |
|  |  | PM1.02 | Counting in Multiples of 8 |
|  |  | PM1.03 | Counting in Multiples of 50 |
|  |  | PM1.04 | Counting in Multiples of 100 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | recognise the place value of each digit in a 3-digit number (100s, 10 s , 1s) | PM1.05 | 3- Digit: Recognising Place Value |
|  | identify, represent and estimate numbers using different representations | PM1.06 | 3-Digit: Representing Numbers up to 1000 |
|  | find 10 more or 10 less than a given number | PM1.07 | 3-Digit: Finding 10 More or 10 Less |
|  | find 100 more or 100 less than a given number | PM1.08 | Finding 100 More or 100 Less |
|  | compare and order numbers up to 1,000 | PM1.09 | 3-Digit: Comparing Numbers with Greater Than and Less Than Symbols |
|  | compare and order numbers up to 1,001 | PM1.10 | Ordering Numbers Up to 1000 |
|  | read and write numbers up to 1,000 in numerals and in words | PM1.11 | Reading and Writing Numbers up to 1000 |
|  | add and subtract numbers mentally, including: <br> a three-digit number and 1 s <br> a three-digit number and 10 s <br> a three-digit number and 100s | PM2.01 | 3-Digit: Adding and Subtracting is |
|  |  | PM2.02 | 3-Digit: Adding and Subtracting 10s |
|  |  | PM2.03 | 3-Digit: Adding and Subtracting 100s |
|  | add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction | PM2.04 | 3-Digit: Column Addition (no Exchanging) |
|  |  | PM2.05 | 3-Digit: Column Addition (with Exchanging) |
|  |  | PM2.06 | 3-Digit: Column Subtraction (no Exchanging) |
|  |  | PM2.07 | 3-Digit: Column Subtraction (with Exchanging) |
|  |  | PM2.08 | 3-Digit: Addition and Subtraction Practice 1 |
|  |  | PM2.09 | 3-Digit: Addition and Subtraction Word Problems 1 |
|  | estimate the answer to a calculation and use inverse operations to check answers | PM2.10 | 3-Digit: Rounding to the Nearest 10 and 100 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  |  | PM2.11 | Estimating Using Rounding |
|  | operations | PM2.12 | Checking Answers Using the Inverse 1 |
|  |  | PM3.01 | Multiplying by 3 |
|  |  | PM3.02 | Multiplying by 4 |
|  |  | PM3.03 | Multiplying by 8 |
|  |  | PM3.04 | Mixed Multiplication 2 (3s, 4s \& 8s) |
|  | the 3,4 and 8 mutiplication tables | PM3.05 | Dividing by 3 |
|  |  | PM3.06 | Dividing by 4 |
|  |  | PM3.07 | Dividing by 8 |
|  |  | PM3.08 | Mixed Division 2 (3s, 4s \& 8s) |
|  |  | PM3.09 | Multiplying Multiples of 10 |
|  |  | PM3.10 | Multiplying Using Partitioning |
|  | ite and calculate mathematical statements for | PM3.11 | Multiplying Using the Grid Method |
|  | tables that they know, including for two digit numbers | PM3.12 | Short Multiplication |
|  | to formal written methods | PM3.13 | Short Division 1 (No Remainders) |
|  |  | PM3.14 | Short Division 2 (with Remainders) |
|  |  | PM3.15 | Multiplication and Division Practice 1 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two digit numbers times one-digit numbers, using mental and progressing to formal written methods | PM3.16 | Multiplication and Division Word Problems 1 |
|  |  | PM3.60 | 2- Digit: Dividing Using Partitioning (No Remainders) |
|  |  | PM3.61 | 2- Digit: Dividing Using Partitioning (With Remainders) |
|  | recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators | PM4.01 | Identifying Fractions |
|  | count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 | PM4.02 | Tenths |
|  | compare and order unit fractions, and fractions with the same denominators | PM4.03 | Comparing and Ordering Fractions |
|  | add and subtract fractions with the same denominator within one whole [for example, $5 / 7+1 / 7=6 / 7$ ] | PM4.04 | Adding and Subtracting Fractions |
|  | recognise and show, using diagrams, equivalent fractions with small denominators | PM4.05 | Equivalent Fractions |
|  | recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | PM4.06 | Finding Unit Fractions of Amounts |
|  |  | PM4.07 | Finding Non-Unit Fractions of Amounts |
|  | recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | PM4.08 | Finding Fractions of Amounts |
|  | measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ) mass (kg/g) volume/capacity ( $1 / \mathrm{ml}$ ) | PM5.01 | 3-Digit: Units of Measure |
|  |  | PM5.02 | 3-Digit: Length |
|  |  | PM5.03 | 3-Digit: Solving Length Problems |
|  |  | PM5.04 | 3-Digit: Mass and Weight |
|  |  | PM5.05 | 3-Digit: Solving Mass Problems |
|  |  | PM5.06 | 3-Digit: Volume and Capacity |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity (1/ml) | PM5.07 | 3-Digit: Solving Volume and Capacity Problems |
|  | measure the perimeter of simple 2-D shapes | PM5.08 | Perimeter by Counting |
|  |  | PM5.09 | Calculating the Perimeter |
| $\begin{aligned} & \stackrel{\rightharpoonup}{\omega} \\ & \stackrel{\delta}{\Sigma} \end{aligned}$ | pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record $£$ and $p$ separately. | PM6.01 | Adding Amounts of Money |
|  |  | PM6.02 | Adding Amounts of Money 2 |
|  |  | PM6.05 | Solving Money Problems 1 |
|  | add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts | PM6.03 | Finding Change 2 |
|  |  | PM6.04 | Subtracting Amounts of Money |
|  |  | PM6.14 | Finding Change 1 (from £1) |
| $\underset{i}{\stackrel{E}{E}}$ | know the number of seconds in a minute and the number of days in each month, year and leap year | PM7.01 | Units of Time 2 |
|  | estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight | PM7.02 | Times of Day |
|  |  | PM7.03 | Telling the Time in Words |
|  |  | PM7.04 | Telling the Time to the Nearest 5 Minutes |
|  |  | PM7.05 | Telling the Time to the Nearest 5 Minutes in Words |
|  |  | PM7.06 | Telling the Time to the Nearest Minute |
|  |  | PM7.07 | Roman Numerals (up to 20) |
|  |  | PM7.08 | Telling the Time with Roman Numerals |


|  | ic National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | estimate and read time with increasing accuracy to the nearest minute; | PM7.09 | 12 Hour and 24 Hour Clocks |
| $\stackrel{\otimes}{\underset{i}{E}}$ | use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight | PM7.10 | Estimating Time |
|  | compare durations of events <br> [for example, to calculate the time taken by particular events or tasks] | PM7.11 | Finding the Duration |
|  |  | PM7.12 | Start and End Times |
| $\begin{aligned} & \text { E } \\ & \stackrel{0}{0} \\ & \stackrel{0}{0} \\ & 0 \end{aligned}$ | draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | PM8.01 | Describing 2D Shapes |
|  |  | PM8.02 | Describing 3D Shapes |
|  |  | PM8.03 | Nets of Shapes |
|  | recognise angles as a property of shape or a description of a turn | PM8.04 | Angles in Turns |
|  | identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle | PM8.05 | Identifying Angles |
|  | identify horizontal and vertical lines and pairs of perpendicular and parallel lines | PM8.06 | Identifying Lines |
|  |  | PM8.07 | Lines of Symmetry |
|  |  | PM9.01 | Pictograms |
|  | interpret and present data using bar charts, pictograms and tables | PM9.02 | Tables 2 |
|  |  | PM9.03 | Bar Charts 1 |

## 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 <br> Place Value | 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 1s | 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
Weeks
$\mathbf{0 9 - 1 2}$

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

## White Rose Small Steps

Add fractions
Subtract fractions
Partition the whole
Unit fractions of a set of objects
Non-unit fractions of a set of objects
Reasoning with fractions of an amount

White Rose Small Steps
Pounds and pence
Weeks
03-04
Topic
Money

## Block 03

Weeks
05-07

Topic
Time

## White Rose Small Steps

Roman numerals to 12
Tell the time to 5 minutes
Tell the time to the minute
Read time on a digital clock
Use am and pm
Years, months and days
Days and hours

CENTURY Nuggets

| Nugget Code | Nugget Name |
| :---: | :--- |
| PM4.04 | Adding and Subtracting Fractions |
| PM4.06 | Finding Unit Fractions of Amounts |
| PM4.07 | Finding Non-Unit Fractions of Amounts |
| PM4.08 | Finding Fractions of Amounts |

Nugget Code Nugget Name
PM6.15 Making Amounts (Pounds and Pence)
PM6.13 Converting Pounds and Pence
PM6.01 Adding Amounts of Money
PM6.02 Adding Amounts of Money 2
PM6.04 Subtracting Amounts of Money
PM6.14 Finding Change 1 (from £1)
PM6.03 Finding Change 2
PM6.05 Solving Money Problems

## Nugget Code Nugget Name

PM7.07 Roman Numerals (up to 20)
PM7.03 Telling the Time in Words
PM7.04 Telling the Time to the Nearest 5 Minutes
PM7.05 Telling the Time to the Nearest 5 Minutes in Words
PM7.01 Units of Time 2
PM7.02 Times of Day
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 |

## National Curriculum Map <br> Year 4 Mathematics

Course Primary - Year 4 Mathematics
Diagnostics 10 Strands 12 Nuggets 206

## Strands - Primary - Year 4 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 10 |
| Number and Place Value | 28 |
| Addition and Subtraction | 20 |
| Multiplication and Division | 39 |
| Fractions and Decimals | 16 |
| Measurement | 20 |


| Strand | No. of nuggets |
| :--- | :---: |
| Time | 13 |
| Money | 10 |
| Geometry | 13 |
| Statistics | 7 |
| Catch Up | 36 |
| End of Year Assessments | 4 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning

| National Curriculum |  | CENTURY |  |
| :---: | :---: | :---: | :---: |
| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
|  |  | PM1.12 | Counting in Multiples of 6 |
|  | count in multiples of 6, 7, 9, 25 and 1,000 | PM1.13 | Counting in Multiples of 7 |
|  |  | PM1.02 | Counting in Multiples of 8 |
|  |  | PM1.14 | Counting in Multiples of 9 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | count in multiples of 6, 7, 9, 25 and 1,000 | PM1.15 | Counting in Multiples of 25 |
|  |  | PM1.16 | Counting in Multiples of 1000 |
|  | find 1,000 more or less than a given number | PM1.33 | Finding 1000 More or 1000 Less |
|  |  | PM1.18 | Negative Numbers 1 |
|  |  | PM1.19 | Negative Numbers 2 (Including Addition and Subtraction) |
|  | recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) | PM1.20 | Place Value in 4 Digit Numbers |
|  | order and compare numbers beyond 1,000 | PM1.22 | Comparing and Ordering Numbers |
|  | round any number to the nearest 10,100 or 1,000 | PM1.23 | Rounding to the Nearest 10,100 and 1000 |
|  | read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value | PM1.24 | Roman Numerals (up to 100) |
|  | add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | PM2.13 | 4-Digit: Column Addition (no Exchanging) |
|  |  | PM2.14 | 4-Digit: Column Addition (with Exchanging) |
|  |  | PM2.15 | 4-Digit: Column Subtraction (no Exchanging) |
|  |  | PM2.16 | 4-Digit: Column Subtraction (with Exchanging) |
|  |  | PM2.17 | 4-Digit: Addition and Subtraction Practice 2 |
|  |  | PM2.18 | 4-Digit: Addition and Subtraction Word Problems 2 |
|  | estimate and use inverse operations to check answers to a calculation | PM2.19 | Checking Answers Using the Inverse 2 |
|  |  | PM2.20 | Estimating to Check Answers |




| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | recognise and show, using diagrams, families of common equivalent fractions | PM4.05 | Equivalent Fractions 1 |
|  | count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 | PM4.09 | Hundredths |
|  |  | PM4.06 | Finding Unit Fractions of Amounts |
|  | solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including | PM4.07 | Finding Non-Unit Fractions of Amounts |
|  |  | PM4.08 | Finding Fractions of Amounts |
|  | add and subtract fractions with the same denominator | PM4.04 | Adding and Subtracting Fractions |
|  |  | PM1.21 | 2dp: Recognising Place Value in Decimals |
|  |  | PM4.10 | Decimal Equivalents (Tenths/Hundredths) |
|  | recognise and write decimal equivalents to quarter, half, three quarters | PM4.11 | Decimal Equivalents (Quarter, Half and Three Quarters) |
|  | find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths | PM4.12 | Dividing and Multiplying by 10 and 100 (Including Decimals) |
|  | round decimals with 1 decimal place to the nearest whole number | PM4.13 | Rounding Decimals to the Nearest Whole Number |
|  | compare numbers with the same number of decimal places up to two decimal places | PM4.14 | Comparing Decimals |
|  | solve simple measure and money problems involving fractions and decimals to two decimal places | (1) | Covered throughout nuggets in this topic |
|  | convert between different units of measure [for example, kilometre to metre; hour to minute] | PM5.10 | Measuring Length |
|  |  | PM5.11 | Converting mm and cm |
|  |  | PM5.12 | Converting cm and m |
|  |  | PM5.13 | Converting m and km |
| ack to | ulum OverviewPrimary Mathematics Course Mapping <br> Year 4 Mathematics National Curriculum Map |  |  |


| Topic | National Curriculum Statement | Nugget <br> Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | convert between different units of measure [for example, kilometre to metre; hour to minute] | PM5.14 | Converting Length |
|  |  | PM7.14 | Converting Seconds, Minutes and Hours |
|  | find the area of rectilinear shapes by counting squares | PM5.20 | Area by Counting |
|  |  | PM5.21 | Area |
|  | estimate, compare and calculate different measures, including money in pounds and pence | PM5.04 | 3-Digit: Mass and Weight |
|  |  | PM5.15 | Measuring Mass |
|  |  | PM5.16 | Converting Mass |
|  |  | PM5.05 | 3-Digit: Solving Mass Problems |
|  |  | PM5.06 | 3-Digit: Volume and Capacity |
|  |  | PM5.17 | Measuring Volume |
|  |  | PM5.18 | Converting Volume |
|  |  | PM5.07 | 3-Digit: Solving Volume and Capacity Problems |
|  |  | PM6.06 | Pounds and Pence |
|  |  | PM6.01 | Adding Amounts of Money |
|  |  | PM6.02 | Adding Amounts of Money 2 |
|  |  | PM6.07 | Comparing Amounts of Money |
|  |  | PM6.08 | Estimating Amounts of Money |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | estimate, compare and calculate different measures, including money in pounds and pence | PM6.03 | Finding Change 2 |
|  |  | PM6.04 | Subtracting Amounts of Money |
|  |  | PM6.10 | Solving Money Problems 2 |
|  | read, write and convert time between analogue and digital 12-and 24-hour clocks | PM7.09 | 12 Hour and 24 Hour Clocks |
|  | solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days | PM7.13 | Converting Weeks, Days, Years and Months |
|  | compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | PM8.11 | Triangles |
|  |  | PM8.12 | Quadrilaterals |
|  |  | PM8.13 | Sorting Shapes |
|  | identify acute and obtuse angles and compare and order angles up to two right angles by size | PM8.05 | Identifying Angles |
|  | Identify lines of symmetry in 2-D shapes presented in different orientations | PM8.07 | Lines of Symmetry |
|  | complete a simple symmetric figure with respect to a specific line of symmetry | (1) | Covered throughout nuggets in this topic |
|  | describe positions on a 2-D grid as coordinates in the first quadrant | PM8.14 | Describing Position |
|  | plot specified points and draw sides to complete a given polygon. | PM8.15 | Plotting Points |
|  | describe movements between positions as translations of a given unit to the left/right and up/down | PM8.16 | Translation 1 |
|  | interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | PM9.01 | Pictograms |
|  |  | PM9.02 | Tables 2 |
|  |  | PM9.03 | Bar Charts 1 |
|  |  | PM9.04 | Line Graphs 1 |

## White Rose Mapping - Year 4

| Autumn Term |  |  |  |
| :---: | :---: | :---: | :---: |
| White Rose Map |  | CENTURY Nuggets |  |
| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Represent numbers to 1,000 | PM1.05 | 3-Digit: Recognising place value |
| 01-04 | Partition numbers to 1,000 | PM1.06 | 3-Digit: Representing numbers up to 1000 |
| Topic Place Value | Number line to 1,000 | PM1.37 | Number lines to 1000 |
|  | Thousands | PM1.20 | Place value in 4 digit numbers |
|  | Represent numbers to 10,000 | PM1.16 | Counting in multiples of 1000 |
|  | Partition numbers to 10,000 | PM1.07 | Finding 10 more or 10 less |
|  | Flexible partitioning of numbers to 10,000 | PM1.08 | Finding 100 more or 100 less |
|  | Find 1, 10, 100, 1,000 more or less | PM1.17 | Finding 1000 more or less |
|  | Number line to 10,000 | PM1.22 | Comparing and ordering numbers |
|  | Estimate on a number line to 10,000 | PM7.07 | Roman numerals (up to 20) |
|  | Compare numbers to 10,000 | PM1.24 | Roman numerals (up to 100) |
|  | Order numbers to 10,000 | PM1.23 | Rounding to the nearest 10,100 and 1000 |
|  | 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 |  |  |
| Block 02 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks <br> 05-07 | Add and subtract 1s, $10 \mathrm{~s}, 100$ s and 1,000s | PM2.01 | 3-Digit: Adding and subtracting is |
|  | Add up to two 4-digit numbers - no exchange | PM2.02 | 3 -Digit: Adding and subtracting 10s |
| Topic <br> Addition and <br> Subtraction | Add two 4-digit numbers - one exchange | PM2.03 | 3 -Digit: Adding and subtracting 100s |
|  | Add two 4-digit numbers - more than one exchange | PM2.13 | 4-Digit: Column addition (no exchanging) |

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
$01-03$
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

|  | CENTURY Nuggets |
| :---: | :--- |
| 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 |
| $\mathbf{0 1 - 0 2}$ | Make a whole with hundredths |
| Topic | Partition decimals |
| Decimals B | Flexibly partition decimals |
|  | Compare decimals <br>  |
|  | Order decimals |
| Round to the nearest whole number |  |
| 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 |

## Nugget Code Nugget Name

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 Describe translation on a grid |  |  |

## National Curriculum Map <br> Primary - Year 5

Course Primary - Year 5 Mathematics

## Diagnostics 10 Strands 12 Nuggets 206

## Strands - Primary - Year 5 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 14 |
| Number and Place Value | 15 |
| Addition and Subtraction | 14 |
| Multiplication and Division | 23 |
| Times Tables and Division Facts | 24 |
| Mixed operations | 7 |
| Fractions | 18 |
| Fractions, decimals and percentages | 18 |


| Strand | No. of nuggets |
| :--- | :---: |
| Measurement | 23 |
| Time | 13 |
| Area, Perimeter and Volume | 10 |
| Properties of Shapes | 21 |
| Position and Direction | 4 |
| Statistics | 10 |
| End of Year Assessments | 4 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning

|  | National Curriculum |  | CENTURY |
| :---: | :---: | :---: | :---: |
| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
|  | d, write, order and compare numbers to at least 1,000,00 | PM1.25 | Place Value up to 1,000,000 |
|  |  | PM1.26 | Comparing and Ordering Numbers to 1,000,000 |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 | PM1.27 | Counting Forwards and Backwards in Powers of 10 |
|  | interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 | PM1.18 | Negative Numbers 1 |
|  |  | PM1.19 | Negative Numbers 2 (Including Addition and Subtraction) |
|  | round any number up to $1,000,000$ to the nearest $10,100,1,000,10,000$ and 100,000 | PM1.23 | Rounding to the Nearest 10, 100 and 1000 |
|  |  | PM1.28 | Rounding to the Nearest 10,000 and 100,000 |
|  | solve number problems and practical problems that involve all of the above | - | (1) Included in Nuggets Above |
|  | read Roman numerals to $1,000(\mathrm{M})$ and recognise years written in Roman numerals | PM7.07 | Roman Numerals (up to 20) |
|  |  | PM1.24 | Roman Numerals (up to 100) |
|  |  | PM1.29 | Roman Numerals (up to 1000) |
|  |  | PM1.30 | Roman Numerals (Beyond 1000) |
|  | add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) | PM2.22 | 4+ Digit: Column Addition |
|  |  | PM2. 23 | 4+ Digit: Column Subtraction |
|  | add and subtract numbers mentally with increasingly large numbers | PM2. 24 | Mental Strategies for Addition 1 |
|  |  | PM2.25 | Mental Strategies for Addition 2 |
|  |  | PM2.26 | Mental Strategies for Subtraction 1 |
|  |  | PM2. 27 | Mental Strategies for Subtraction 2 |
|  | use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy | PM2.20 | Estimating to Check Answers |
| Primary Mathematics Course Mapping <br> Year 5 Mathematics National Curriculum Map |  |  |  |



| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  |  | PM11.01 | Understanding the Equals Sign |
|  | solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign | PM11.02 | Solving Multistep Problems 1 (with Multiplication) |
|  |  | PM11.03 | Solving Multistep Problems 2 (with Division) |
|  | solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | PM3.32 | Scaling Problems 2 |
|  |  | PM11.04 | Multistep Scaling Problems |
|  | identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | PM4.15 | Equivalent Fractions 2 |
|  | compare and order fractions whose denominators are all multiples of the same number | PM4.16 | Comparing Proper Fractions 1 |
|  |  | PM4.18 | Comparing and Ordering Improper Fractions and Mixed Numbers |
|  | recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example, $2 / 5+4 / 5=6 / 5=11 / 5$ ] | PM4.17 | Mixed Numbers and Improper Fractions |
|  |  | PM4.04 | Adding and Subtracting Fractions |
|  | add and subtract fractions with the same denominator, and denominators that are multiples of the same number | PM4.27 | Adding and Subtracting Fractions with Different Denominators |
|  |  | PM4.29 | Adding and Subtracting Mixed Numbers 1 |
|  | multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | PM4. 28 | Multiplying Fractions by Whole Numbers |
|  |  | PM4.30 | Multiplying Mixed Numbers by Whole Numbers |
|  |  | PM4.31 | Fractions as Operators |
|  | read and write decimal numbers as fractions [for example, $0.71=71 / 100$ ] | PM4.11 | Decimal Equivalents (Quarter, Half and Three Quarters) |
|  |  | PM4.10 | Decimal Equivalents (Tenths/Hundredths) |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents | PM12.01 | Thousandths |
|  | round decimals with 2 decimal places to the nearest whole number and to 1 decimal place | PM4.13 | Rounding Decimals to the Nearest Whole Number |
|  |  | PM12.03 | Rounding Decimals |
|  | read, write, order and compare numbers with up to 3 decimal places | PM12.02 | 3dp: Recognising Place Value in Decimals |
|  |  | PM4.14 | Comparing Decimals |
|  | solve problems involving number up to 3 decimal places | PM12.14 | Adding and Subtracting Decimals (within 1) |
|  |  | PM12.15 | 3dp: Decimal Complements to 1 |
|  |  | PM12.04 | Adding and Subtracting Decimals |
|  | recognise the percent symbol (\%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction | PM12.05 | Introduction to Percentages |
|  | solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25 | PM12.06 | Fractions, Decimals and Percentages 1 |
|  |  | PM12.07 | Finding Percentages 1 |
|  |  | PM12.08 | Finding Percentages 2 |
|  | convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] | PM5.11 | Converting mm and cm |
|  |  | PM5.12 | Converting cm and m |
|  |  | PM5.13 | Converting m and km |
|  |  | PM5.14 | Converting Length |
|  |  | PM5.16 | Converting Mass |



| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Geometry - Properties of Shapes | know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles | PM14.05 | Identifying Angles 2 |
|  |  | PM14.08 | Measuring Angles |
|  |  | PM14.07 | Estimating Angles |
|  | draw given angles, and measure them in degrees ( ${ }^{\circ}$ ) | PM14.09 | Drawing Angles |
|  | identify angles at a point and 1 whole turn (total $360^{\circ}$ ) | PM14.12 | Angles Around a Point |
|  | identify angles at a point on a straight line and half a turn (total $180^{\circ}$ ) | PM14.11 | Angles on a Straight Line |
|  | identify other multiples of $90^{\circ}$ | PM14.04 | Angles in Turns 2 |
|  | identify use the properties of rectangles to deduce related facts and find missing lengths and angles | PM14.02 | Lengths of Right-Angled Shapes |
|  |  | PM14.06 | Angles in Right-Angled Shapes |
|  | identify distinguish between regular and irregular polygons based on reasoning about equal sides and angles | PM14.01 | Regular and Irregular Polygons |
|  | identify, describe and represent the position of a shape following | PM8.16 | Translation 1 |
|  | and know that the shape has not changed | PM15.01 | Reflection 1 |
|  | solve comparison, sum and difference problems using information presented in a line graph | PM9.13 | Bar Charts 2 |
|  | complete, read and interpret information in tables, including timetables | PM9.08 | Line Graphs 2 |
|  |  | PM9.05 | Tables 3 |
|  |  | PM9.06 | Two-Way Tables |
|  |  | PM9.07 | Timetables |

## 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

PM4. 28
PM4.30
PM4.06
PM4.07
PM4.36
PM4.31

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 |

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

Block 06
Weeks
11-12

Topic
Statistics

## 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
$\mathbf{0 4}$ - $\mathbf{0 5}$
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 | 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 |  |  |
| 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 |  |  |

## National Curriculum Map <br> Year 6 Mathematics

Course Primary - Year 6 Mathematics

## Diagnostics 17 Strands 18 Nuggets 272

## Strands - Primary - Year 6 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 17 |
| Number and Place Value | 15 |
| Addition and Subtraction | 16 |
| Times Tables and Division Facts | 24 |
| Multiplication and Division | 27 |
| Mixed Operations | 10 |
| Fractions | 29 |
| Fractions, Decimals and Percentages | 20 |
| Percentages | 8 |


| Strand | No. of nuggets |
| :--- | :---: |
| Ratio and Proportion | 6 |
| Algebra | 11 |
| Measurements | 25 |
| Time | 13 |
| Area, Perimeter and Volume | 14 |
| Properties of Shapes | 28 |
| Position and Direction | 7 |
| Statistics | 15 |
| End of Year 6 Assessments | 4 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning

| National Curriculum |  | CENTURY |  |
| :---: | :---: | :---: | :---: |
| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
|  | read, write, order and compare numbers up to 10,000,000 and determine the value of each digit | PM1.31 | Place Value up to 10,000,000 |
|  | round any whole number to a required degree of accuracy | PM1.23 | Rounding to the Nearest 10, 100 and 1000 |




| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  |  | PM4.27 | Adding and Subtracting Fractions with Different Denominators |
|  | add and subtract fractions with different denominators and | 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 |
|  | multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1 / 4 \times 1 / 2=1 / 8$ ] | PM4. 24 | Multiplying Simple Pairs of Proper Fractions |
|  | divide proper fractions by whole numbers [for example, $1 / 3 \div 2=1 / 6$ ] | PM4. 25 | Dividing Fractions by Whole Numbers |
|  | associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] | PM12.12 | Fractions to Decimals Using Division |
|  | identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10,100 and 1,000 giving answers up to 3 decimal places | PM12.02 | 3dp: Recognising Place Value in 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.) |
|  | multiply one-digit numbers with up to 2 decimal places by whole numbers | PM12.09 | Multiplying Decimals |
|  | use written division methods in cases where the answer has up to 2 decimal places | PM12.10 | Dividing Decimals |
|  | solve problems which require answers to be rounded to specified degrees of accuracy | (1) | Included in Nuggets Above |
|  | recall and use equivalences between simple fractions, decimals and percentages, including in different contexts | PM12.11 | Converting Decimals to Fractions |
|  |  | PM12.13 | Fractions, Decimals and Percentages 2 |
| ⿹ㅡㄴ 든응은 문 | solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts | PM17.01 | Introduction to Ratio |
|  |  | PM17.02 | Simplifying Ratios |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts | PM17.06 | Proportion |
|  |  | PM16.01 | Finding Percentages of Amounts 1 $(1 \%, 10 \%, 25 \%, 50 \%)$ |
|  |  | PM16.02 | Finding Percentages of Amounts 2 (2-9\%) |
|  | solve problems involving the calculation of percentages [for example, of measures and such as $15 \%$ of 360 ] | PM16.03 | Finding Percentages of Amounts 3 (multiples of 10) |
|  |  | PM16.04 | Finding Percentages of Amounts 4 (11-99\%) |
|  |  | PM16.05 | Percentages (Missing Values) |
|  | solve problems involving similar shapes where the scale factor is known or can be found | PM17.05 | Similar Shapes |
|  |  | PM17.03 | Ratios and Fractions |
|  |  | PM17.04 | Sharing into a Given Ratio |
| $\begin{aligned} & \frac{0}{0} \\ & \frac{0}{0} \\ & \frac{0}{4} \end{aligned}$ |  | PM18.02 | Function Machines |
|  |  | PM18.07 | Formulae |
|  | generate and describe linear number sequences | PM18.01 | Sequences |
|  |  | PM18.03 | Forming Expressions 1 |
|  |  | PM18.04 | Forming Expressions 2 |
|  | express missing number problems algebraically | PM18.05 | Forming Expressions 3 |
|  |  | PM18.06 | Substitution |
|  |  | PM18.08 | Solving 1 Step Equations |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \frac{0}{5} \\ & \frac{0}{0} \\ & \frac{0}{4} \end{aligned}$ | express missing number problems algebraically | PM18.09 | Solving 2 Step Equations |
|  | find pairs of numbers that satisfy an equation with 2 unknowns | PM18.10 | Satisfying Equations with 2 Variables |
|  | enumerate possibilities of combinations of 2 variables | PM18.11 | Enumerating Possibilities |
|  | solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate | PM5.14 | Converting Length |
|  |  | PM5.16 | Converting Mass |
|  |  | PM5.18 | Converting Volume |
|  | use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places | PM5.29 | Converting Metric Measures |
|  | convert between miles and kilometres | PM5.30 | Converting Miles and Kilometres |
|  | recognise that shapes with the same areas can have different perimeters and vice versa | PM13.05 | Area and Perimeter |
|  | recognise when it is possible to use formulae for area and volume of shapes | PM13.02 | Area of Rectangles |
|  |  | PM13.10 | Volume of Shapes 2 |
|  | calculate the area of parallelograms and triangles | PM13.07 | Area of Parallelograms |
|  |  | PM13.08 | Area of Right-Angled Triangles |
|  |  | PM13.09 | Area of Triangles |
|  | draw 2-D shapes using given dimensions and angles | PM14.14 | Nets of Shapes 2 |
|  | compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons | PM14.16 | Angles in Triangles |
|  |  | PM14.17 | Angles in Quadrilaterals |


| Topic | National Curriculum Statement | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
|  | compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons | PM14.18 | Angles in Regular Polygons |
|  | illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius | PM14.13 | Circles |
|  |  | PM14.12 | Angles Around a Point |
|  | recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles | PM14.11 | Angles on a Straight Line |
|  |  | PM14.15 | Vertically Opposite Angles |
|  | describe positions on the full coordinate grid (all 4 quadrants) | PM15.02 | Four Quadrants |
|  |  | PM15.03 | Translation 2 |
|  |  | PM15.04 | Reflection 2 |
|  |  | PM9.09 | Line Graphs 3 |
|  | interpret and construct pie charts and line graphs and use these to solve problems | PM9.10 | Pie Charts 1 |
|  |  | PM9.11 | Pie Charts 2 |
|  | calculate and interpret the mean as an average | PM9.12 | Finding the Mean |

## 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 05 | White Rose Small Steps | Nugget Code | Nugget Name |
| :---: | :---: | :---: | :---: |
| Week | Metric measures | PM5.29 | Converting metric measures |
| 12 | Convert metric measures | PM5.23 | Solving length problems with conversion |
|  | Calculate with metric measures | PM5. 25 | Solving mass problems with conversion |
| Converting | Miles and kilometres | PM5.27 | Solving volume and capacity problems with conversion |
| Units | Imperial measures | PM5.30 | Converting miles and kilometres |
|  |  | PM5.22 | Imperial units of length |
|  |  | PM5.24 | Imperial units of mass |
|  |  | PM5.26 | Imperial units of volume and capacity |
| Spring Ter |  |  |  |
|  | White Rose Map |  | CENTURY Nuggets |
| Block 01 | White Rose Small Steps | Nugget Code | Nugget Name |
| Weeks | Add or multiply? | PM17.01 | Introduction to Ratio |
| 01-02 | Use ratio language | PM17.03 | Ratios and Fractions |
|  | Introduction to the ratio symbol | PM17.05 | Similar Shapes |
| Topic | Ratio and fractions | PM17.04 | Sharing into a Given Ratio |
|  | Scale drawing | PM17.06 | Proportion |
|  | Use scale factors |  |  |
|  | Similar shapes |  |  |
|  | Ratio problems |  |  |
|  | Proportion problems |  |  |
|  | Recipes |  |  |

## 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 equation
Solve 2-step equations
Find pairs of values
Solve problems with two unknowns

## Block 03

Weeks
05-07
Topic
Decimals

## White Rose Small Steps

Place value within 1
Place value - integers and decimals
Round decimals
Add and subtract decimals

Multiply by 10, 100 and 1,000
Divide by 10, 100 and 1,000
Multiply decimals by integers
Divide decimals by integers
Multiply and divide decimals in context

| 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
PM12.03 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
rea 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

| 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 |
| Topic Shape | Vertically opposite angles | PM14.15 | Vertically Opposite Angles |
|  | 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 |
| Topic <br> Position and | Translations | PM15.04 | Reflection 2 |
| Direction | Reflections |  |  |

## Course Content <br> Primary Multiplication Tables

Diagnostics 1 Strands 6 Nuggets 52

This course is designed to develop fluency and recall of multiplication tables. It includes each of the times tables, mixed tables tests and practice tests of increasing difficulty.

## Strands - Primary Multiplication Tables Course

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostic Assessment | 1 |
| Multiplication Tables | 33 |
| Easy Practice | 3 |
| Medium Practice | 3 |
| Hard Practice | 3 |
| Practice Assessments | 10 |

## Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
| Diagnostics | PMT0.01 | Diagnostic: Practice Assessment |
|  | PMT1.01 | 2 Times Table Practice (1) |
|  | PMT1.02 | 2 Times Table Practice (2) |
|  | PMT1.03 | 2 Times Table Practice (3) |
|  | PMT1.04 | 3 Times Table Practice (1) |
|  | PMT1.05 | 3 Times Table Practice (2) |
|  | PMT1.06 | 3 Times Table Practice (3) |
|  | PMT1.07 | 4 Times Table Practice (1) |
|  | PMT1.08 | 4 Times Table Practice (2) |
|  | PMT1.09 | 4 Times Table Practice (3) |
|  | PMT1.10 | 5 Times Table Practice (1) |
|  | PMT1.11 | 5 Times Table Practice (2) |
|  | PMT1.12 | 5 Times Table Practice (3) |
|  | PMT1.13 | 6 Times Table Practice (1) |
|  | PMT1.14 | 6 Times Table Practice (2) |
|  | PMT1.15 | 6 Times Table Practice (3) |
|  | PMT1.16 | 7 Times Table Practice (1) |
|  | PMT1.17 | 7 Times Table Practice (2) |
|  | PMT1.18 | 7 Times Table Practice (3) |


| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
|  | PMT1.19 | 8 Times Table Practice (1) |
|  | PMT1.20 | 8 Times Table Practice (2) |
|  | PMT1.21 | 8 Times Table Practice (3) |
|  | PMT1.22 | 9 Times Table Practice (1) |
|  | PMT1.23 | 9 Times Table Practice (2) |
|  | PMT1.24 | 9 Times Table Practice (3) |
|  | PMT1.25 | 10 Times Table Practice (1) |
|  | PMT1.26 | 10 Times Table Practice (2) |
|  | PMT1.27 | 10 Times Table Practice (3) |
|  | PMT1.28 | 11 Times Table Practice (1) |
|  | PMT1.29 | 11 Times Table Practice (2) |
|  | PMT1.30 | 11 Times Table Practice (3) |
|  | PMT1.31 | 12 Times Table Practice (1) |
|  | PMT1.32 | 12 Times Table Practice (2) |
|  | PMT1.33 | 12 Times Table Practice (3) |
|  | PMT2.01 | Easy Practice (1) |
|  | PMT2.02 | Easy Practice (2) |
|  | PMT2.03 | Easy Practice (3) |
|  | PMT3.01 | Medium Practice (1) |
|  | PMT3.02 | Medium Practice (2) |
|  | PMT3.03 | Medium Practice (3) |


| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
|  | PMT4.01 | Hard Practice (1) |
|  | PMT4.02 | Hard Practice (2) |
|  | PMT4.03 | Hard Practice (3) |
|  | PMT5.01 | Practice Assessment (1) |
|  | PMT5.02 | Practice Assessment (2) |
|  | PMT5.03 | Practice Assessment (3) |
|  | PMT5.04 | Practice Assessment (4) |
|  | PMT5.05 | Practice Assessment (5) |
|  | PMT5.06 | Practice Assessment (6) |
|  | PMT5.07 | Practice Assessment (7) |
|  | PMT5.08 | Practice Assessment (8) |
|  | PMT5.09 | Practice Assessment (9) |
|  | PMT5.10 | Practice Assessment (10) |

## Course Content

## Primary Year 5-6 Arithmetic

Diagnostics 8 Strands 9 Nuggets 60

This course is designed for students to practise fluency and recall in number skills. It includes several practice papers and is designed specifically to help students prepare for the SATs arithmetic assessment.

## Strands - Primary Year 5-6 Arithmetic Course

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course

| Strand | No. of nuggets |
| :--- | :---: |
| Diagnostics | 8 |
| Place Value | 2 |
| Addition and Subtraction | 15 |
| Multiplication | 10 |
| Division | 8 |
| Mixed Operations | 4 |
| Fractions | 7 |
| Percentages | 8 |
| Diagnostics: Practice Papers | 6 |

## Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
|  | PAR0. 01 | Diagnostic: Place Value |
|  | PAR0.02 | Diagnostic: Addition |
|  | PAR0.03 | Diagnostic: Subtraction |
|  | PARO.04 | Diagnostic: Multiplication |
|  | PAR0.05 | Diagnostic: Division |
|  | PAR0.06 | Diagnostic: Mixed Operations |
|  | PAR0.07 | Diagnostic: Fractions |
|  | PARO. 08 | Diagnostic: Percentages |
|  | PAR1.01 | Place Value 1 |
|  | PAR1.02 | Place Value 2 |
|  | PAR2.01 | Addition Mental Methods 1 |
|  | PAR2.02 | Addition Mental Methods 2 |
|  | PAR2.03 | Addition Written Methods 1 |
|  | PAR2.04 | Addition Written Methods 2 |
|  | PAR2.05 | Addition Written Methods with Decimals 1 |
|  | PAR2.06 | Addition Written Methods with Decimals 2 |
|  | PAR2.07 | Subtraction Mental Methods 1 |
|  | PAR2.08 | Subtraction Mental Methods 2a |
|  | PAR2.09 | Subtraction Mental Methods 2b |


| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
|  | PAR2.10 | Subtraction Mental Methods 3 |
|  | PAR2.11 | Subtraction Written Methods 1 |
|  | PAR2.12 | Subtraction Written Methods 2 |
|  | PAR2.13 | Subtraction Involving Decimals |
|  | PAR2.14 | Subtraction Written Methods (with Decimals) 1 |
|  | PAR2.15 | Subtraction Written Methods (with Decimals) 2 |
|  | PAR3. 01 | Multiplying by 1 and 0 |
|  | PAR3.02 | Multiplying by 10,100 and 1,000 |
|  | PAR3.03 | Multiplying Multiples of 10 and 100 |
|  | PAR3.04 | Multiplying 3 Numbers |
|  | PAR3.05 | Multiplying by Multiples of 10 and 100 with Decimals |
|  | PAR3.06 | Short Multiplication |
|  | PAR3.07 | Long Multiplication 1 |
|  | PAR3.08 | Long Multiplication 2 |
|  | PAR3.09 | Multiplying by Decimals 1 |
|  | PAR3.10 | Multiplying by Decimals 2 |
| $\frac{5}{\frac{5}{n}}$ | PAR4.01 | Dividing by 1 |
|  | PAR4.02 | Mental Division |
|  | PAR4.03 | Dividing by 10 and 100 with Decimals |
|  | PAR4.04 | The Bus Stop Method |
|  | PAR4.05 | Long Division 1 |
|  | PAR4.06 | Long Division 2 |
|  | PAR4.07 | Long Division 3 |


| Strand | Code | Nugget Name |
| :---: | :---: | :---: |
| Division | PAR4.08 | Long Division 4 |
|  | PAR5.01 | Squared and Cubed Numbers 1 |
|  | PAR5.02 | Squared and Cubed Numbers 2 |
|  | PAR5.03 | BIDMAS 1 |
|  | PAR5.04 | BIDMAS 2 |
|  | PAR6.01 | Adding and Subtracting Fractions 1 |
|  | PAR6.02 | Adding and Subtracting Fractions 2 |
|  | PAR6.03 | Adding and Subtracting Fractions 3 |
|  | PAR6.04 | Dividing Fractions by a Whole Number |
|  | PAR6.05 | Multiply Fractions by Fractions |
|  | PAR6.06 | Multiply Proper Fractions by a Whole Number |
|  | PAR6.07 | Multiply Mixed Numbers by a Whole Number |
|  | PAR7.01 | Finding Percentages of Amounts 1 |
|  | PAR7.02 | Finding 1-9\% of an Amount |
|  | PAR7.03 | Finding Multiples of $10 \%$ of an Amount |
|  | PAR7.04 | Percentages of 1,000 |
|  | PAR7.05 | Finding Percentages of Amounts 2 |
|  | PAR7.06 | Finding Percentages of Amounts 3 |
|  | PAR7.07 | Finding Percentages of Amounts 4 |
|  | PAR7.08 | Finding Percentages of Amounts 5 |
|  | PAR8. 01 | Arithmetic Practice Assessment 1 |
|  | PAR8.02 | Arithmetic Practice Assessment 2 |
|  | PAR8.03 | Arithmetic Practice Assessment 3 |

## Strand Code Nugget Name

|  | PAR8. 04 | Arithmetic Practice Assessment 4 |
| :---: | :---: | :---: |
|  | PAR8. 05 | Arithmetic Practice Assessment 5 |
|  |  |  |

Email support@century.tech

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

