Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 1

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to count to 100 forwards and backwards, beginning with 0 or 1	To count to and across to 100 forwards and backwards, beginning with 0 or 1, or from any given number.	To confidently count to and across to 100 forwards and backwards, beginning with 0 or 1, or from any given number.
	To begin count, read and write numbers to 100 in numerals; count in multiples of twos.	To count, read and write numbers; count in multiples of twos and tens.	To confidently count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.
	When given a number, to begin to identify one more and one less.	When given a number, identify one more and one less.	When given a number, confidently identify one or more in addition to and one more less.
	To begin to identify and represent numbers using objects and pictorial representations and begin to use the language of; equal to, more than, less than (fewer), most, least.	To identify and represent numbers using objects and pictorial representations including the number line and use the language of; equal to, more than, (fewer), most, least.	To confidently identify and clearly represent numbers using objects and pictorial representations including the number line and accurately and appropriately use the language of; equal to, more than, less than (fewer), most, least.
	To begin to read and write numbers from 1 to 20 in numerals and words.	To read and write numbers from 1 to 20 in numerals and words.	To confidently and accurately read and write numbers from 1 to 20 in numerals and words.
Addition and subtraction			
NUMBER	To begin to read and write mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	To read, write and begin to interpret mathematical statements involving addition (+), subtraction (-), and equals (=) signs.	To accurately read, write and interpret mathematical statements involving addition (+), subtraction (-), and equals (=) signs.
	To begin to represent and use number bonds within 20.	To represent and use number bonds and related subtraction facts within 20	To accurately represent and use number bonds and related number facts within 20
	To begin to add and subtract one-digit and two-digit numbers to 20 accurately	To add and subtract one-digit and two-digit numbers to 20, including zero.	To confidently add and subtract one-digit and two-digit numbers to 20, including zero.
	To begin to solve one-step problems that involve addition and subtraction, suing concrete objects and pictorial representations.	To solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = - 9.	To accurately solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = - 9
Multiplication and division			
NUMBER	To begin to solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	To solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	To confidently and independently solve one-step problems involving multiplication and division, by calculating the answer using appropriate concrete objects, pictorial representations and arrays.
	Fractions		
NUMBER	To begin to recognise and find a half as one of two equal parts of an object or shape.	To recognise, find and begin to name a half as one of two equal parts of an objects, shape or quantity.	To accurately and confidently recognise, find and name a half as one of two equal parts of an object, shape or quantity.
	To begin to recognise, find and name a quarter as one of four equal parts of an object or shape.	To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	To accurately and confidently recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Measurement			
MEASUREMENT	To begin to compare and describe: • Lengths and heights (e.g. long/short, longer/shorter, tall/short) • Mass or weight (e.g. heavy/light, heavier than/lighter than)	To compare, describe and solve practical problems for: • Lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half) • Mass or weight (e.g. heavy/light, heavier than, lighter than)	To accurately compare, describe and solve practical problems for: • Lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half) • Mass or weight (e.g. heavy/light, heavier than, lighter than)
	To measure with support and begin to record the following: • Lengths and heights • Mass/weight • Capacity and volume • Time (hours, minutes)	To measure and begin to record the following; • Lengths and heights • Mass/weight • Capacity and volume • Time (hours, minutes, seconds)	To accurately and independently measure and begin to record the following; • Lengths and heights • Mass/weight • Capacity and volume • Time (hours, minutes, seconds)
	To begin to recognise and identify the value of different denominations of coins and notes.	To recognise and identify the value of different denominations of coins and notes.	To accurately recognise and identify the value of different denominations of coins and notes.
	To begin to sequence basic information in chronological order with support using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	To sequence events in chronological order with support using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	To independently and accurately sequence events in chronological order with support using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening
	To begin to recognise language relating to dates, including days of the week, weeks, months and years	To recognise and use language relating to dates, including days of the week, weeks, months and years.	To accurately recognise and use language relating to dates, including days of the week, weeks, months and years, beginning to understand the relationships between them.
	To begin to tell the time to the hour and draw the hands on a clock face to show these times with support.	To tell the time to the hour and half past and draw the hands on a clock face to show these times.	To independently tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
Properties of Shape			
GEOMETRY	To begin to recognise and 2-D shapes, including: rectangles (including squares), circles and triangles.	To recognise and name common 2-D shapes, including: rectangles (including squares), circles and triangles. To begin to recognise and name 3-D shapes, including cuboids (including cubes), pyramids and spheres.	To independently recognise and name common 2-D and 3-D shapes, including: • 2-D shapes (e.g. rectangles (including squares) circles and triangles) • 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).
Position and direction			
GEOMETRY	To begin to describe, position, directions and movements, including half and quarter turns using kinaesthetic actions.	To describe position, directions and movements, including half, quarter and three-quarter turns.	To confidently, accurately and fluently describe position, directions and movements, including half, quarter and three-quarter turns.

Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 2

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to count in steps of 2 and 5 from 0 to tens from any number, forward or backward with support.	To count in steps of 2, 3, and 5 from 0 in tens from any number, forward or backward.	To fluently count in steps of 2, 3, and 5 from 0 to tens from any number, forward or backward.
	To begin to recognise the place value of each digit in a two-digit number (tens, ones)	To recognise the place value of each digit in a two-digit number (tens, ones)	To confidently and fluently recognise the place value of each digit in a two-digit number (tens, ones)
	To identify and estimate numbers using the number line	To identify, represent and estimate numbers using the number line.	To accurately identify, represent and estimate numbers using different representations including the number line.
	To compare and order numbers from 0 up to 50: begin to use <, >, and = signs.	To compare and order numbers from 0 to 100: use <, >, and = signs	To accurately compare and order numbers from 0 to 100: use <, >, and = signs
	To identify and read numbers to at least 50 in numerals and in words.	To identify, read and write numbers to at least 100 in numerals and in words.	To confidently and accurately read and write numbers to at least 100, use <, >, and = signs.
	To use place value and number facts to begin to solve problems with support.	To use place value and number facts to begin to solve problems.	To accurately use place value and number facts to solve problems independently.
Addition and subtraction			
NUMBER	To begin to solve problems with addition and subtraction with support using concrete objects and some pictorial representations, including those involving numbers, quantities and measures beginning to apply their increasing knowledge of metal and written methods.	To solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures and to apply their increasing knowledge of metal and written methods.	To independently solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures and apply their increasing knowledge of mental and written methods in a systematic manner.
	To begin to recall and use addition and subtraction facts to 20 and derive and use related facts up to 50	To recall and use addition and subtraction facts to 20 and derive and use related facts up to 100.	To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
	To add and subtract numbers with support using concrete objects, pictorial representations including: A two-digit number and ones, A two-digit number and tens and two two-digit numbers Adding three one-digit numbers.	To add and subtract numbers using concrete objects, pictorial representations and begin to do so mentally, including: A two-digit number and ones, A two-digit number and tens and Two two-digit numbers Adding three one-digit numbers	To accurately add and subtract numbers using concrete objects, pictorial representations and mentally, including: A two-digit number and ones A two-digit number and tens and two two-digit numbers Adding three one-digit numbers.
	To begin to show that addition of two numbers can be done in any order. (commutative) and subtraction of one number from another cannot with support	To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	To confidently and accurately show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
	To begin to recognise the inverse relationship between addition and subtraction and begin to use this to check calculations.	To recognise and use the inverse relationship between addition and subtraction and use this to check calculations	To recognise and confidently use the inverse relationship between addition and subtraction and use this systematically to check

			calculations and missing number problems
Multiplication and division			
NUMBER	To begin to recall multiplication and division facts for the 2 and 10 multiplication tables and begin to recognise odd and even numbers	To recall multiplication and division facts for the 2, 5, and 10 multiplication tables, including recognising odd and even numbers.	To accurately recall and use multiplication and division facts for the 2, 5, and 10 multiplication tables, including recognising odd and even numbers.
	To begin to solve problems involving multiplication of two numbers can be done in any order (commutative) and begin to understand that division of one number by another cannot, with support.	To show that multiplication of two numbers can be done in any order (commutative) and begin to identify that division of one number by another cannot.	To accurately show that multiplication of two numbers can be done in any order (commutative) and begin to identify that division of one number by another cannot.
	To begin to solve problems involving multiplication and division, with support, using materials, arrays, repeated addition and multiplication and division facts.	To solve problems involving multiplication and division, using materials, arrays, repeated addition, some metal methods, and multiplication and division facts and begin to solve problems in contexts.	To accurately solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts and be able to record systematically.
Fractions			
NUMBER	To begin to recognise and name fractions ¼, ½, and ¾ of a length, shape, set of objects or quantity.	To recognise, name and write fractions 1/3, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity.	To accurately recognise, find name and write fractions 1/3, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity.
	To begin to write simple fractions e.g. ½ of 6 = 3.	To write simple fractions e.g. ½, of 6 = 3 and begin to recognise the equivalence of 2/4 and 1/2	To accurately write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of 2/4 and 1/2
Measurement			
MEASUREMENT	To begin to choose and use appropriate standard units to estimate and measure length/height in any directions (m/cm); mass (kg/g); temperature (^oC); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels with support.	To choose and use appropriate standard units to estimate and measure length/height in any directions (m/cm); mass (kg/g); temperature (^oC); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.	To confidently choose and use appropriate standard units to estimate and measure length/height in any directions (m/cm); mass (kg/g); temperature (^oC); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels and use and apply knowledge in word problems.
	To begin to order lengths, mass, volume/capacity and record the results.	To compare and order lengths, mass, volume/capacity and record the results	To accurately compare and order lengths, mass, volume/capacity and record the results using >, <, and =
	To begin to recognise symbols for pounds (£) and pence (p): combine simple amounts to make a particular value.	To recognise and use symbols for pounds (£) and pence (p): combine simple amounts to make a particular value.	To accurately recognise and use symbols for pounds (£) and pence (p): combine simple amounts to make a range of value.
	To begin to find different combinations of coins that equal the same amounts of money, with support.	To find different combinations of coins that equal the same amounts of money.	To accurately and confidently find different combinations of coins that equal the same amounts of money.
	To begin to solve simple problems in a practical context involving addition of money of the same unit, with support.	To solve simple problems in a practical context involving addition of money of the same unit.	To independently solve simple problems in a practical context involving addition of money of the same unit, including giving change.
	To sequence simple intervals of time with support.	To compare and sequence simple intervals of time.	To accurately compare and sequence intervals of time.
	To begin to tell the time to five minutes, including quarter past/to the hour and draw the hands on a	To tell the time to five minutes, including quarter past/to the hour and	To fluently and accurately tell the time to five minutes, including quarter past/to the hour and draw

	clock face to show these times, with support.	draw the hands on a clock face to show these times.	the hands on a clock face to show these times.
Properties of Shape			
GEOMETRY	To begin to identify 2-D shapes and some of their properties, including the number of sides.	To identify and describe the properties of 2-D shapes, including the number of sides.	To accurately identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line.
	To begin to identify 3-D shapes and some of their properties, including the number of faces.	To identify 3-D shapes and some of their properties, including the number of vertices and faces.	To accurately identify and describe 3-D shapes, including the number of edges, vertices and faces.
	To begin to identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid with support.	To begin to identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid.	To independently identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid.
	To begin to sort common 2-D and 3-D shapes and everyday objects with support.	To sort common 2-D shapes and 3-D shapes and everyday objects.	To independently compare and sort common 2-D and 3-D shapes and everyday objects.
Position and direction			
GEOMETRY	To begin to order combinations of mathematical objects in patterns with support.	To order combinations of mathematical objects in patterns.	To independently order and arrange combinations of mathematical objects in patterns
	To begin to use mathematical vocabulary to describe position, direction and movement as a turn and movement in a straight line.	To use mathematical vocabulary to describe position, direction, and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns and movement in a straight line.	To fluently use mathematical vocabulary to describe position, direction, and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns and movement in a straight line.
Statistics			
STATISTICS	To begin to construct simple pictograms, tally charts, block diagrams and simple tables with support.	To independently construct simple pictograms, tally charts, block diagrams and simple tables.	To independently interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
	To answer simple questions by counting the number of objects in each category and sorting the categories by quantity with support.	To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	To fluently and confidently ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.
	To answer questions about totalling categorical data.	To answer questions about totalling and comparing categorical data.	To confidently ask and answer questions about totalling and comparing categorical data.

Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 3

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to count from 0 in multiples of 4, 8, 50 and 100 with support. To begin to find 10 or 100 more or less than a given number with support.	To count from 0 in multiples of 4, 8, 50 and 100 with support. To begin to find 10 or 100 more or less than a given number.	To accurately count from 0 in multiples of 4, 8, 50 and 100 independently. To accurately find 10 or 100 more or less than a given number with support
	To start to recognise the place value of each digit in a three-digit number (hundreds, tens, ones) with support.	To recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	To independently recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
	To make simple comparisons of numbers up to 1000. To order numbers up to 1000 with support	To compare and order numbers up to 1000.	To evaluate the properties of numbers up to 1000. To order numbers up to 1000 with support.
	To identify, represent and estimate numbers using different representations with support.	To identify represent and estimate numbers using different representations.	To confidently identify, represent and estimate numbers using different representations and evaluate the different representations.
	To read and write numbers up to 1000 in numerals and in words with support.	To read and write numbers up to 1000 in numerals and in words.	To fluently read and write numbers up to 1000 in numerals and in words.
	To solve simple number problems and practical problems involving these ideas with support.	To solve number problems and practical problems involving these ideas independently.	To accurately solve number problems and practical problems involving these ideas.
Addition and subtraction			
NUMBER	To add and subtract numbers mentally, including; a three-digit number and ones, a three-digit number and tens with support.	To add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds independently.	To accurately add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds.
	To add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction with support.	To independently add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	To accurately use a variety of different formal written methods of columnar addition and subtraction. To evaluate and compare different written methods which allow them to add and subtract numbers with up to three digits.
	To estimate the answer to a simple calculation and use inverse operations to check answers with support.	To independently estimate the answer to a simple calculation and use inverse operations to check answers.	To accurately estimate the answer to a simple calculation and use inverse operations to check answers
	To solve single problems, including missing number problems, using number facts, place value, and more e complex, addition and subtraction with support.	To solve problems, including missing number problems, using number facts, place value, and more e complex, addition and subtraction independently.	To accurately solve problems, including missing number problems, using number facts, place value, and more e complex, addition and subtraction.

Multiplication and division			
NUMBER	To recall and use multiplication and division facts for the 3, 4, and 8 multiplication tables with support.	To independently recall and use multiplication and division facts for the 3, 4, and 8 multiplication tables.	To accurately recall and use multiplication and division facts for the 3, 4, and 8 multiplication tables.
	To write and calculate mathematical statements for simple 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 with support.	To independently write and calculate mathematical statements for simple 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.	To accurately write and calculate mathematical statements for simple 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 methods with support.
	To solve simple 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 with support.	To 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 independently.	To accurately 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.
Fractions			
NUMBER	To count up and down; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 with support.	To independently count in 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.	To accurately 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.
	To recognise, find and write simple fractions of discrete set of objects: unit fractions and non-unit fractions with small denominators with support.	To independently recognise, find and write simple fractions of discrete set of objects: unit fractions and non-unit fractions with small denominators	To accurately recognise, find and write simple fractions of discrete set of objects: unit fractions and non-unit fractions with small denominators.
	To recognise and use simple fractions as numbers: unit fractions and non-unit fractions with small denominations with support.	To independently recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	To accurately recognise and use simple fractions as numbers: unit fractions and non-unit fractions with small denominators.
	To recognise and show, using diagrams, simple equivalent fractions with small denominators with support.	To independently recognise and show, using diagrams, equivalent fractions with small denominators.	To accurately recognise and show, using diagrams, equivalent fractions with small denominators. To evaluate these pictorial representations.
	To add and subtract simple fractions with the same denominator within one whole (e.g. 5/7, + 1/7 = 6/7 with support.	To independently add and subtract fractions with the same denominator within one whole (e.g. 5/7+1/7 =6/7)	To accurately add and subtract with the same denominator within one whole (e.g. 5/7+1/7=6/7)
	To compare and order simple unit fractions, and fractions with the same denominators with support.	To independently compare and order unit fractions with the same denominators.	To accurately compare and order simple unit fractions, and fractions with the same denominators.
	To solve simple problems that involve all of the above with support.	To independently solve problems that involve all of the above.	To accurately solve problems that involve all the above.

Measurement			
MEASURMENT	To measure, compare, add and subtract: simple lengths (m/cm/mm): mass (kg/g): volume/capacity (l/ml) with support.	To independently measure, compare, add and subtract: simple lengths (m/cm/mm): mass (kg/g): volume/capacity (l/ml)	To accurately measure, compare, add and subtract: simple lengths (m/cm/mm): mass (kg/g): volume/capacity (l/ml)
	To measure the perimeter of simple 2-D shapes with support.	To independently measure the perimeter of simple 2-D shapes	To measure the perimeter of 2-D shapes.
	To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 hour and 24-hour clocks with support.	To independently tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 hour and 24-hour clocks.	To accurately tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 hour and 24-hour clocks.
	To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight with support.	To independently estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	To accurately estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.
	To know the numbers of seconds in a minute and the number of days in each month, year, and leap year with support.	To independently know the numbers of seconds in a minute and the number of days in each month, year, and leap year.	To accurately know the numbers of seconds in a minute and the number of days in each month, year, and leap year.
	To compare durations of events, for example to calculate the time taken by particular events or tasks with support.	To independently compare durations of events, for example to calculate the time taken by particular events or tasks.	To compare durations of events, for example to calculate the time taken by particular events or tasks.
Properties of Shape			
GEOMETRY	To draw simple 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them with support.	To independently draw simple 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	To accurately draw simple 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.
	To recognise that angles are a property of shape or a description of a turn with support.	To independently recognise that angles are a property of shape or a description of a turn.	To accurately recognise that angles are a property of shape or a description of a turn.
	To identify right angles 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 with support.	To independently identify right angles 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.	To confidently identify right angles 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.
	To identify horizontal and vertical lines and pairs of perpendicular and parallel lines with support.	To independently identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	To confidently identify horizontal and vertical lines and pairs of perpendicular and parallel lines with support.
Statistics			
STATISTICS	To interpret and present simple data using bar charts, pictograms and tables with support.	To independently interpret and present simple data using bar charts, pictograms and tables.	To compare, interpret and present simple data using bar charts, pictograms and tables with support.
	With support, solve simple one-step and two-step questions such as "How many more?" and "How many fewer?" using information presented in scaled bar charts and pictogram and tables.	To independently solve simple one-step and two-step questions such as "How many more?" and "How many fewer?" using information presented in scaled bar charts and pictogram and tables.	To accurately solve simple one-step and two-step questions such as "How many more?" and "How many fewer?" using information presented in scaled bar charts and pictogram and tables.

Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 4

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to count in multiples of 25 and 1000 with support	To begin to count in multiples of 6,7,9,25 and 1000	To count in multiples of 6,7,9,25 and 1000.
	To find 1000 more than a given number	To find 1000 more or less than a given number.	To accurately find 1000 more or less than a given number.
	To begin to count backwards through zero to include some negative numbers with support.	To count backwards through zero to include negative numbers.	To fluently count backwards through zero to include negative numbers.
	To begin to recognise the place value of each digit in a three-digit number (hundreds, tens, and ones)	To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	To recognise and compare the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
	To order numbers beyond 1000	To order and compare numbers beyond 1000	To justify, order and compare numbers beyond 1000.
	To begin to identify and estimate numbers using different representations with support	To identify, represent and estimate numbers using different representations.	To compare, identify, represent and estimate numbers using different representations
	To round any number to the nearest 10 and 100 with support.	To round any number to the nearest 10, 100 or 1000.	To fluently round any number to the nearest 10, 100 or 1000.
	To begin to solve number and practical problems that involves all of the above with support.	To solve number and practical problems that involve all of the above and with increasingly large positive numbers.	To independently solve number and practical problems that involve all of the above and with increasingly large positive numbers.
	To begin to read Roman numerals to 100. (1 to C)	To begin to read Roman numerals to 100 (1 to C) and know that over time, the numeral system changed to include the concept of zero	To read Roman numerals to 100 (1 to C) and know that over time, the numeral system changed to include the concept of zero
Addition and subtraction			
NUMBER	To begin to add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction with support.	To add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	To independently add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
	To begin to estimate to check answers to a calculation.	To begin to estimate and use inverse operations to check answers to calculations.	To estimate and use inverse operations to check answers to a calculation.
	To begin to solve addition and subtraction two-step problems in contexts.	To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use.	To independently solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Multiplication and division			
NUMBER	To begin to recall multiplication and division facts for multiplication tables up to 12 x 12.	To recall multiplication and division facts for multiplication tables up to 12 x 12.	To fluently recall multiplication and division facts for multiplication tables up to 12 x 12.
	To begin to use place value, known and derived facts to multiply and divide mentally.	To use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1: dividing by 1.	To 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.
	To begin to recognise and use factor pairs in mental calculations.	To recognise and use factor pairs and commutativity in mental calculations.	To independently recognise and use factor pairs and commutativity in mental calculations.

	To begin to multiply two-digit numbers by one-digit number using formal written layout with support.	To multiply two-digit numbers by one-digit number using formal written layout.	To multiply two-digit and three-digit numbers by one-digit number using formal written layout.
	To begin to solve problems, with support, involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit.	To solve problems, involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit.	To independently solve problems, involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
Fractions			
NUMBER	To begin to recognise using diagrams, families of common equivalent fractions.	To recognise and begin to show, using diagrams, families of common equivalent fractions.	To recognise and show, using diagrams, families of common equivalent fractions.
	To count up and down in hundredths with support.	To count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by tens.	To fluently count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by tens.
	To begin to solve problems involving fractions to calculate quantities, and fractions to divide quantities, with support.	To solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities.	To 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.
	To add and subtract fractions with the same denominator, with support.	To add and subtract fractions with the same denominator.	To independently add and subtract fractions with the same denominator.
	To begin to recognise decimal equivalents of any number of tenths.	To recognise and write decimal equivalents of any number of tenths.	To recognise and decimal equivalents of any number of tenths or hundredths.
	To begin to recognise decimal equivalents to 1/4, ½, ¾.	To recognise decimal equivalents to 1/4, ½, ¾.	To recognise and write decimal equivalents to 1/4, ½, ¾.
	To find the effect of dividing a one, or two-digit number by 10 and 100 with support.	To find the effect of dividing a one, or two-digit number by 10 and 100.	To 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 units, tenths and hundredth.
	To begin to round decimals with one decimal place to the nearest whole number with support.	To round decimals with one decimal place to the nearest whole number.	To independently round decimals with one decimal place to the nearest whole number.
	To begin to identify numbers with the same number of decimal places up to two decimal places with support.	To identify numbers with the same number of decimal places up to two decimal places.	To compare numbers with the same number of decimal places up to two decimal places.
	To begin to solve simple measure and money problems involving simple fractions and simple decimals to two decimal places with support.	To solve simple measure and money problems involving simple fractions and simple decimals to two decimal places with support.	To solve simple measure and money problems involving simple fractions and simple decimals to two decimal places.

Measurement			
MEASUREMENT	To begin to convert between some units of measure (e.g. kilometre to metre, hour to minute) with support.	To convert between some units of measure (e.g. kilometre to metre, hour to minute)	To confidently convert between some units of measure (e.g. kilometre to metre, hour to minute)
	To begin to calculate the perimeter of a rectilinear figure (including squares) in centimetres and begin to measure them with support.	To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	To accurately measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
	To begin to find the area of rectilinear shapes by counting squares.	To find the area of rectilinear shapes by counting squares.	To accurately find the area of rectilinear shapes by counting squares.
	To begin to calculate different measures, including money in pounds and pence.	To estimate and calculate different measures, including money in pounds and pence.	To estimate, compare and calculate different measures, including money in pounds and pence.
	To begin to read time between analogue and digital 12 and 24-hour clocks.	To read and write time between analogue and digital 12 and 24-hour clocks.	To read, write and convert time between analogue and digital 12 and 24-hour clocks.
	To begin to solve problems involving converting from hours to minutes; years to months and weeks to days with support.	To solve problems involving converting from hours to minutes; years to months and weeks to days.	To independently solve problems involving converting from hours to minutes; years to months and weeks to days.
Properties of Shape			
GEOMETRY	To begin to classify geometric shapes, including quadrilaterals and triangles, based on their properties.	To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	To independently compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.
	To begin to identify acute and obtuse angles	To identify acute and obtuse angles and order angles up to two right angles by size.	To identify acute and obtuse angles and compare and order angles up to two right angles by size.
	To begin to identify lines of symmetry in 2-D shapes presented simply with support	To identify lines of symmetry in 2-D shapes presented in different orientations.	To independently identify lines of symmetry in 2-D shapes presented in different orientations and explain their decision.
	To begin to complete a simple symmetric figure.	To complete a simple symmetric figure with respect to a specific line of symmetry.	To independently complete a simple symmetric figure with respect to a specific line of symmetry.
Position and direction			
GEOMETRY	To begin to describe position on a 2-D grid with support.	To describe positions on a 2-D grid as coordinates in the first quadrant.	To independently describe position on a 2-D grid as coordinates in the first quadrant.
	To begin to describe movements between positions.	To describe movements between positions as translations of a given unit to left/right and up/down.	To fluently describe movements between positions as translations of a given unit to left/right and up/down.
	To begin to plot points and draw sides to complete a given polygon with support.	To plot specified points and draw sides to complete a given polygon.	To accurately and independently plots specified points and draw sides to complete a given polygon.
Statistics			
STATISTICS	To begin to present discrete and continuous data using some graphical methods, including bar charts and time graphs with support.	To present discrete and continuous data using some graphical methods, including bar charts and time graphs.	To interpret and present discrete and continuous data using some graphical methods, including bar charts and time graphs.
	To begin to solve sum and difference problems using information presented in tables and bar charts with support.	To solve sum and difference problems using information presented in bar charts, pictograms and tables.	To independently solve comparison, sum and difference problems using information presented in bar charts, pictograms and tables and other graphs.

Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 5

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.	To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.	To accurately read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.
	To begin to count forward and backwards in steps of powers of 10 for any given number up to 1 000 000.	To count forward and backwards in steps of powers of 10 for any given number up to 1 000 000.	To fluently count forward and backwards in steps of powers of 10 for any given number up to 1 000 000.
	To begin to interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.	To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.	To accurately interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.
	To begin to round any numbers up to 1 000 000 to the nearest 10, 1000, 10,000 and 100,000.	To round any numbers up to 1 000 000 to the nearest 10, 1000, 10,000 and 100,000.	To confidently round any numbers up to 1 000 000 to the nearest 10, 1000, 10,000 and 100,000.
	To begin to solve number problems and practical problems that involve all of the above.	To independently solve number problems and practical problems that involve all of the above.	To accurately solve number problems and practical problems that involve all of the above.
	To begin to read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
Addition and subtraction			
NUMBER	To start to add and subtract simple whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	To independently add and subtract simple whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	To confidently and accurately add and subtract simple whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
	To start to add and subtract numbers mentally with increasingly large numbers.	To independently add and subtract numbers mentally with increasingly large numbers.	To confidently and accurately add and subtract numbers mentally with increasingly large numbers.
	To start to use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy with support.	To independently use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	To confidently use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
	To start to solve simple addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	To independently solve simple addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	To accurately solve simple addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why explaining strategies.
Multiplication and division			
NUMBER	To start to identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	To independently identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	To confidently identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
	To start to solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors.	To independently solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors.	To accurately solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors with support.

	To start know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.	To independently know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.	To confidently know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
	To start to know how to establish whether a number up to 100 is prime and recall prime numbers up to 19.	To independently know how to establish whether a number up to 100 is prime and recall prime numbers up to 19.	To confidently know how to establish whether a number up to 100 is prime and recall prime numbers up to 19.
	To start to multiply numbers up to 4 digits by one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.	To independently multiply numbers up to 4 digits by one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.	To accurately multiply numbers up to 4 digits by one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.
	To start to multiply and divide numbers mentally drawing upon known facts.	To independently multiply and divide numbers mentally drawing upon known facts.	To accurately multiply and divide numbers mentally drawing upon known facts.
	To start to divide numbers up to 4 digits by one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	To independently divide numbers up to 4 digits by one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	To confidently divide numbers up to 4 digits by one-digit number using the formal written method of short division and interpret remainders appropriately for the context.
	To begin to multiply and divide whole numbers and those involving decimals by 10, 100, and 1000.	To independently multiply and divide whole numbers and those involving decimals by 10, 100, and 1000.	To accurately multiply and divide whole numbers and those involving decimals by 10, 100, and 1000.
	To begin to recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	To independently recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	To accurately use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
	To begin to solve problems involving addition, addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	To independently solve problems involving addition, addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	To accurately solve problems involving addition, addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.
	To begin to solve simple problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates with support.	To independently solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	To accurately solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.
		Fractions	
NUMBER	To begin to compare and order fractions whose denominators are all multiples of the same number.	To independently compare and order fractions whose denominators are all multiples of the same number.	To confidently compare and order fractions whose denominators are all multiples of the same number.
	To begin to identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	To independently identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	To accurately identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
	To begin to recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 =11/5).	To independently recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 =11/5).	To accurately recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 =11/5).
	To begin to add and subtract fractions with the same	To independently add and subtract fractions with the same denominator and multiples of the same number.	To confidently add and subtract fractions with the same

	denominator and multiples of the same number.		denominator and multiples of the same number.
	To begin to multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	To independently multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	To accurately multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
	To begin to read and write decimal numbers as fractions (e.g. 0.71 = 71/100).	To independently read and write decimal numbers as fractions (e.g. 0.71 = 71/100).	To accurately read and write decimal numbers as fractions (e.g. 0.71 = 71/100).
	To begin to recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	To independently recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	To confidently recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
	To begin to round decimals with two decimals with two decimal places to the nearest whole number and to one decimal place.	To independently round decimals with two decimals with two decimal places to the nearest whole number and to one decimal place.	To accurately round decimals with two decimals with two decimal places to the nearest whole number and to one decimal place.
	To begin to read, write, order and compare numbers with up to three decimal places.	To independently read, write, order and compare numbers with up to three decimal places.	To confidently read, write, order and compare numbers with up to three decimal places.
	To begin to solve problems involving number up to three decimal places.	To independently solve problems involving number up to three decimal places.	To accurately solve simple problems involving number up to three decimal places.
	To begin to 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 hundred, and as a decimal fraction.	To independently 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 hundred, and as a decimal fraction.	To confidently 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 hundred, and as a decimal fraction.
	To begin to solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5, and those with a denominator of a multiple of 10 or 25.	To independently solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5, and those with a denominator of a multiple of 10 or 25.	To accurately solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5, and those with a denominator of a multiple of 10 or 25.
Measurement			
MEASUREMENT	To begin to convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre	To independently convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre	To accurately convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre
	To begin to understand and use equivalences between metric units and common Imperial units such as inches, pounds and pints.	To independently understand and use equivalences between metric units and common Imperial units such as inches, pounds and pints.	To confidently understand and use equivalences between metric units and common Imperial units such as inches, pounds and pints.
	To begin to measure and calculate the perimeter of simple composite rectilinear shapes in centimetres and metres.	To independently measure and calculate the perimeter of simple composite rectilinear shapes in centimetres and metres.	To accurately measure and calculate the perimeter of simple composite rectilinear shapes in centimetres and metres.
	To begin to calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metre (m2) and estimate the area of irregular shapes.	To independently calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metre (m2) and estimate the area of irregular shapes.	To accurately calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metre (m2) and estimate the area of irregular shapes.
	To begin to estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water).	To independently estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water).	To confidently and accurately estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water).

	To begin to solve simple problems involving converting between units of time.	To independently solve simple problems involving converting between units of time.	To accurately solve simple problems involving converting between units of time.
	To begin to use all four operations to solve simple problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.	To independently use all four operations to solve simple problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.	To accurately use all four operations to solve simple problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.
Properties of Shape			
GEOMETRY	To begin to identify simple 3-D shapes, including cubes and other cuboids, from 2-D representations.	To independently identify simple 3-D shapes, including cubes and other cuboids, from 2-D representations.	To accurately identify simple 3-D shapes, including cubes and other cuboids, from 2-D representations.
	To begin to know angles are measured in degree; estimate and compare acute, obtuse and reflex angles.	To independently know angles are measured in degree; estimate and compare acute, obtuse and reflex angles.	To confidently know angles are measured in degree; estimate and compare acute, obtuse and reflex angles.
	To begin to draw given angles and measure them in degrees (^{o}).	To independently draw given angles and measure them in degrees (^{o}).	To accurately draw given angles and measure them in degrees (‘).
	To begin to be able to identify: angles at a point and one whole turn (total of 360^o), angles at a point on a straight line and ½ a turn (total 180^o), other multiples of 90^o.	To independently be able to identify: angles at a point and one whole turn (total of 360^o), angles at a point on a straight line and ½ a turn (total 180^o), other multiples of 90^o.	To accurately be able to identify: angles at a point and one whole turn (total of 360^o), angles at a point on a straight line and ½ a turn (total 180^o), other multiples of 90^o.
	To begin to use the properties of rectangles to deduce related facts and find missing lengths and angles.	To independently use the properties of rectangles to deduce related facts and find missing lengths and angles.	To confidently use the properties of rectangles to deduce related facts and find missing lengths and angles.
	To begin to distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	To independently distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	To confidently distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
	To begin to 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.	To independently 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.	To confidently 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.
Position and direction			
GEOMETRY	To begin to 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.	To independently 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.	To confidently 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.
Statistics			
STATISTICS	To begin to solve comparison, sum and difference problems using information presented in a line graph.	To independently solve comparison, sum and difference problems using information presented in a line graph.	To accurately solve comparison, sum and difference problems using information presented in a line graph.
	To begin to complete, read and interpret information in tables, including timetables.	To independently complete, read and interpret information in tables, including timetables.	To accurately complete, read and interpret information in tables, including timetables.

Loseley Fields Primary School

Medium Term Planning

Mathematics

Year 6

	Autumn	Spring	Summer
Number and place value			
NUMBER	To begin to read and write numbers up to 10 000 000 and determine the value of each digit with support.	To be able to read, write and order numbers up to 10 000 000 and determine the value of each digit.	To read, write and order numbers up to 10 000 000 and determine the value of each digit.
	To round any whole number to the nearest 10, 100 and 1000.	To round any whole number to the nearest unit.	To round any whole number to the nearest tenth, hundredth or thousandth.
	To begin to use negative numbers in context.	To use negative numbers in context and calculate intervals across zero.	To fluently use negative numbers in context, and calculate intervals across zero.
	To begin to solve number problems that involve all of the above with support.	To solve number problems that involve all of the above.	To independently solve number problems that involve all of the above.
Addition, subtraction, multiplication and division			
NUMBER	To begin to multiply multi-digit numbers up to 3 digits by a two-digit whole number using the formal written method of long multiplication.	To multiply multi-digit numbers up to 3 digits by a two-digit whole number using the formal written method of long multiplication.	To confidently and accurately multiply multi-digit numbers up to 3 digits by a two-digit whole number using the formal written method of long multiplication and apply this to any given problem.
	To begin to divide numbers up to 3 digits by a two-digit whole number using the formal written method of long division.	To 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.	To 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.
	To perform mental calculations with assistance, including with some mixed operations.	To perform mental calculations with assistance, including with some mixed operations and some large numbers.	To fluently and accurately perform mental calculations with assistance, including with some mixed operations and large numbers.
	To begin to identify common factors, common multiples and prime numbers with assistance.	To identify common factors, common multiples and prime numbers.	To confidently and accurately identify common factors, common multiples and prime numbers and recognise patterns.
	To begin to use knowledge of the order of operations to carry out straight forward calculations involving the four operations.	To use knowledge of the order of operations to carry out straight forward calculations involving the four operations.	To confidently and accurately use knowledge of the order of operations to carry out straight forward calculations involving the four operations with accuracy.
	To begin to solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why with assistance	To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	To completely solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
	To begin to solve problems involving addition, subtraction, multiplication and division.	To solve problems involving addition, subtraction, multiplication and division.	To accurately solve problems involving addition, subtraction, multiplication and division.
	To begin to use estimations to check answers to calculations.	To use estimation to check answers to calculations and begin to determine, in the context of a problem, levels of accuracy.	To confidently and accurately use estimation to check answers to calculations and determine, in the

			context of a problem, levels of accuracy.
Fractions, decimals and percentages			
NUMBER	To begin to use common factors to simplify fractions.	To use common factors to simplify fractions; use common multiples to express some fractions in the same denomination.	To confidently and accurately common factors to simplify fractions; use common multiples to express fractions in the same denominations.
	To order fractions, including fractions > 1 with assistance.	To independently order fractions, including fractions >1	To confidently and accurately compare and order fractions, including fractions >1
	To begin to add and subtract fractions with different denominators using the concept of equivalent fractions with support.	To add and subtract fractions with different denominators using the concept of equivalent fractions.	To confidently and accurately and accurately add and subtract fractions with different denominators using the concept of equivalent fractions.
	To begin to multiply simple pairs of proper fractions with support.	To multiply simple pairs of proper fractions, beginning to write the answer in its simplest form (e.g. ¼ x ½ = 1/8)	To confidently and accurately multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. ¼ x ½ = 1/8)
	To begin to divide simple proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6) with assistance.	To divide simple proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6)	To confidently and accurately divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6).
	To begin to associate a fraction with division and begin to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)	To associate a fraction with division and begin to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)	To confidently associate a fraction with division and begin to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)
	To begin to identify the value of each digit to wo decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to two decimal places.	To identify the value of each digit to wo decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.	To confidently and accurately identify the value of each digit to wo decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places and beyond.
	To begin to multiply one-digit numbers with up to two decimal places by whole numbers with assistance.	To multiply one-digit numbers with up to two decimal places by whole numbers.	To accurately multiply one-digit numbers with up to two decimal places by whole numbers and apply this knowledge to word problems.
	To begin to use written division methods in cases where the answer has up to two decimal places with assistance.	To use written division methods in cases where the answer has up to two decimal places.	To explore and use written division methods in cases where the answer has up to two decimal places.
	To begin to solve problems which require answers to be rounded to specified degrees of accuracy.	To problems which require answers to be rounded to specified degrees of accuracy.	To explore and solve problems which require answers to be rounded to specified degrees of accuracy.
	To recall and use equivalences between simple decimals and percentages.	To recall and use equivalences between simple fractions, decimals and percentages.	To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Ratio and proportion			
NUMBER	To begin to solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts with support.	To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.	To solve a range of problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
	To begin to solve problems involving the calculation of percentages (erg; of measures) such as 15% of 360	To solve problems involving the calculation of percentages (e.g.; of measures) such as 15% of 360 and begin to identify the use of percentages for comparisons.	To solve problems involving the calculation of percentages (e.g.; of measures) such as 15% of 360 and the use of percentages for comparisons.

	To begin to solve problems involving simple shapes similar shapes where the scale factor is known or can be found.	To solve problems involving simple shapes similar shapes where the scale factor is known or can be found.	To confidently and accurately solve problems involving simple shapes similar shapes where the scale factor is known or can be found.
	To begin to solve problems involving recognising unequal sharing and grouping using knowledge of simple fractions and multiples with support.	To solve problems involving recognising unequal sharing and grouping using knowledge of simple fractions and multiples.	To confidently and accurately and accurately solve problems involving recognising unequal sharing and grouping using knowledge of simple fractions and multiples.
Algebra			
NUMBER	To recognise that simple missing number problems can be expressed algebraically	To begin to express missing number problems algebraically.	To express missing number problems algebraically.
	To begin to describe linear number sequences	To begin to generate and describe linear number sequences.	To generate and describe linear number sequence.
	To begin to find pairs of numbers that satisfy number sentences involving one unknown with support.	To begin to find pairs of numbers that satisfy number sentences involving two unknowns.	To find and express pairs of numbers that satisfy number sentences involving two unknowns
	To begin to identify some possibilities of combination of two variables with support.	To begin to enumerate all possibilities of combinations of two variables.	To enumerate all possibilities of combinations of two variables.
Measurement			
MEASUREMENT	To begin to solve problems involving the calculation of units of measure, using decimal notation up to two decimal places where appropriate with support.	To begin to solve problems involving the calculation of units of measure, using decimal notation up to three decimal places where appropriate.	To accurately solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
	To begin to read and write 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 notations to up to two decimal places.	To use, read and write 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 notations to up to three decimal places.	To completely use, read and write 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 notations to up to three decimal places.
	To begin to convert between miles and kilometres.	To convert between miles and kilometres.	To convert between miles and kilometres and apply knowledge in other subjects. e.g. Science
	To begin to recognise that shapes with the same areas can have different perimeters.	To recognise that shapes with the same areas can have different perimeters and vice versa.	To recognise that shapes with the same areas can have different perimeters and vice versa and relate this knowledge to different shapes.
	To begin to recognise when it is possible to use formulae for area of shapes	To recognise when it is possible to use formulae for area and volume of shapes.	To recognise when it is possible to use formulae for area and volume of shapes and apply this knowledge in different contexts.
	To begin to calculate the area of parallelograms and triangles with support.	To calculate the area of parallelograms and triangles.	To calculate the area of parallelograms and triangles and apply this knowledge in different contexts.
	To begin to calculate volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3)	To calculate volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units.	To calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units.

Properties of Shape			
GEOMETRY	To begin to draw simple 2-D shapes using given dimensions and angles with support.	To draw simple 2-D shapes using given dimensions and angles independently.	To draw 2-D shapes using given dimensions and angles and apply this knowledge to other areas of the curriculum.
	To begin to recognise and describe simple 3-D shapes	To recognise, describe and build some 3-D shapes, including making nets of some shapes	To recognise, describe and build simple 3-D shapes, including making nets.
	To begin to classify geometric shapes based on their properties and sizes.	To classify geometric shapes based on their properties and sizes and find unknown angles in some triangles, quadrilaterals, and regular polygons.	To confidently and accurately compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.
	To begin to name parts of circles, including radius, diameter and circumference.	To illustrate and name parts of circles, including radius, diameter and circumference and begin to recognise that the diameter is twice the radius.	To confidently and accurately illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
	To begin to recognise angles where they meet at a point, are on a straight line, or are vertically opposite.	To recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and begin to find missing angles.	To confidently and accurately recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
Position and direction			
GEOMETRY	To begin to describe positions on the full coordinate grid (two quadrants)	To describe positions on the full coordinate grid (two quadrants)	To confidently and accurately describe and compare positions on the full coordinate grid (two quadrants)
	To begin to draw simple shapes on the coordinate plane, and begin to reflect them in the axes.	To draw and translate simple shapes on the coordinate plane and reflect them in axes.	To accurately and independently draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Statistics			
STATISTICS	To begin to construct pie charts and line graphs and use these to solve problems with support.	To construct and begin to interpret pie charts and line graphs and use these to solve problems	To interpret and construct pie charts and line graphs and use these to solve problems to different contexts.
	To begin to calculate the mean as an average.	To calculate and interpret the mean as an average.	To calculate and interpret the mean as an average and apply the knowledge to different contexts.