Big Maths

Maths

Curriculum **Mapping**

Big Maths Curriculum Mapping

One of the many things that Big Maths offers is an essential detailed description of a child's mathematical learning journey.

Schools that:

- use the Basic Skills Framework and follow the Basic Skills on your Planning journey for Core Numeracy; and

- use the Wider Maths Maths Framework and follow the Wider Maths Planning journey for Outer Numeracy, will provide each and every child with a high-expectation, minimum learning journey that the child will experience over the primary years as if they were being taught and tracked by one teacher.

For more information on how to use the step by step Progress Drives as an essential assessment, planning and teaching tool, please speak to us.

The Big Maths Beat That! challenges allow the school leader, teacher and child to assess and track each child's individual mathematics journey against government age-related expectations.

This document shows how every element of the national curriculum for primary mathematics is covered by Big Maths. This means teachers do not need to keep referring to their national curriculum document as they can just see this document once and be assured that following the Big Maths Journey is covering the curriculum.

In fact the steps of progression in the Big Maths Journey cover a lot more than the national curriculum. The Big Maths steps start earlier and finish later. The Big Maths Journey starts right from the beginning of the child's life, which can be seen in the very first steps of the journey, and it finishes on the top steps of the Progress Drives, which is actually secondary school mathematics (thus allowing the most able primary children to be stretched in their ability).

Further to this, the Big Maths Journey adds in the extra detail that the national curriculum can't go into. However, this detail is crucial as it provides the essential subject knowledge and the system needed in order to give us the precision of tracking for truly teaching the child's next step. If we just use the broader, vaguer and more 'gappy' statements of the curriculum then true formative assessment quickly breaks down. This vagueness may be useful for some areas of the curriculum but it does not suit the nature of mathematical progression.

This mapping document uses the national curriculum documentation as a starting point and then shows where that statement maps to the Big Maths Progress Drives.

Year 1

Number - number and place value

Curriculum Statement	Big Maths Location
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	**Basic Skills: Counting:** **Saying Numbers:** Step 5
count, read and write numbers to 100 in numerals, count in different multiples including ones, twos, fives and tens	**Basic Skills: Counting:** **Reading Numbers:** Step 4 **Counting Along in 4 Ways:** Steps 1 - 3 **Counting Multiples:** Steps 1 - 3
given a number, identify one more and one less	**Basic Skills: Counting:** **Counting On:** Step 1
identify and represent numbers using concrete objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	**Basic Skills: Counting:** **Actual Counting:** Step 4 **Counting Along in 4 Ways** **Mastery of Numbers:** Step 2 **Early Years: Amounts:** **Amounts Compared**
read and write numbers from 1 to 20 in digits and words	**Basic Skills: Counting:** **Reading Numbers:** Step 2

Number - addition and subtraction

Curriculum Statement	Big Maths Location
read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	**Basic Skills: Calculation:** **Addition:** Steps 6, 7 **Subtraction:** Steps 6, 7
represent and use number bonds and related subtraction facts within 20	**Basic Skills: Learn Its:** Steps 1 - 6 **Basic Skills: It's Nothing New:** **INN: Fact Families:** Step 1
add and subtract one-digit and two-digit numbers to 20, including zero	**Basic Skills: Calculation:** **Addition:** Steps 8 - 12 **Subtraction:** Steps 8 - 12

Curriculum Statement	Big Maths Location
solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = [ ] - 9	**Basic Skills: Calculation:** **Addition:** Steps 7, 8 **Subtraction:** Steps 7, 8 **Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 1

Number - multiplication and division

Curriculum Statement	Big Maths Location
solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	**Basic Skills: Calculation:** **Multiplication:** Steps 1 - 6 **Division:** Steps 1 - 11

Number - fractions

Curriculum Statement	Big Maths Location
recognise, find and name a half as one of two equal parts of an object, shape or quantity	**Wider Maths: Fractions:** **Fractions of a Whole:** Step 2 **Fractions of a Set:** Steps 2, 3
recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	**Wider Maths: Fractions:** **Fractions of a Whole**: Step 4 **Fractions of a Set**: Step 5

Measurement

Curriculum Statement	Big Maths Location
compare, describe and solve practical problems for: • lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] • mass/weight [for example, heavy/light, heavier than, lighter than] • capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] • time [for example, quicker, slower, earlier, later]	**Wider Maths: Amounts:** **Amounts of Distance:** Steps 5, 6 **Amounts of Mass:** Steps 5, 6 **Amounts of Space:** Steps 5, 6 **Amounts of Time:** Step 11

Curriculum Statement	Big Maths Location
measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume • time (hours, minutes, seconds)	**Wider Maths: Amounts:** **Amounts of Distance:** Steps 5, 6 **Amounts of Mass:** Steps 5, 6 **Amounts of Space:** Steps 5, 6 **Amounts of Time:** Step 11
recognise and know the value of different denominations of coins and notes	**Wider Maths: Amounts:** **Amounts of Money:** Step 5
sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	**Wider Maths: Amounts:** **Amounts of Time:** Step 10
recognise and use language relating to dates, including days of the week, weeks, months and years	**Wider Maths: Amounts:** **Amounts of Time:** Step 12
tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Step 4

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
recognise and name common 2-D and 3-D shapes, including: • 2-D shapes [for example, rectangles (including squares), circles and triangles] • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	**Wider Maths: Shape:** **2D Shape:** Step 13 **3D Shape:** Step 10

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
describe position, direction and movement, including whole, half, quarter and three-quarter turns	**Wider Maths: Shape:** **Position & Direction:** Step 9 **Wider Maths: Amounts:** **Amounts of Turn:** Step 3

Year 2

Number - number and place value

Curriculum Statement	Big Maths Location
count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward	**Basic Skills: Counting:** **Counting Along in 4 Ways** **Counting Multiples:** Step 4
recognise the place value of each digit in a two-digit number (tens, ones)	**Basic Skills: Counting:** **Place Value:** Step 1
identify, represent and estimate numbers using different representations, including the number line	**Basic Skills: Counting:** **Mastery of Numbers:** Step 3
compare and order numbers from 0 up to 100; use <, > and = signs	**Basic Skills: Counting:** **Mastery of Numbers:** Step 3
read and write numbers to at least 100 in numerals and in words	**Basic Skills: Counting:** **Reading Numbers:** Step 4
use place value and number facts to solve problems	**Basic Skills: Calculation:** **Addition** **Subtraction**

Number - addition and subtraction

Curriculum Statement	Big Maths Location
solve problems with addition and subtraction: • using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods	**Basic Skills: Calculation:** **Addition** **Subtraction**
recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	**Basic Skills: Learn Its:** Steps 7 - 9 **Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 2 **Addition and Subtraction:** Step 1

Curriculum Statement	Big Maths Location
add and subtract 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	**Basic Skills: Calculation:** **Addition:** Step 20 **Subtraction:** Step 18 **Addition:** Step 23 **Subtraction:** Step 25 **Addition:** Step 24 **Subtraction:** Step 27 **Addition:** Step 19
show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	**Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 2
recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	**Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 3

Number - multiplication and division

Curriculum Statement	Big Maths Location
• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, • including recognising odd and even numbers	**Basic Skills: Learn Its:** Steps 7 - 9 **Basic Skills: Calculation:** **Division:** Steps 16, 17 **Basic Skills: Counting:** **Counting Along in 4 Ways**
calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	**Basic Skills: Calculation:** **Multiplication:** Steps 7 - 9 **Division:** Step 13
recognise and use the inverse relationship between multiplication and division in calculations	**Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 4
show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	**Basic Skills: It's Nothing New: INN:** **Fact Families:** Step 4

Curriculum Statement	Big Maths Location
solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	**Basic Skills: Calculation:** **Division:** Steps 12 - 15 **Multiplication:** Steps 7 - 9

Number - fractions

Curriculum Statement	Big Maths Location
recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity	**Wider Maths: Fractions:** **Fractions of a Whole:** Steps 6, 8 **Fractions of a Set:** Step 6
write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	**Wider Maths: Fractions:** **Fractions of a Set:** Step 6 **Fractions: Learn Its:** Step 3

Measurement

Curriculum Statement	Big Maths Location
choose and use appropriate standard units to estimate and measure: • length/height in any direction (m/cm); • mass (kg/g); • temperature (°C); • capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	**Wider Maths: Amounts:** **Amounts of Distance:** Step 10 **Amounts of Mass:** Step 10 **Amounts of Temperature:** Step 7 **Amounts of Space:** Step 10
compare and order: • lengths, • mass, • volume/capacity and record the results using >, < and =	**Wider Maths: Amounts:** **Amounts of Distance:** Step 7 **Amounts of Mass:** Step 7 **Amounts of Space:** Step 7
recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	**Wider Maths: Amounts:** **Amounts of Money:** Step 10
find different combinations of coins that equal the same amounts of money	**Wider Maths: Amounts:** **Amounts of Money:** Step 8

Curriculum Statement	Big Maths Location
solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	**Wider Maths: Amounts:** **Amounts of Money**: Step 12
compare and sequence intervals of time	**Wider Maths: Amounts:** **Amounts of Time:** Step 19
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	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Step 8
know the number of minutes in an hour and the number of hours in a day	**Wider Maths: Amounts:** **Amounts of Time:** Steps 14, 15

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	**Wider Maths: Shape:** **2D Shape:** Step 17 **Explore & Draw:** Step 10
identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	**Wider Maths: Shape:** **3D Shape:** Step 16
identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	**Wider Maths: Shape:** **3D Shape:** Step 13
compare and sort common 2-D and 3-D shapes and everyday objects	**Wider Maths: Shape:** **2D Shape:** Step 17 **3D Shape:** Step 16

Geometry - position and direction

Curriculum Statement	Big Maths Location
order and arrange combinations of mathematical objects in patterns and sequences	**Dangerous Maths:** **Pattern Spotting:** Step 9

Curriculum Statement	Big Maths Location
use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)	**Wider Maths: Shape: Position & Direction:** Steps 9 - 11 **Wider Maths: Amounts: Amounts of Turn:** Step 6

Statistics

Curriculum Statement	Big Maths Location
interpret and construct simple pictograms, tally charts, block diagrams and simple tables	**Wider Maths: Explaining Data: Diagrams & Tables:** Steps 8 - 16
ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	**Wider Maths: Explaining Data: Diagrams & Tables:** Steps 8 - 16
ask and answer questions about totalling and comparing categorical data	**Wider Maths: Explaining Data: Bar Charts:** Step 3

Year 3

Number - number and place value

Curriculum Statement	Big Maths Location
count from 0 in multiples of 4, 8, 50 and 100; finding 10 or 100 more or less than a given number	**Basic Skills: Counting:** **Counting Along in 4 Ways** **Counting Multiples:** Steps 5, 6
recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	**Basic Skills: Counting:** **Place Value:** Step 2
compare and order numbers up to 1000	**Basic Skills: Counting:** **Mastery of Numbers:** Step 4
identify, represent and estimate numbers using different representations	**Basic Skills: Counting:** **Mastery of Numbers:** Step 4
read and write numbers to at least 1000 in numerals and in words	**Basic Skills: Counting:** **Reading Numbers:** Steps 5, 6
solve number problems and practical problems involving these ideas	**Basic Skills: Calculation:** **Addition** **Subtraction** **Basic Skills: Counting:** **Counting Along Scales** **Basic Skills: It's Nothing New:** **Swapping the Units:** Steps 2, 3

Number - addition and subtraction

Curriculum Statement	Big Maths Location
add and subtract numbers mentally, including: • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds	**Basic Skills: Calculation:** **Addition:** Step 20 **Subtraction:** Step 19 **Addition:** Step 26 **Subtraction:** Step 29 **Addition:** Step 28 **Subtraction:** Step 29

Curriculum Statement	Big Maths Location
add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction	**Cool Moves: Column Methods:** **Addition:** Step 5 **Subtraction:** Step 5
estimate the answer to a calculation and use inverse operations to check answers	**Basic Skills: Counting:** **Mastery of Numbers** **Basic Skills: It's Nothing New:** **INN: Fact Families**
solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	**Real Life Maths** **Basic Skills: Calculation:** **Addition** **Subtraction** **Basic Skills: It's Nothing New:** **Swapping the Units:** Steps 1 - 3

Number - multiplication and division

Curriculum Statement	Big Maths Location
recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	**Basic Skills: Learn Its:** Steps 10 - 12
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 efficient written methods	**Basic Skills: It's Nothing New:** **INN: Fact Families:** Steps 1 - 3 **Smile Multiplication:** Steps 1 - 3 **Basic Skills: Calculation:** **Multiplication:** Step 11 **Cool Moves: Column Methods:** **Multiplication:** Step 1

Curriculum Statement	Big Maths Location
• solve problems, including missing number problems, involving multiplication and division, • including integer scaling problems and correspondence problems in which n objects are connected to m objects	**Real Life Maths** **Basic Skills: It's Nothing New:** **INN: Fact Families:** Steps 4, 5 **Wider Maths: Fractions:** **Ratio:** Step 3 **Dangerous Maths:** **Prove It!:** Step 3

Number - fractions

Curriculum Statement	Big Maths Location
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	**Wider Maths: Fractions:** **Fractions: Counting:** Steps 7, 8
recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	**Wider Maths: Fractions:** **Fractions of a Set:** Steps 9, 10
recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 1
recognise and show, using diagrams, equivalent fractions with small denominators	**Wider Maths: Fractions:** **Fractions of a Whole:** Step 15
add and subtract fractions with the same denominator within one whole, for example, 5/7 + 1/7 = 6/7	**Wider Maths: Fractions:** **It's Nothing New:** Step 4
compare and order unit fractions, and fractions with the same denominators	**Wider Maths: Fractions:** **Fractions: Counting:** Step 9
solve problems that involve all of the above	**Wider Maths: Fractions**

Measurement

Curriculum Statement	Big Maths Location
measure, compare, add and subtract: • lengths (m/cm/mm); • mass (kg/g); • volume/capacity (l/ml)	**Wider Maths: Amounts:** **Amounts of Distance:** Step 14 **Amounts of Mass:** Step 13 **Amounts of Space:** Step 13
measure the perimeter of simple 2-D shapes	**Wider Maths: Amounts:** **Amounts of Distance:** Step 18
add and subtract amounts of money to give change, using both £ and p in practical contexts	**Wider Maths: Amounts:** **Amounts of Money:** Step 13
tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Steps 12, 14
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, a.m./p.m., morning, afternoon, noon and midnight	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Steps 11, 13
know the number of seconds in a minute and the number of days in each month, year and leap year	**Wider Maths: Amounts:** **Amounts of Time:** Steps 16, 22
compare durations of events [for example to calculate the time taken by particular events or tasks].	**Wider Maths: Amounts:** **Amounts of Time:** Step 21

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	**Wider Maths: Shape:** **3D Shape:** Steps 17 - 19
recognise angles as a property of shape or a description of a turn	**Wider Maths: Amounts:** **Amounts of Turn:** Steps 4, 14
identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	**Wider Maths: Amounts:** **Amounts of Turn:** Step 8

Curriculum Statement	Big Maths Location
identify horizontal and vertical lines and pairs of perpendicular and parallel lines	**Wider Maths: Shape:** **Explore & Draw:** Steps 15 - 17

Statistics

Curriculum Statement	Big Maths Location
interpret and present data using bar charts, pictograms and tables	**Wider Maths: Explaining Data:** **Bar Charts:** Steps 5, 6 **Diagrams & Tables:** Steps 17 - 20
solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	**Wider Maths: Explaining Data:** **Bar Charts:** Steps 7 - 9 **Diagrams & Tables:** Steps 17 - 20

Year 4

Number - number and place value

Curriculum Statement	Big Maths Location
count in multiples of 6, 7, 9, 25 and 1000	**Basic Skills: Counting:** **Counting Along in 4 Ways** **Counting Multiples:** Steps 7 - 9
find 1000 more or less than a given number	**Basic Skills: Counting:** **Counting Along in 4 Ways** **Mastery of Numbers**
count backwards through zero to include negative numbers	**Basic Skills: Counting:** **Counting Along in 4 Ways**
recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	**Basic Skills: Counting:** **Place Value:** Step 2
order and compare numbers beyond 1000	**Basic Skills: Counting:** **Mastery of Numbers:** Step 5
identify, represent and estimate numbers using different representations	**Basic Skills: Counting:** **Mastery of Numbers:** Step 5
round any number to the nearest 10, 100 or 1000	**Basic Skills: Counting:** **Mastery of Numbers:** Step 5
solve number and practical problems that involve all of the above and with increasingly large positive numbers	**Basic Skills: Calculation:** **Addition** **Subtraction** **Counting Along Scales**
read Roman numerals to 100 (I to C) and understand how, over time, the numeral system changed to include the concept of zero and place value	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Step 17

Number - addition and subtraction

Curriculum Statement	Big Maths Location
add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate	**Cool Moves: Column Methods:** **Addition:** Step 8 **Subtraction:** Step 8

Curriculum Statement	Big Maths Location
estimate and use inverse operations to check answers to a calculation	**Basic Skills: Counting: Mastery of Numbers** **Basic Skills: It's Nothing New: INN: Fact Families**
solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	**Basic Skills: Calculation: Addition Subtraction**

Number - multiplication and division

Curriculum Statement	Big Maths Location
recall multiplication and division facts for multiplication tables up to 12 × 12	**Basic Skills: Learn Its:** Steps 13 - 15
• use place value, known and derived facts to multiply and divide mentally, • including: multiplying by 0 and 1; dividing by 1; • multiplying together three numbers	**Basic Skills: Calculation: Multiplication Division** **Dangerous Maths: Prove It!:** Step 4
recognise and use factor pairs and commutativity in mental calculations	**Basic Skills: It's Nothing New: Multiple-Factor-Prime:** Step 2
multiply two-digit and three-digit numbers by a one-digit number using formal written layout	**Cool Moves: Column Methods: Multiplication:** Steps 2, 3
• solve problems involving multiplying and adding, • including using the distributive law and harder multiplication problems such as which n objects are connected to m objects	**Basic Skills: Calculation: Addition Multiplication** **Basic Skills: It's Nothing New: Coin Multiplication** **Wider Maths: Fractions: Ratio:** Step 4 **Big Maths Mastery**

Number - fractions (including decimals)

Curriculum Statement	Big Maths Location
recognise and show, using diagrams, families of common equivalent fractions	**Wider Maths: Fractions:** **Fractions of a Whole:** Step 17
count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	**Wider Maths: Fractions: Fractions: Counting:** Step 15
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	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 4 **Fractions of a Set:** Step 12
add and subtract fractions with the same denominator	**Wider Maths: Fractions: Fractions:** **It's Nothing New**: Step 5
recognise and write decimal equivalents of any number of tenths or hundredths	**Wider Maths: Fractions:** **Fractions: Counting:** Step 16
recognise and write decimal equivalents to ¼, ½, ¾	**Wider Maths: Fractions:** **Fractions: Learn Its:** Step 7
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	**Basic Skills: It's Nothing New:** **Dividing by 10:** Step 2
round decimals with one decimal place to the nearest whole number	**Basic Skills: Counting:** **Mastery of Numbers:** Step 6 **Wider Maths: Fractions:** **Fractions: Counting**: Step 12
compare numbers with the same number of decimal places up to two decimal places	**Basic Skills: Counting:** **Mastery of Numbers:** Step 7
solve simple measure and money problems involving fractions and decimals to two decimal places	**Real Life Maths** **Basic Skills: It's Nothing New:** **Swapping the Units:** Steps 1 - 3

Measurement

Curriculum Statement	Big Maths Location
Convert between different units of measure [for example, kilometre to metre; hour to minute]	**Wider Maths: Amounts:** **Amounts of Distance:** Step 22 **Amounts of Mass:** Step 16 **Amounts of Space:** Step 20 **Amounts of Time:** Step 24
measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	**Wider Maths: Amounts:** **Amounts of Distance:** Step 20
find the area of rectilinear shapes by counting squares	**Wider Maths: Amounts:** **Amounts of Space**: Step 17
estimate, compare and calculate different measures, including money in pounds and pence	**Wider Maths: Amounts**
read, write and convert time between analogue and digital 12- and 24-hour clocks	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Step 16
solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	**Wider Maths: Amounts:** **Amounts of Time**: Step 24

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	**Wider Maths: Shape:** **2D Shape:** Step 23
identify acute and obtuse angles and compare and order angles up to two right angles by size	**Wider Maths: Amounts:** **Amounts of Turn:** Step 15
identify lines of symmetry in 2-D shapes presented in different orientations	**Wider Maths: Shape:** **Explore & Draw:** Step 20
complete a simple symmetric figure with respect to a specific line of symmetry	**Wider Maths: Shape:** **Explore & Draw:** Step 21

Geometry – position and direction

Curriculum Statement	Big Maths Location
describe positions on a 2-D grid as coordinates in the first quadrant	**Wider Maths: Shape: Position & Direction:** Step 16
describe movements between positions as translations of a given unit to the left/right and up/down	**Wider Maths: Shape: Position & Direction:** Steps 23, 24
plot specified points and draw sides to complete a given polygon	**Wider Maths: Shape: Position & Direction:** Step 21

Statistics

Curriculum Statement	Big Maths Location
interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	**Wider Maths: Explaining Data: Bar Charts:** Steps 10, 11 **Line Graphs:** Step 3
solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	**Wider Maths: Explaining Data: Bar Charts:** Steps 10, 11 **Diagrams & Tables:** Steps 21 - 24

Year 5

Number - number and place value

Curriculum Statement	Big Maths Location
read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	**Basic Skills: Counting:** **Reading Numbers:** Steps 7 - 9 **Mastery of Numbers:** Step 9
count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	**Basic Skills: Counting:** **Counting Along in 4 Ways**
interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero	**Basic Skills: Counting:** **Counting Along in 4 Ways** **Counting Along Scales** **Wider Maths: Amounts:** **Amounts of Temperature:** Step 14
round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	**Basic Skills: Counting:** **Mastery of Numbers:** Step 9
solve number problems and practical problems that involve all of the above	**Real Life Maths** **Basic Skills: Calculation:** **Addition** **Subtraction** **Basic Skills: Counting:** **Counting Along Scales** **Basic Skills: It's Nothing New:** **Swapping the Units:** Steps 1 - 3
read Roman numerals to 1000 (M) and recognise years written in Roman numerals	**Wider Maths: Amounts:** **Amounts of Time: Telling the Time:** Step 18

Number - addition and subtraction

Curriculum Statement	Big Maths Location
add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction)	**Cool Moves: Column Methods:** **Addition:** Step 10 **Subtraction:** Step 10

Curriculum Statement	Big Maths Location
add and subtract numbers mentally with increasingly large numbers	**Basic Skills: Calculation:** **Addition:** Step 38 **Subtraction:** Step 36
use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	**Basic Skills: Counting:** **Mastery of Numbers:** Steps 8, 9
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	**Real Life Maths** **Basic Skills: Calculation:** **Addition** **Subtraction** **Basic Skills: It's Nothing New:** **Swapping the Units:** Steps 1 - 3

Number - multiplication and division

Curriculum Statement	Big Maths Location
identify multiples and factors, including finding all factor pairs	**Basic Skills: It's Nothing New:** **Multiple-Factor-Prime:** Steps 1, 2
solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors	**Basic Skills: It's Nothing New:** **Multiple-Factor-Prime:** Step 2
know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	**Basic Skills: It's Nothing New:** **Multiple-Factor-Prime:** Step 4
establish whether a number up to 100 is prime and recall prime numbers up to 19	**Basic Skills: It's Nothing New:** **Multiple-Factor-Prime:** Step 4
multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers	**Cool Moves: Column Methods:** **Multiplication:** Steps 4 - 7
multiply and divide numbers mentally drawing upon known facts	**Basic Skills: Calculation:** **Multiplication:** Step 15 **Division:** Steps 24 - 27

Curriculum Statement	Big Maths Location
divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context	**Cool Moves: Column Methods: Division:** Step 7
multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	**Basic Skills: It's Nothing New: Multiplying by 10 Dividing by 10**
recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	**Basic Skills: It's Nothing New: Multiple-Factor-Prime:** Step 3
solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	**Basic Skills: Calculation**
solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	**Real Life Maths** **Basic Skills: Calculation: Multiplication Division** **Wider Maths: Fractions: Fractions: Ratio:** Steps 5 - 7

Number - fractions (including decimals and percentages)

Curriculum Statement	Big Maths Location
compare and order fractions whose denominators are all multiples of the same number	**Wider Maths: Fractions: Fractions: Calculation:** Step 6
identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	**Wider Maths: Fractions: Fractions: Calculation:** Step 8
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	**Wider Maths: Fractions: Fractions: Calculation:** Steps 13, 14

Curriculum Statement	Big Maths Location
add and subtract fractions with the same denominator and denominators that are multiples of the same number	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 7
multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	**Wider Maths: Fractions:** **Fractions: Calculation:** Steps 15, 16
read and write decimal numbers as fractions, for example, 0.71 = 71/100	**Wider Maths: Fractions:** **Fractions: Counting:** Step 16
recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	**Wider Maths: Fractions:** **Fractions: Counting:** Step 19 **Basic Skills: Counting:** **Mastery of Numbers:** Step 8
round decimals with two decimal places to the nearest whole number and to one decimal place	**Basic Skills: Counting:** **Mastery of Numbers:** Step 7
read, write, order and compare numbers with up to three decimal places	**Basic Skills: Counting:** **Mastery of Numbers:** Step 8
solve problems involving number up to three decimal places	**Real Life Maths** **Basic Skills: Calculation**
recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	**Wider Maths: Fractions:** **Fractions: Counting:** Step 20 **Percentage:** Step 1
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	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 17 **Fractions: Learn Its:** Step 10 **Percentages:** Steps 2, 3

Measurement

Curriculum Statement	Big Maths Location
convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	**Wider Maths: Amounts:** **Amounts of Distance:** Step 27 **Amounts of Mass:** Step 17 **Amounts of Space:** Step 23
understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	**Wider Maths: Amounts:** **Amounts of Distance:** Step 28 **Amounts of Mass:** Step 18 **Amounts of Space:** Step 24
measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	**Wider Maths: Amounts:** **Amounts of Distance:** Step 25
calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	**Wider Maths: Amounts:** **Amounts of Space:** Step 22
estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	**Wider Maths: Amounts:** **Amounts of Space:** Step 25
solve problems involving converting between units of time	**Wider Maths: Amounts:** **Amounts of Time:** Step 31
use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	**Real Life Maths**

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
identify 3-D shapes, including cubes and other cuboids, from 2-D representations	**Wider Maths: Shape:** **3D Shape:** Step 23
know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	**Wider Maths: Amounts:** **Amounts of Turn:** Steps 18, 22

Curriculum Statement	Big Maths Location
draw given angles, and measure them in degrees (º)	**Wider Maths: Amounts:** **Amounts of Turn:** Steps 23 - 29
identify: • angles at a point and one whole turn (total 360º) • angles at a point on a straight line and 1/2 a turn (total 180º) • other multiples of 90º	**Wider Maths: Amounts:** **Amounts of Turn:** Step 21
use the properties of rectangles to deduce related facts and find missing lengths and angles	**Wider Maths: Shape:** **2D Shape:** Step 24 **Wider Maths: Amounts:** **Amounts of Turn:** Step 30
distinguish between regular and irregular polygons based on reasoning about equal sides and angles	**Wider Maths: Shape:** **2D Shape:** Step 24

Geometry - position and direction

Curriculum Statement	Big Maths Location
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	**Wider Maths: Shape:** **Position & Direction:** Step 29

Statistics

Curriculum Statement	Big Maths Location
solve comparison, sum and difference problems using information presented in a line graph	**Wider Maths: Explaining Data:** **Line Graphs:** Step 6
complete, read and interpret information in tables, including timetables	**Wider Maths: Explaining Data:** **Diagrams & Tables:** Step 25

Year 6
Number - number and place value

Curriculum Statement	Big Maths Location
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	**Basic Skills: Counting:** **Reading Numbers:** Step 10 **Mastery of Numbers:** Step 9
round any whole number to a required degree of accuracy	**Basic Skills: Counting:** **Mastery of Numbers:** Step 9
use negative numbers in context, and calculate intervals across zero	**Basic Skills: Counting:** **Counting Along Scales:** Step 7
solve number problems and practical problems that involve all of the above	**Basic Skills: Calculation:** **Addition** **Subtraction** **Counting Along Scales** **Real Life Maths**

Number - addition, subtraction, multiplication & division

Curriculum Statement	Big Maths Location
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication	**Cool Moves: Column Methods:** **Multiplication:** Step 7
divide numbers up to 4 digits by a two-digit whole number using the efficient written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	**Cool Moves: Column Methods:** **Division:** Step 9
perform mental calculations, including with mixed operations and large numbers	**Basic Skills: Calculation:** **Addition** **Subtraction**
identify common factors, common multiples and prime numbers	**Basic Skills: It's Nothing New:** **Multiple-Factor-Prime:** Steps 1 - 4
use their knowledge of the order of operations to carry out calculations involving the four operations	**Dangerous Maths:** **Algebra:** Step 18

Curriculum Statement	Big Maths Location
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	**Basic Skills: Calculation:** **Addition** **Subtraction** **Cool Moves: Column Methods:** **Addition** **Subtraction**
solve problems involving addition, subtraction, multiplication and division	**Basic Skills: Calculation:** **Addition** **Subtraction** **Real Life Maths**
use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy	**Basic Skills: Counting:** **Mastery of Numbers**

Number - fractions (including decimals and percentages)

Curriculum Statement	Big Maths Location
use common factors to simplify fractions; use common multiples to express fractions in the same denomination	**Wider Maths: Fractions:** **Fractions: Calculation:** Steps 18, 19
compare and order fractions, including fractions > 1	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 21
add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 22
multiply simple pairs of proper fractions, writing the answer in its simplest form, for example, 1/4 × 1/2 = 1/8	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 20
divide proper fractions by whole numbers, for example, 1/3 ÷ 2 = 1/6	**Wider Maths: Fractions:** **Fractions: Calculation:** Step 23
identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	**Basic Skills: Counting:** **Place Value:** Step 5 **Mastery of Numbers:** Step 8

Year 6

Curriculum Statement	Big Maths Location
multiply one-digit numbers with up to two decimal places by whole numbers	**Basic Skills: Calculation: Multiplication:** Step 18
use written division methods in cases where the answer has up to two decimal places	**Cool Moves: Column Methods: Division:** Step 10
solve problems which require answers to be rounded to specified degrees of accuracy	**Basic Skills: Counting: Mastery of Numbers:** Steps 6 - 10
recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	**Wider Maths: Fractions: Fractions: Calculation:** Step 17

Ratio and proportion

Curriculum Statement	Big Maths Location
solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	**Wider Maths: Fractions: Ratio:** Step 8
solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	**Wider Maths: Fractions: Percentages:** Step 6
solve problems involving similar shapes where the scale factor is known or can be found	**Wider Maths: Fractions: Ratio:** Step 9
solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	**Wider Maths: Fractions: Ratio:** Step 8

Algebra

Curriculum Statement	Big Maths Location
use simple formulae	**Wider Maths: Amounts: Amounts of Space:** Steps 31, 32

Curriculum Statement	Big Maths Location
generate and describe linear number sequences	**Dangerous Maths:** **Pattern Spotting:** Step 19
express missing number problems algebraically	**Dangerous Maths:** **Algebra:** Step 17
find pairs of numbers that satisfy an equation with two unknowns	**Dangerous Maths:** **Algebra:** Step 20
enumerate possibilities of combinations of two variables	**Dangerous Maths:** **Algebra:** Step 21

Measurement

Curriculum Statement	Big Maths Location
solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	**Wider Maths: Amounts:** **Amounts of Distance:** Step 29 **Amounts of Mass:** Step 19 **Amounts of Space:** Step 27
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 three decimal places	**Wider Maths: Amounts:** **Amounts of Distance:** Step 29 **Amounts of Mass:** Step 19 **Amounts of Space:** Step 27 **Amounts of Time:** Step 31
convert between miles and kilometres	**Wider Maths: Amounts:** **Amounts of Distance:** Step 28 **Wider Maths: Explaining Data:** **Line Graphs:** Step 7 **Wider Maths: Fractions:** **Ratio:** Step 12
recognise that shapes with the same areas can have different perimeters and vice versa	**Wider Maths: Amounts:** **Amounts of Space:** Step 29
recognise when it is possible to use formulae for area and volume of shapes	**Wider Maths: Amounts:** **Amounts of Space:** Steps 30, 31
calculate the area of parallelograms and triangles	**Wider Maths: Amounts:** **Amounts of Space:** Steps 30, 31

Curriculum Statement	Big Maths Location
calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].	**Wider Maths: Amounts:** **Amounts of Space:** Step 28

Geometry - properties of shapes

Curriculum Statement	Big Maths Location
draw 2-D shapes using given dimensions and angles	**Wider Maths: Shape:** **Explore & Draw:** Step 28
recognise, describe and build simple 3-D shapes, including making nets	**Wider Maths: Shape:** **3D Shape:** Step 26
compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	**Wider Maths: Shape:** **2D Shape:** Step 27 **3D Shape:** Step 27
illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	**Wider Maths: Amounts:** **Amounts of Distance:** Steps 30, 31, 32
recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	**Wider Maths: Amounts:** **Amounts of Turn:** Step 34

Geometry – position and direction

Curriculum Statement	Big Maths Location
describe positions on the full coordinate grid (all four quadrants)	**Wider Maths: Shape:** **Position & Direction:** Step 31
draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	**Wider Maths: Shape:** **Position & Direction:** Steps 33, 34

Statistics

Curriculum Statement	Big Maths Location
interpret and construct pie charts and line graphs and use these to solve problems	**Wider Maths: Explaining Data:** **Pie Charts:** Steps 9, 10, 11 **Line Graphs**: Step 8
calculate and interpret the mean as an average	**Wider Maths: Explaining Data:** **Averages:** Step 6

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