September 2022

Course Mapping Guide
Primary Mathematics

CENTURY

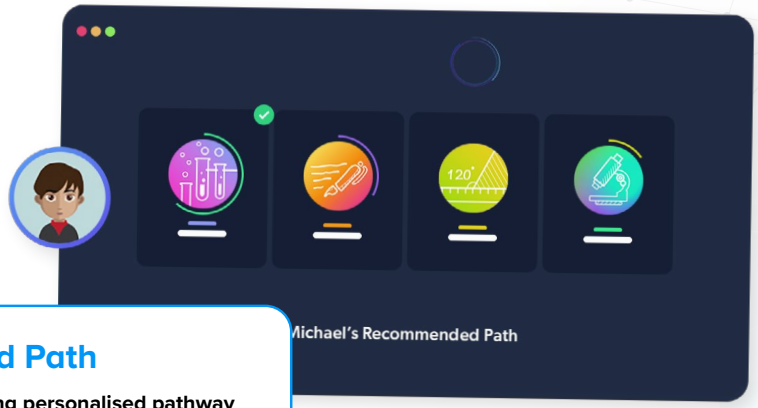
Supercharge learning through personalisation

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 and science from years 3 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 learners
- Tailored to each learner's skills and knowledge
- Powered by the world's leading adaptive learning platform
- Web-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

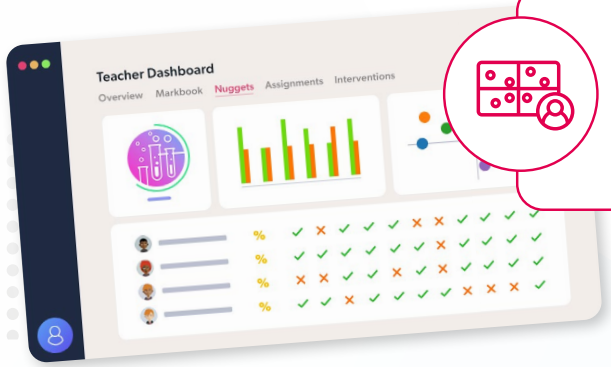
Senior and middle leaders get an overview of performance and engagement on a subject, class and learner level.

Achievements

Learners get rewarded with badges and streaks for completing micro-lessons or 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 you quickly identify which learners require additional support or further stretch.



Teacher Dashboard

Use the markbook to monitor individual learners and whole-class trends with a range of dashboards.

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.

Want to see this in action?

Watch a CENTURY platform walkthrough

Course List

Primary Mathematics

Our primary mathematics offering includes specific courses for each year group, from years 3 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

Primary – Year 3 Mathematics

Diagnostics 9 **Strands** 11 **Nuggets** 131

Year 3 National Curriculum Map | Year 3 White Rose Map

Primary – Year 4 Mathematics

Diagnostics 10 **Strands** 12 **Nuggets** 206

Year 4 National Curriculum Map | Year 4 White Rose Map

Primary – Year 5 Mathematics

Diagnostics 10 **Strands** 12 **Nuggets** 206

Year 5 National Curriculum Map | Year 5 White Rose Map

Primary – Year 6 Mathematics

Diagnostics 17 **Strands** 18 **Nuggets** 272

Year 6 National Curriculum Map | Year 6 White Rose Map

Additional courses

Primary – Multiplication Tables

Diagnostics 1 **Strands** 6 **Nuggets** 52

View course content

Primary – Year 5-6 Arithmetic

Diagnostics 8 **Strands** 9 **Nuggets** 60

View course content

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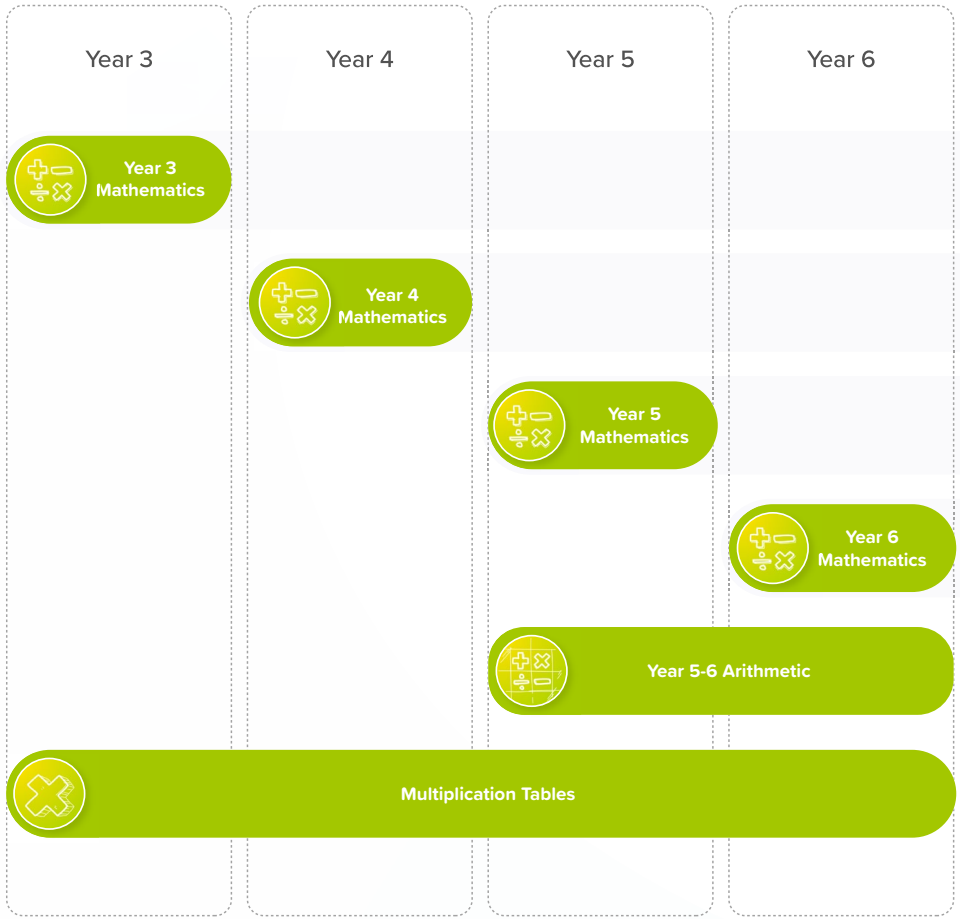
Course Assignment & Coverage

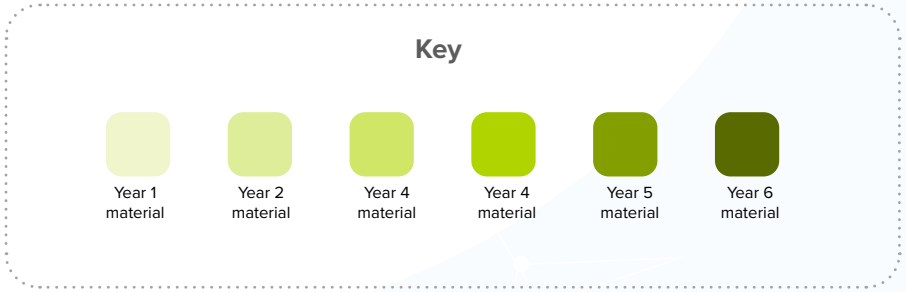
Primary Mathematics

Course Assignment



Course Coverage

In addition to the listed nuggets, each course also includes nuggets which support prerequisite learning.



CENTURY

National Curriculum Map
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**
Number and Place Value	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
Number and Place Value	recognise the place value of each digit in a 3-digit number (100s, 10s, 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	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
Addition and Subtraction	add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s	PM2.01	3-Digit: Adding and Subtracting 1s
		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
Addition and Subtraction	estimate the answer to a calculation and use inverse operations to check answers	PM2.11	Estimating Using Rounding
		PM2.12	Checking Answers Using the Inverse 1
Multiplication and Division	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	PM3.01	Multiplying by 3
		PM3.02	Multiplying by 4
		PM3.03	Multiplying by 8
		PM3.04	Mixed Multiplication
		PM3.05	Dividing by 3
		PM3.06	Dividing by 4
		PM3.07	Dividing by 8
		PM3.08	Mixed Division
	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	PM3.09	Multiplying Multiples of 10
		PM3.10	Multiplying Using Partitioning
		PM3.11	Multiplying Using the Grid Method
		PM3.12	Short Multiplication
		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
Multiplication and Division	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)
Fractions	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
Measurement	measure, compare, add and subtract: lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml)	PM5.01	Units of Measure
		PM5.02	Length
		PM5.03	Solving Length Problems
		PM5.04	Mass and Weight
		PM5.05	Solving Mass Problems
		PM5.06	Volume and Capacity

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)	PM5.07	Solving Volume and Capacity Problems
	measure the perimeter of simple 2-D shapes	PM5.08	Perimeter by Counting
		PM5.09	Calculating the Perimeter
Money	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)
Time	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
	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

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Time	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	PM7.09	12 Hour and 24 Hour Clocks
		PM7.10	Estimating Time
	compare durations of events [for example, to calculate the time taken by particular events or tasks]	PM7.11	Finding the Duration
		PM7.12	Start and End Times
Geometry	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
Statistics	interpret and present data using bar charts, pictograms and tables	PM9.01	Pictograms
		PM9.02	Tables
		PM9.03	Bar Charts 1

White Rose Mapping - Year 3

Autumn Term

White Rose Map		CENTURY Nuggets	
Block 01 Weeks **01 - 03** Topic **Place Value**	**White Rose Small Steps**	**Nugget Code**	**Nugget Name**
	Represent numbers to 100	PM1.34	2-Digit: Recognising place value
	Partition numbers to 100	PM1.35	2-Digit: Representing numbers
	Number line to 100	PM1.36	Number lines to 100
	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	PM1.09	Comparing numbers with greater than and less than
	Compare numbers to 1,000	PM1.10	Ordering numbers up to 1000
	Order numbers to 1,000	PM1.03	Counting in multiples of 50
	Count in 50s		
Block 02 Weeks **04 - 08** Topic **Addition and Subtraction**	**White Rose Small Steps**	**Nugget Code**	**Nugget Name**
	Apply number bonds within 10	PM2.01	3-Digit: Adding and subtracting 1s
	Apply number bonds within 10	PM2.02	3-Digit: Adding and subtracting 10s
	Add and subtract 1s	PM2.03	3-Digit: Adding and subtracting 100s
	Add and subtract 10s	PM2.37	2-Digit: Adding 2-digit numbers (no exchanging)
	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 02
Continued

Weeks
04 - 08

Topic
Addition and Subtraction

White Rose Small Steps	Nugget Code	Nugget Name
Subtract 10s across a 100	PM2.06	3-Digit: Column subtraction (no exchanging)
Make connections	PM2.05	3-Digit: Column addition (with exchanging)
Add two numbers (no exchange)	PM2.08	Addition and subtraction practice 1
Subtract two numbers (no exchange)	PM2.09	Addition and subtraction word problems 1
Add two numbers (across a 10)	PM2.31	Number bonds to 100
Add two numbers (across a 100)	PM2.10	Rounding to the nearest 10 and 100
Subtract two numbers (across a 10)	PM2.11	Estimating using rounding
Subtract two numbers (across a 100)	PM2.12	Checking answers using the inverse 1
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		

Block 03

Weeks
09 - 12

Topic
Multiplication and Division

White Rose Small Steps	Nugget Code	Nugget Name
Multiplication – equal groups	PM3.63	Understanding multiplication
Use arrays	PM10.01	Counting in multiples of 2
Multiples of 2	PM10.03	Counting in multiples of 5
Multiples of 5 and 10	PM10.04	Counting in multiples of 10
Sharing and grouping	PM10.02	Counting in multiples of 3
Multiply by 3	PM3.01	Multiplying by 3
Divide by 3	PM3.05	Dividing by 3
The 3 times-table	PM1.01	Counting in multiples of 4
Multiply by 4	PM3.02	Multiplying by 4
Divide by 4	PM3.06	Dividing by 4
The 4 times-table	PM1.02	Counting in multiples of 8
Multiply by 8	PM3.03	Multiplying by 8
Divide by 8	PM3.07	Dividing by 8
The 8 times-table		
The 2, 4 and 8 times-tables		

National Curriculum Map
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**
Number and Place Value	count in multiples of 6, 7, 9, 25 and 1,000	PM1.12	Counting in Multiples of 6
		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
Number and Place Value	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
	count backwards through 0 to include negative numbers	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)
Addition and Subtraction	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
Addition and Subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	PM2.21	Solving Two-Step Problems
Multiplication and Division	recall multiplication and division facts for multiplication tables up to 12 × 12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	PM10.05	Multiplying by 2
		PM3.01	Multiplying by 3
		PM3.02	Multiplying by 4
		PM10.06	Multiplying by 5
		PM3.17	Multiplying by 6
		PM3.18	Multiplying by 7
		PM3.03	Multiplying by 8
		PM3.19	Multiplying by 9
		PM10.07	Multiplying by 10
		PM3.20	Multiplying by 11
		PM3.21	Multiplying by 12
		PM3.22	Mixed Multiplication (Within the Times Tables)
		PM10.08	Dividing by 2
		PM3.05	Dividing by 3
		PM3.06	Dividing by 4
		PM3.23	Dividing by 6

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	recall multiplication and division facts for multiplication tables up to 12 × 12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	PM10.09	Dividing by 5
		PM3.24	Dividing by 7
		PM3.07	Dividing by 8
		PM3.25	Dividing by 9
		PM10.10	Dividing by 10
		PM3.26	Dividing by 11
		PM3.27	Dividing by 12
		PM3.28	Mixed Division (Within the Times Tables)
		PM3.29	Multiplying 3 Numbers Together
		PM3.64	Comparing Statements
	recognise and use factor pairs and commutativity in mental calculations	PM3.30	Factor Pairs
	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	PM3.09	Multiplying Multiples of 10
		PM3.10	Multiplying Using Partitioning
		PM3.31	2/3-Digit: Multiplying by 1-Digit
	solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	PM3.32	Scaling Problems 2
		PM3.33	Correspondence Problems 1
		PM3.34	Correspondence Problems 2

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Fractions (Including Decimals)	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
	solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	PM4.06	Finding Unit Fractions of Amounts
		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
	recognise and write decimal equivalents of any number of tenths or hundreds	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	↑	Covered throughout nuggets in this topic
Measurement	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

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	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	Mass and Weight
		PM5.15	Measuring Mass
		PM5.16	Converting Mass
		PM5.05	Solving Mass Problems
		PM5.06	Volume and Capacity
		PM5.17	Measuring Volume
		PM5.18	Converting Volume
		PM5.07	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
Measurement	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
Geometry - Properties of Shapes	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	↑	Covered throughout nuggets in this topic
Geometry - Position and Direction	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
Statistics	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 1
		PM9.03	Bar Charts 1
		PM9.04	Line Graphs 1

White Rose Mapping - Year 4

Autumn Term

Block 01

Weeks
01 - 04

Topic
Place Value

White Rose Map	CENTURY Nuggets	
White Rose Small Steps	**Nugget Code**	**Nugget Name**
Represent numbers to 1,000	PM1.05	3-Digit: Recognising place value
Partition numbers to 1,000	PM1.06	3-Digit: Representing numbers up to 1000
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

Weeks
05 - 07

Topic
Addition and Subtraction

White Rose Small Steps	Nugget Code	Nugget Name
Add and subtract 1s, 10s, 100s and 1,000s	PM2.01	3-Digit: Adding and subtracting 1s
Add up to two 4-digit numbers – no exchange	PM2.02	3-Digit: Adding and subtracting 10s
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
Continued

Weeks
05 - 07

Topic
Addition and Subtraction

White Rose Small Steps	Nugget Code	Nugget Name
Subtract two 4-digit numbers – no exchange	PM2.14	4- Digit: Column addition (with exchanging)
Subtract two 4-digit numbers – one exchange	PM2.15	4-Digit: Column subtraction (no exchanging)
Subtract two 4-digit numbers – more than one exchange	PM2.16	4-Digit: Column subtraction (with exchanging)
Efficient subtraction	PM2.20	Estimating to check answers
Estimate answers	PM2.19	Checking answers using the inverse 2
Checking strategies		

Block 03

Week
08

Topic
Area

White Rose Small Steps	Nugget Code	Nugget Name
What is area?	PM5.20	Area by counting
Count squares		
Make shapes		
Compare areas		

Block 04

Weeks
09 - 11

Topic
Multiplication and Division

White Rose Small Steps	Nugget Code	Nugget Name
Multiples of 3	PM3.01	Multiplying by 3
Multiply and divide by 6	PM3.05	Dividing by 3
6 times-table and division facts	PM3.17	Multiplying by 6
Multiply and divide by 9	PM3.23	Dividing by 6
9 times-table and division facts	PM3.19	Multiplying by 9
The 3, 6 and 9 times-tables	PM3.25	Dividing by 9
Multiply and divide by 7	PM3.18	Multiplying by 7
7 times-table and division facts	PM3.24	Dividing by 7
11 times-table and division facts	PM3.20	Multiplying by 11
12 times-table and division facts	PM3.26	Dividing by 11
Multiply by 1 and 0	PM3.21	Multiplying by 12
Divide a number by 1 and itself	PM3.27	Dividing by 12
Multiply three numbers	PM3.29	Multiplying 3 numbers together

National Curriculum Map
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**
Number and Place Value	read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	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
Number and Place Value	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	-	↑ Included in Nuggets Above
	read Roman numerals to 1,000 (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)
Addition and Subtraction	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

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition and Subtraction	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	PM2.21	Solving Two-Step Problems
Multiplication and Division	identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers	PM3.30	Factor Pairs
		PM3.40	Common Factors
	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	PM3.41	Prime Numbers
	establish whether a number up to 100 is prime and recall prime numbers up to 19	PM3.42	Prime Factors
	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	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
	multiply and divide numbers mentally, drawing upon known facts	PM3.47	Mental Strategies for Multiplication 1
		PM3.48	Mental Strategies for Multiplication 2
		PM3.49	Mental Strategies for Division
	divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
		PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
	multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	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.)
	recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	PM3.43	Square Numbers
		PM3.44	Cube Numbers

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	PM11.01	Understanding 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
Fractions (Including Decimals and Percentages)	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 = 1 1/5]	PM4.17	Mixed Numbers and Improper Fractions
	add and subtract fractions with the same denominator, and denominators that are multiples of the same number	PM4.04	Adding and Subtracting Fractions
		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
Fractions (Including Decimals and Percentages)	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 ½ , ¼ , ⅕ , ⅖ , ⅘ 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
Measurement	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
Measurement	convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]	PM5.18	Converting Volume
		PM5.23	Solving Length Problems with Conversion
		PM5.25	Solving Mass Problems with Conversion
		PM5.27	Solving Volume and Capacity Problems with Conversion
	understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	PM5.22	Imperial Units of Length
		PM5.24	Imperial Units of Mass
		PM5.26	Imperial Units of Volume and Capacity
	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	PM13.01	Calculating the Perimeter 2
	calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes	PM13.02	Area of Rectangles
		PM13.03	Area of Compound Shapes
		PM13.04	Estimating Area
	estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	PM13.06	Volume of Shapes 1
		PM5.28	Estimating Volume and Capacity
	solve problems involving converting between units of time	PM7.13	Converting Weeks, Days, Years and Months
		PM7.14	Converting Seconds, Minutes and Hours
		PM7.15	Converting Units of Time
Geometry – Properties of Shapes	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	PM14.03	Views of 3D Shapes

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 (°)	PM14.09	Drawing Angles
	identify angles at a point and 1 whole turn (total 360°)	PM14.12	Angles Around a Point
	identify angles at a point on a straight line and half a turn (total 180°)	PM14.11	Angles on a Straight Line
	identify other multiples of 90°	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
Geometry – Position and Direction	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	PM8.16	Translation 1
		PM15.01	Reflection 1
Statistics	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 2
		PM9.06	Two-Way Tables
		PM9.07	Timetables

White Rose Mapping - Year 5

Autumn Term

White Rose Map

CENTURY Nuggets

Block 01

Weeks
01 - 03

Topic
Place Value

White Rose Small Steps	Nugget Code	Nugget Name
Roman numerals to 1,000	PM1.29	Roman numerals (up to 1000)
Numbers to 10,000	PM1.20	Place value in 4 digit numbers
Numbers to 100,000	PM1.25	Place value up to 1,000,000
Numbers to 1,000,000	PM1.27	Counting forwards and backwards in powers of 10
Read and write numbers to 1,000,000	PM1.26	Comparing and ordering numbers to 1,000,000
Powers of 10	PM1.23	Rounding to the nearest 10, 100 and 1000
10/100/1,000/10,000/100,000 more or less	PM1.28	Rounding to the nearest 10,000 and 100,000
Partition numbers to 1,000,000		
Number line to 1,000,000		
Compare and order numbers to 100,000		
Compare and order numbers to 1,000,000		
Round to the nearest 10, 100 or 1,000		
Round within 100,000		
Round within 1,000,000		

Block 02

Weeks
04 - 05

Topic
Addition and Subtraction

White Rose Small Steps	Nugget Code	Nugget Name
Mental strategies	PM2.24	Mental strategies for addition 1
Add whole numbers with more than four digits	PM2.25	Mental strategies for addition 2
Subtract whole numbers with more than four digits	PM2.26	Mental strategies for subtraction 1
Round to check answers	PM2.27	Mental strategies for subtraction 2
Inverse operations (addition and subtraction)	PM2.22	4+ Digit: Column addition

Block 02
Continued

Weeks
04 - 05

Topic
Addition and Subtraction

White Rose Small Steps	Nugget Code	Nugget Name
Multi-step addition and subtraction problems	PM2.23	4+ Digit: Column subtraction
Compare calculations	PM2.20	Estimating to check answers
Find missing numbers	PM2.19	Checking answers using the inverse 2
	PM2.21	Solving two-step problems

Block 03

Weeks
06 - 08

Topic
Multiplication and Division A

White Rose Small Steps	Nugget Code	Nugget Name
Multiples	PM3.30	Factor pairs
Common multiples	PM3.40	Common factors
Factors	PM3.41	Prime numbers
Common factors	PM3.43	Square numbers
Prime numbers	PM3.44	Cube numbers
Square numbers	PM3.09	Multiplying multiples of 10
Cube numbers	PM3.47	Mental strategies for multiplication 1
Multiply by 10, 100 and 1,000	PM3.49	Mental strategies for division
Divide by 10, 100 and 1,000		
Multiples of 10, 100 and 1,000		

Block 04

Weeks
09 - 12

Topic
Fractions A

White Rose Small Steps	Nugget Code	Nugget Name
Find fractions equivalent to a unit fraction	PM4.05	Equivalent fractions 1
Find fractions equivalent to a non-unit fraction	PM4.15	Equivalent fractions 2
Recognise equivalent fractions	PM4.17	Mixed numbers and improper fractions
Convert improper fractions to mixed numbers	PM4.03	Comparing and ordering fractions
Convert mixed numbers to improper fractions	PM4.16	Comparing proper fractions 1
Compare fractions less than 1	PM4.18	Comparing and ordering improper fractions and mixed numbers
Order fractions less than 1	PM4.04	Adding and subtracting fractions
Compare and order fractions greater than 1	PM4.27	Adding and subtracting fractions with different denominators

Block 04
Continued

Weeks
09 - 12

Topic
Fractions A

White Rose Small Steps	Nugget Code	Nugget Name
Add and subtract fractions with the same denominator	PM4.29	Adding and subtracting mixed numbers 1
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		

National Curriculum Map
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**
Number and Place Value	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
Number and Place Value	round any whole number to a required degree of accuracy	PM1.28	Rounding to the Nearest 10,000 and 100,000
	use negative numbers in context, and calculate intervals across 0	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
		PM1.32	Negative Numbers 3
	solve number and practical problems that involve all of the above	↑	Included in Nuggets Above
Addition, Subtraction, Multiplication and Division	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	PM3.51	2-Digit: Multiplying by 2-Digits
		PM3.52	3/4-Digit: Multiplying by 2-Digits
	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	PM3.57	Long Division 1 (Dividing by a Single Digit Number)
		PM3.58	Long Division 2 (Dividing by a 2 Digit Number)
	divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
		PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
		PM3.56	Dividing by 2 Digit Numbers Using Short Division
	perform mental calculations, including with mixed operations and 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
		PM3.47	Mental Strategies for Multiplication 1
		PM3.48	Mental Strategies for Multiplication 2

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition, Subtraction, Multiplication and Division	perform mental calculations, including with mixed operations and large numbers	PM3.49	Mental Strategies for Division
	identify common factors, common multiples and prime numbers	PM3.40	Common Factors
		PM3.41	Prime Numbers
		PM3.55	Common Multiples
	use their knowledge of the order of operations to carry out calculations involving the 4 operations	PM11.05	Operations of Equal Priority
		PM11.06	BIDMAS: 4 Operations and Brackets
		PM11.07	BIDMAS: Indices
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	PM2.28	Multistep Addition and Subtraction Problems
		PM11.02	Solving Multistep Problems 1 (with Multiplication)
		PM11.03	Solving Multistep Problems 2 (with Division)
	solve problems involving addition, subtraction, multiplication and division	PM2.22	4+ Digit: Column Addition
		PM2.23	4+ Digit: Column Subtraction
	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	PM2.20	Estimating to Check Answers
Fractions	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	PM4.23	Simplifying Fractions
	compare and order fractions, including fractions >1	PM4.16	Comparing Proper Fractions 1
		PM4.21	Comparing Proper Fractions 2
		PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Fractions	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	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
	multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ × ½ = ⅛]	PM4.24	Multiplying Simple Pairs of Proper Fractions
	divide proper fractions by whole numbers [for example, ⅓ ÷ 2 = ⅙]	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, ⅜]	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	↑	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
Ratio and Proportion	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
Ratio and Proportion	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
	solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison	PM16.01	Finding Percentages of Amounts 1
		PM16.02	Finding Percentages of Amounts 2
		PM16.03	Finding Percentages of Amounts 3
		PM16.04	Finding Percentages of Amounts 4
		PM16.05	Percentages (Missing Values)
	solve problems involving similar shapes where the scale factor is known or can be found	PM17.05	Similar Shapes
	solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	PM17.03	Ratios and Fractions
		PM17.04	Sharing into a Given Ratio
Algebra	use simple formulae	PM18.02	Function Machines
		PM18.07	Formulae
	generate and describe linear number sequences	PM18.01	Sequences
	express missing number problems algebraically	PM18.03	Forming Expressions 1
		PM18.04	Forming Expressions 2
		PM18.05	Forming Expressions 3
		PM18.06	Substitution
		PM18.08	Solving 1 Step Equations

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Algebra	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
Measurements	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
Properties of Shapes	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
Properties of Shapes	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
	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	PM14.12	Angles Around a Point
		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
	draw and translate simple shapes on the coordinate plane, and reflect them in the axes	PM15.03	Translation 2
		PM15.04	Reflection 2
Statistics	interpret and construct pie charts and line graphs and use these to solve problems	PM9.09	Line Graphs 3
		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

Block 01

Weeks
01 - 02

Topic
Place Value

White Rose Map	CENTURY Nuggets	
White Rose Small Steps	**Nugget Code**	**Nugget Name**
Numbers to 1,000,000	PM1.25	Place value up to 1,000,000
Numbers to 10,000,000	PM1.31	Place value up to 10,000,000
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

Weeks
03 - 07

Topic
Addition, Subtraction, Multiplication and Division

White Rose Small Steps	Nugget Code	Nugget Name
Add and subtract integers	PM2.22	4+ Digits: Column addition
Common factors	PM2.23	4+ Digits: Column subtraction
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

White Rose Small Steps	Nugget Code	Nugget Name
Solve problems with division	PM3.57	Long division 1 (dividing by a single digit number)
Solve multi-step problems	PM3.58	Long division 2 (dividing by a 2-Digit number)
Order of operations	PM11.03	Solving Multistep Problems 2 (with Division)
Mental calculations and estimation	PM11.05	Operations of equal priority
Reason from known facts	PM11.06	BIDMAS: 4 operations and brackets
	PM11.07	BIDMAS: Indices

Block 03

Weeks
08 - 09

Topic
Fractions A

White Rose Small Steps	Nugget Code	Nugget Name
Equivalent fractions and simplifying	PM4.15	Equivalent fractions 2
Equivalent fractions on a number line	PM4.34	Fractions on a number line 1
Compare and order (denominator)	PM4.35	Fractions on a number line 2
Compare and order (numerator)	PM4.23	Simplifying fractions
Add and subtract simple fractions	PM4.16	Comparing proper fractions 1
Add and subtract any two fractions	PM4.21	Comparing proper fractions 2
Add mixed numbers	PM4.27	Adding and subtracting fractions with different denominators
Subtract mixed numbers	PM4.32	Adding and subtracting fractions with different denominators 2
Multi-step problems	PM4.29	Adding and subtracting mixed numbers 1
	PM4.33	Adding and subtracting mixed numbers 2

Block 04

Weeks
10 - 11

Topic
Fractions B

White Rose Small Steps	Nugget Code	Nugget Name
Multiply fractions by integers	PM4.28	Multiplying fractions by whole numbers
Multiply fractions by fractions	PM4.24	Multiplying simple pairs of proper fractions
Divide a fraction by an integer	PM4.25	Dividing fractions by whole numbers
Divide any fraction by an integer	PM4.08	Finding fractions of amounts
Mixed questions with fractions	PM4.36	Finding fractions of amounts: finding the whole
Fraction of an amount		
Fraction of an amount – find the whole		

Block 05

Week
12

Topic
Converting Units

White Rose Small Steps
Metric measures
Convert metric measures
Calculate with metric measures
Miles and kilometres
Imperial measures

Nugget Code	Nugget Name
PM5.29	Converting metric measures
PM5.23	Solving length problems with conversion
PM5.25	Solving mass problems with conversion
PM5.27	Solving volume and capacity problems with conversion
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

Course Content
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
Multiplication Tables	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
Multiplication Tables	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)
Easy Practice	PMT2.01	Easy Practice (1)
	PMT2.02	Easy Practice (2)
	PMT2.03	Easy Practice (3)
Medium Practice	PMT3.01	Medium Practice (1)
	PMT3.02	Medium Practice (2)
	PMT3.03	Medium Practice (3)

Strand	Code	Nugget Name
Hard Practice	PMT4.01	Hard Practice (1)
	PMT4.02	Hard Practice (2)
	PMT4.03	Hard Practice (3)
Practice Assessments	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
Diagnostics	PAR0.01	Diagnostic: Place Value
	PAR0.02	Diagnostic: Addition
	PAR0.03	Diagnostic: Subtraction
	PAR0.04	Diagnostic: Multiplication
	PAR0.05	Diagnostic: Division
	PAR0.06	Diagnostic: Mixed Operations
	PAR0.07	Diagnostic: Fractions
	PAR0.08	Diagnostic: Percentages
Place Value	PAR1.01	Place Value 1
	PAR1.02	Place Value 2
Addition and Subtraction	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
Addition and Subtraction	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
Multiplication	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
Division	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
Division	PAR4.08	Long Division 4
Mixed Operations	PAR5.01	Squared and Cubed Numbers 1
	PAR5.02	Squared and Cubed Numbers 2
	PAR5.03	BIDMAS 1
	PAR5.04	BIDMAS 2
Fractions	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
Percentages	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
Diagnostics: Practice Papers	PAR8.01	Arithmetic Practice Assessment 1
	PAR8.02	Arithmetic Practice Assessment 2
	PAR8.03	Arithmetic Practice Assessment 3

Strand	Code	Nugget Name
Diagnostics: Practice Papers	PAR8.04	Arithmetic Practice Assessment 4
	PAR8.05	Arithmetic Practice Assessment 5
	PAR8.06	Arithmetic Practice Assessment 6

Questions?
Email support@century.tech

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Supercharge learning through personalisation