Number – Number and place value Unit 1 Number – Addition and subtraction Geometry – Properties of shape		
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Number and place value	Week 1	
find 1000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 identify, represent and estimate numbers using different representations	 Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Identify, represent and estimate numbers using different representations 	1
	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Identify, represent and estimate numbers using different representations	2
	Order and compare numbers beyond 1000	3
	Find 1000 more or less than a given number	4
Number - Addition and subtraction	Week 2	
practise mental methods with increasingly large numbers to aid fluency *	Use mental methods for addition	1
	Use mental methods for subtraction	2
 solve addition and subtraction two-step problems in contexts, deciding which operations and 	Solve one-step problems in contexts	3
methods to use and why	Solve two-step problems in contexts	4
Geometry - Properties of shape	Week 3	
• identify lines of symmetry in 2-D shapes	Identify lines of symmetry in 2-D shapes	1
presented in different orientations	Reflect 2-D shapes along a line of symmetry	2
complete a simple symmetric figure with respect to a specific line of symmetry	Complete simple symmetric figures with respect to a specific line of symmetry	3
	Make patterns by repeatedly reflecting shapes in vertical lines of symmetry	4

Number – Multiplication and division, inclu Unit 2 Number – Fractions Geometry – Position and direction	ding Number and place value	
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
recall multiplication and division facts for multiplication tables up to 12 × 12 recognise and use factor pairs and commutativity in mental calculations	 Count in multiples of 9 Recall multiplication and division facts for the 9 multiplication table Understand that multiplication can be done in any order 	1
Number – Number and place value • count in multiples of 6 and 9	 Recall multiplication and division facts for the 9 multiplication table Understand that multiplication can be done in any order 	2
count in multiples of a and a	 Count in multiples of 6 Recall multiplication and division facts for the 6 multiplication table Understand that multiplication can be done in any order 	3
	 Recall multiplication and division facts for the 6 multiplication table Understand that multiplication can be done in any order 	4
Number – Fractions	Week 2	
recognise and show, using diagrams, families of common equivalent fractions	 Recognise and show, using diagrams, families of common equivalent fractions 	1
 understand the relation between non-unit fractions and multiplication and division of quantities * 	 Recognise and show, using diagrams, families of common equivalent fractions 	2
	 Understand the relation between non-unit fractions and multiplication and division of quantities 	3
	 Understand the relation between non-unit fractions and multiplication and division of quantities 	4
Geometry – Position and direction	Week 3	
describe positions on a 2-D grid as coordinates in the first quadrant	 Recognise where a shape will be after translations of a given unit to the left/right and up/down on square and triangular grids 	1
describe movements between positions as translations of a given unit to the left/right and	 Use coordinates to describe the position of a point on a grid in the first quadrant 	2
 up/down plot specified points and draw sides to complete a given polygon 	Plot specified points on a coordinate grid in the first quadrant	3
	Recognise where a shape will be after translations of a given unit to the left/right and up/down on a coordinate grid in the first quadrant	4

^{*} Notes and guidance (non-statutory)



anning Number - Addition and subtraction

Unit 3 Number – Decimals Measurement (mass)	giiiiiig	
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number – Addition and subtraction	Week 1	
practise mental methods with increasingly large numbers to aid fluency * add numbers with up to 4 digits using the formal written method of columnar addition where appropriate estimate answers to a calculation	Use mental methods for addition Add numbers with up to 4 digits using the formal written method of columnar addition Estimate the answer to a calculation	1 2
 solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	 Add numbers with up to 4 digits using the formal written method of columnar addition Estimate the answer to a calculation 	3
	Solve two-step problems in contexts, deciding which operations and methods to use and why	4
Number – Decimals	Week 2	
extend understanding of the number system and decimal place value to tenths * recognise and write decimal equivalents of any	Understand the place value of tenths Recognise and write decimal equivalents of any number of tenths	1
number of tenths round decimals with one decimal place to the nearest whole number	Compare numbers with one decimal place	2
compare numbers with the same number of decimal places up to two	Round decimals with one decimal place to the nearest whole	3
decimal places - solve simple measure problems involving decimals to two decimal places	piaco	4
Measurement (mass)	Week 3	
convert between different units of measure estimate, compare and calculate different measures	 Read and write the relationships between metric units for mass; use decimal notation to tenths to record mass 	1
	Use multiplication to convert from larger to smaller units of	2
	Estimate and compare mass; round numbers on scales to the nearest whole number	3
	Calculate different measures of mass using decimals to one place	4

Unit 4 Number – Multiplication and division, inclu Measurement (time)	ding Number and place value	
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
 recall multiplication and division facts for 	Recall square numbers to 12 x 12 and the related division facts	1
 multiplication tables up to 12 × 12 use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations multiply two-digit numbers by a one-digit number 	Count in multiples of 7 Recall multiplication and division facts for the 0, 1 and 7 multiplication tables Understand that multiplication can be done in any order	2
	 Recall multiplication and division facts for the 11 and 12 multiplication tables Recognise and find factors of numbers to multiples up to 12 x 12 	3
using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one-digit	Solve problems involving multiplication and division facts of all multiplication tables to 12 x 12 and reason mathematically	4
Number – Number and place value		
 count in multiples of 7 		
	Week 2	
	Use partitioning to calculate TO x O	1
	Estimate and check the answer to a calculation	
	Use partitioning and the grid method to calculate TO x O	2
	Estimate and check the answer to a calculation	
	Use the expanded written method to calculate TO x O Tationate and all other properties and all of the second of the se	3
	 Estimate and check the answer to a calculation Use place value, including x0, x1, x10 to derive multiplication facts; multiply together three numbers 	4
Measurement (time)	Week 3	
convert between different units of measure read, write and convert time between analogue and digital 12- and 24-hour clocks	Convert between different units of time	1
	Read, write and convert time between analogue and digital 12-hour clocks	2
solve problems involving converting from hours to minutes; minutes to seconds; years	• Read, write and convert time between analogue and digital 24-hour clocks	3
to months; weeks to days	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	4

^{*} Notes and guidance (non-statutory)

Number – Number and place value Unit 5 Number – Addition and subtraction Geometry – Properties of shape		
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Number and place value	Week 1	
recognise the place value of each digit in a four-digit	 Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Order and compare numbers beyond 1000 	1
order and compare numbers beyond 1000	Solve number and practical problems that involve place value	2
 round any number to the nearest 10 or 100 solve number and practical problems that involve all of the 	Round any number to the nearest 10 or 100	3
above and with increasingly large positive numbers	Count backwards through zero to include negative numbers	4
Number - Addition and subtraction	Week 2	
• practise mental methods with increasingly large numbers to	Use mental methods for subtraction	1
aid fluency * • subtract numbers with up to 4 digits using the formal written method of columnar subtraction where appropriate	Subtract numbers with up to 4 digits using the formal written method of columnar subtraction (decomposition) Estimate and use inverse operations to check answers to a calculation	2
estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Subtract numbers with up to 4 digits using the formal written method of columnar subtraction (decomposition) Estimate and use inverse operations to check answers to a calculation	3
	Solve two-step problems in contexts, deciding which operations and methods to use and why	4
Geometry - Properties of shape	Week 3	
identify acute and obtuse angles and compare and	Identify acute and obtuse angles	1
order angles up to two right angles by size	Identify acute and obtuse angles in 2-D shapes	2
	Compare and order angles up to two right angles by size	3
	Decide if a polygon is regular or irregular by comparing lengths and angles	4

Number – Multiplication and division, includin Unit 6 Number – Fractions Measurement (length)	ng Number and place value	
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
multiply two-digit numbers by a one-digit number using formal written layout solve problems involving multiplying and adding,	Count in multiples of 25, 100 and 1000 Use the formal written method to calculate TO x O Estimate and check the answer to a calculation	2
including using the distributive law to multiply two-digit numbers by one-digit, integer scaling problems and harder correspondence problems such as n objects	Use the most efficient method to calculate TO x O Estimate and check the answer to a calculation Solve problems and reason mathematically	3
are connected to m objects	Solve problems and reason mathematically	4
Number – Number and place value		
• count in multiples 25 and 1000	West 0	
Number – Fractions	Week 2	
extend the use of the number line to connect fractions, numbers and measures *	Use the number line to connect fractions and numbers	1
understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths * count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten 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	 Count up and down in hundredths Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten 	2
	Count up and down in hundredths Use multiplication and division to find non-unit tenths and hundredths	3
	Solve fraction problems to calculate quantities including non-unit fractions	4
Measurement (length)	Week 3	
convert between different units of measure [for example, kilometre to metre] estimate, compare and calculate different measures	 Read and write the relationships between metric units for length (kilometres and metres); use decimal notation to tenths to record length Use multiplication to convert from larger to smaller units of length 	1
	 Read and write the relationships between metric units for length (metres, centimetres and millimetres); use decimal notation to tenths to record length Use multiplication to convert from larger to smaller units of length 	2
	Estimate and compare length; round numbers on measuring tapes to the nearest whole number	3
	Calculate different measures of length using decimals to one place	4

^{*} Notes and guidance (non-statutory)



Year 4 Mathematics Planning

Unit 7 Number – Addition and subtraction Statistics		
	Lesson objectives Pupils will be taught to:	Lesson
Number - Addition and subtraction	Week 1	
practise mental methods with increasingly large numbers to aid fluency * add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Use mental methods for addition Use mental methods for subtraction Solve two-step problems in contexts, deciding which operations and methods to use and why Add numbers with up to 4 digits using the formal written method of columnar addition Estimate and use inverse operations to check answers to a calculation Week 2 Add numbers with up to 4 digits using the formal written method of columnar addition	1 2 3 4
	 Estimate and use inverse operations to check answers to a calculation Subtract numbers with up to 4 digits using the formal written method of columnar subtraction (decomposition) Estimate and use inverse operations to check answers to a calculation 	2
	Subtract numbers with up to 4 digits using the formal written method of columnar subtraction (decomposition) Estimate and use inverse operations to check answers to a calculation	3
	 Solve two-step problems in contexts, deciding which operations and methods to use and why 	4
Statistics	Week 3	
interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time	Interpret and present discrete data using appropriate graphical methods, including scaled bar charts	1
graphs • solve comparison, sum and difference problems using	 Interpret and present continuous data using appropriate graphical methods, using simple time graphs 	2
information presented in bar charts, pictograms, tables and other graphs	Use information presented in scaled pictograms, bar charts and tables to solve problems	3
	Use information presented in simple time graphs to solve problems	4

Number – Multiplication and division Unit 8 Number – Decimals Measurement (perimeter and area)		
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
multiply three-digit numbers by a one-digit number using formal written layout	Use partitioning to calculate HTO x O Estimate and check the answer to a calculation	1
 solve problems involving multiplying and adding, including using the distributive law to multiply two- digit numbers by one-digit, integer scaling problems and harder 	Use partitioning and the grid method to calculate HTO x O Estimate and check the answer to a calculation	2
correspondence problems such as n objects are connected to m objects	Use the expanded written method to calculate HTO x O Estimate and check the answer to a calculation	3
	Solve problems and reason mathematically	4
Number – Decimals	Week 2	
extend understanding of the number system and decimal place value to hundredths * recognise and write decimal equivalents of any number of hundredths 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 compare numbers with the same number of decimal places up to two decimal places	Understand the place value of hundredths Recognise and write decimal equivalents of any number of hundredths	1
	Compare numbers with two decimal places	2
	Divide one-digit and two-digit numbers by 10	3
	Divide one-digit and two-digit numbers by 100	4
Measurement (perimeter and area)	Week 3	
 measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares 	 Measure and calculate the perimeter of rectilinear figures in cm and m, and use the rule P = 2 (a + b) to calculate the perimeter (P) where a and b are the dimensions of the sides in the same unit 	1
relate area to arrays and multiplication *	Find the area of rectilinear shapes by counting squares	2
	Find the area of rectilinear and other simple 2-D shapes by counting squares	3

Relate area to arrays and multiplication
 4

Number – Number and place value Unit 9 Number – Addition and subtraction, inc Geometry – Properties of shape	luding Measurement (money)	
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number – Number and place value count backwards through zero to include negative numbers recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Order and compare numbers beyond 1000 Solve number and practical problems that involve place value	1
order and compare numbers beyond 1000 round any number to the nearest 10, 100 or 1000	Round any number to the nearest 10, 100 or 1000	2
solve number and practical problems that involve all of the above and with increasingly large positive numbers read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	Count backwards through zero to include negative numbers Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	3 4
Number - Addition and subtraction	Week 2	
 add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	Add numbers with up to 4 digits using the formal written method of columnar addition Estimate and use inverse operations to check answers to a calculation	1
	Subtract numbers with up to 4 digits using the formal written method of columnar subtraction (decomposition) Estimate and use inverse operations to check answers to a calculation	2
	Solve two-step problems in contexts, deciding which operations and methods to use and why	3
Measurement (money) • estimate, compare and calculate different measures, including money in pounds and pence	Estimate, compare and calculate with money in pounds and pence	4
Geometry - Properties of shape	Week 3	
compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Compare and classify triangles based on their properties and sizes	1
	Compare and classify parallelograms and rhombuses based on their properties and sizes	2
	Compare and classify trapeziums and kites based on their properties and sizes	3
	Compare and classify quadrilaterals based on their properties and sizes * Notes and quidance (nor	4

Notes and guidance (non-statutory)
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Unit 10 Number – Multiplication and division Number – Fractions Measurement (volume and capacity)		
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
multiply three-digit numbers by a one-digit number using formal written layout	 Use the formal written method to calculate HTO x O Estimate and check the answer to a calculation 	1
solve problems involving multiplying and adding, including using the distributive law to multiply two-	Use the formal written method to calculate HTO x O Estimate and check the answer to a calculation	2
digit numbers by one-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	Use the most efficient method to calculate HTO x O Estimate and check the answer to a calculation	3
	Solve problems and reason mathematically	4
Number – Fractions	Week 2	
use factors and multiples to recognise equivalent fractions and simplify where appropriate [for	Use factors and multiples to recognise equivalent fractions and simplify where appropriate	1
example, $\frac{6}{9} = \frac{2}{3}$ or $\frac{1}{4} = \frac{2}{8}$] *	Add fractions with the same denominator	2
• recognise and show, using diagrams, families of	Subtract fractions with the same denominator	3
add and subtract fractions with the same denominator solve simple measure and money problems involving fractions	Solve simple measure and money problems involving fractions	4
Measurement (volume & capacity)	Week 3	
convert between different units of measure estimate, compare and calculate different	Read and write the relationship between metric units for capacity; use decimal notation to hundredths to record capacity	1
measures	Use multiplication to convert from larger to smaller units of capacity	2
	Estimate and compare capacity; round numbers to the nearest whole number	3
	Calculate different measures of capacity using decimals to two places	4



Number - Addition and subtraction, including Measurement (money) Planning Unit 11 Number - Decimals Geometry - Position and direction National Curriculum attainment targets Lesson objectives Lesson Pupils should be taught to: Pupils will be taught to: Week 1 Number - Addition and subtraction add and subtract numbers with up to 4 digits using · Add numbers with up to 4 digits using the formal written method of the formal written methods of columnar addition columnar addition and subtraction where appropriate · Estimate and use inverse operations to check answers to a calculation estimate and use inverse operations to check • Subtract numbers with up to 4 digits using the formal written method 2 answers to a calculation of columnar subtraction (decomposition) solve addition and subtraction two-step problems in contexts, deciding which operations and methods to · Estimate and use inverse operations to check answers to a calculation use and why • Estimate, compare and calculate with money in pounds and pence 3 Measurement (money) • Solve problems in contexts, deciding which operations and methods 4 estimate, compare and calculate different measures, including money in pounds and pence to use and why Number – Decimals Week 2 extend understanding of the number system and decimal place value to tenths and then hundredths* • Recognise and write decimal equivalents of any number of tenths and hundredths recognise and write decimal equivalents of any number of tenths or hundredths · Recognise and write decimal equivalents to Compare decimals with up to two places • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ 2 · Round decimals with one decimal place to the nearest whole number find the effect of dividing a one- or two-digit number by • Divide one-digit and two-digit numbers by 10 and 100 3 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Solve simple measure and money problems involving decimals to 4 round decimals with one decimal place to the nearest two places whole number compare numbers with the same number of decimal places up to two decimal places solve simple measure and money problems involving decimals to two decimal places Geometry - Position and direction describe positions on a 2-D grid as coordinates in the • Describe the position of a point on a grid as coordinates in the first quadrant first quadrant • Plot specified points and draw sides to complete a given polygon 2 plot specified points and draw sides to complete a given Describe the position of a point on a grid as coordinates in the first 3 polygon • Plot specified points and draw sides to complete a given polygon; 4 make use of ICT tools

* Notes and guidance (non-statutory)

Unit 12 Number – Multiplication and division Statistics		
National Curriculum attainment targets Pupils should be taught to:	Lesson objectives Pupils will be taught to:	Lesson
Number - Multiplication and division	Week 1	
use place value, known and derived facts to divide mentally, including dividing by 1 practise to become fluent in the formal written method of short division with exact answers *	 Use place value, known and derived facts to divide mentally, including dividing by 1 Use mental methods to partition and calculate TO ÷ O Estimate and check the answer to a calculation 	1
solve problems involving multiplying and adding, including using the distributive law to multiply	Use the formal written method of short division to calculate TO ÷ O Estimate and check the answer to a calculation	2
two-digit numbers by one-digit, integer scaling	Use mental methods to partition and calculate HTO ÷ O	3
problems and harder correspondence problems such as n objects are connected to m objects	Use the expanded written method to calculate HTO ÷ O Estimate and check the answer to a calculation	4
	Week 2	
	Use the formal written method of short division to calculate HTO ÷ O Estimate and check the answer to a calculation	1
	Use the formal written method of short division to calculate HTO ÷ O Estimate and check the answer to a calculation	2
	Use the most efficient method to calculate HTO ÷ O Estimate and check the answer to a calculation	3
	Solve problems and reason mathematically	4
Statistics	Week 3	
 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 	Interpret and present discrete data using appropriate graphical methods, including scaled bar charts	1
	 Interpret and present continuous data using appropriate graphical methods, using simple time graphs 	2
	Use information presented in scaled pictograms, bar charts and tables to solve problems	3
	Use information presented in simple time graphs to solve problems	4

^{*} Notes and guidance (non-statutory)