Mathematics
Year 1

MATHEMATICS Year 1

Strand	Objective	Child Speak Target
Number Place Value	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	*I can count up and down from 0 to 100 and more.*
Number Place Value	Count, read and write numbers to 100 in numerals.	*I can count, read and write numbers up to 100.*
Number Place Value	Count in multiples of twos, fives and tens.	*I can count in 2 or 5 or 10.*
Number Place Value	Given a number, identify one more and one less.	*When you show me a number, I can tell you what is one more and one less.*
Number Place Value	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	*I can find numbers on a number line when I am solving problems with questions using equal to, more than, less than, most and least.*
Addition Subtraction	Read and write numbers from 1 to 20 in numerals and words.	*I read and write numbers from 1 to 20 in numbers and words.*
Addition Subtraction	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	*I know and can use the maths symbols + - and = in a number sentence.*
Addition Subtraction	Represent and use number bonds and related subtraction facts within 20.	*I know my number bond facts to 20 - such as 1+5 = 6 and 5 = 6 - 1.*
Addition Subtraction	Add and subtract one-digit and two-digit numbers to 20, including zero.	*I add and subtract numbers up to 20 - such as 5+5 or 12-8.*
Addition Subtraction	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.	*I can solve some number problems such as 7 = ? - 9.*
Multiplication Division	Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the	*I answer maths multiplication or division problems with help from an adult and using objects to see what the problem means.*

	support of the teacher.	
Fractions	Recognise, find and name a half as one of two equal parts of an object, shape or quantity.	*I know that a half is one of two equal parts, and I find half of a shape or a set of objects by sharing the shape or set into two equal parts.*
Fractions	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	*I find a quarter of a shape or a set of objects by sharing the shape or set into four equal parts.*
Measurement	Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half].	*I use words such as long/short, longer/shorter, tall/short, double/half to describe my maths work when I am measuring.*
Measurement	Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than].	*When weighing, I use the words heavy/light, heavier than, lighter than to explain my work.*
Measurement	Compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].	*When working with capacity, I use the words full/empty, more than, less than, half, half full and quarter to explain my work.*
Measurement	Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later].	*I can answer questions about time, such as Who is quicker? or What is earlier?*
Measurement	Measure and begin to record lengths and heights.	*I can measure the length or height of something and write down what measure.*
Measurement	Measure and begin to record mass/weight.	*I can measure how heavy an object is and write down what I find.*
Measurement	Measure and begin to record capacity and volume.	*I can measure the capacity of jugs of water and write down what I measure.*
Measurement	Measure and begin to record time (hours, minutes, seconds).	*I can measure how long something takes to happen - such as how long it takes me to run around the playground.*
Measurement	Recognise and know the value of different denominations of coins and notes.	*I know that coins have different values - such as 2p, 5p, 10p and 50p.*
Measurement	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].	*I use special time words such as before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.*
Measurement	Recognise and use language relating to dates,	*I can tell you the days of the week and months of the year and I*

	including days of the week, weeks, months and years.	*can talk about weeks and months and years and what they mean.*
Measurement	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	*I can tell the time and draw hands on a clock for to the hour and half past the hour times.*
Shape	Recognise and name common 2-D and 3-D shapes, including 2-D shapes [for example, rectangles (including squares), circles and triangles].	*I can name common 2-D shapes such as rectangles, squares, circles and triangles.*
Shape	Recognise and name common 2-D and 3-D shapes, including 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	*I can name some 3-D shapes such as cuboids and cubes, pyramids and spheres.*
Position	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	*I can describe my position, direction and movement, including whole turns, half turns, quarter turns and three-quarter turns.*

Rising Stars

	YEAR 1	
Sequence 1	• count to and across 100, forwards and backwards, beginning with 0 or 1 • count, read and write numbers to 100 in numerals • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	• recognise and use language relating to dates, including days of the week, weeks, months and years • compare, describe and solve practical problems for: › lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] › mass or weight [for example, heavy/light, heavier than, lighter than] › capacity/volume [for example, full/empty, more than, less than, half, half full, quarters
Sequence 2	• given a number, identify one more and one less • represent and use number bonds and related subtraction facts within 20 • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9	• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • recognise and use language relating to dates, including days of the week, weeks, months and years
Sequence 3	• recognise and name common 2-D and 3-D shapes, including: › 2-D shapes [for example, rectangles (including squares), circles and triangles] › 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	• describe position, direction and movement
Sequence 4	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	• compare, describe and solve practical problems for: › lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] › mass or weight [for example, heavy/light, heavier than, lighter than] › capacity/volume [for example, full/empty, more than, less than, half, half full, quarter] › time [for example, quicker, slower, earlier, later] • recognise and use language relating to dates, including days of the week, weeks, months and years

Sequence 5	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • given a number, identify one more and one less	• represent and use number bonds and related subtraction facts within 20 • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9
Sequence 6	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of twos and tens • given a number, identify one more and one less	• identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • recognise and know the value of different denominations of coins and notes
Sequence 7	• count, read and write numbers to 100 in numerals, count in multiples of twos and tens	• 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 • recognise and know the value of different denominations of coins and notes
Sequence 8	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of twos and tens • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	• measure and begin to record the following: › lengths and heights › mass/weight › capacity and volume • recognise and know the value of different denominations of coins and notes
Sequence 9	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • given a number, identify one more and one less • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20 including zero	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • recognise and use language relating to dates, including days of the week, weeks, months and years
Sequence 10	• recognise and name common 2-D and 3-D shapes, including: › 2-D shapes [for example, rectangles (including squares), circles and triangles] › 3-D shapes [for example, cuboids (including cubes),	pyramids and spheres] • describe position, direction and movement

Sequence 11	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words	• measure and begin to record the following: › lengths and heights › mass/weight › capacity and volume › time (hours, minutes, seconds) • recognise and know the value of different denominations of coins and notes • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
Sequence 12	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • given a number, identify one more and one less • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20	• add and subtract one-digit and two-digit numbers to 20, including zero • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9
Sequence 13	• count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens • 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 • recognise, find and name a half as one of two equal parts of an object, shape or quantity	• recognise, find and name a quarter as one of four equal parts of an object, shape or quantity • recognise and know the value of different denominations of coins and notes • tell the time to the hour and half past the hour and draw the hands on a clock face to show these times
Sequence 14	• recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity • recognise and name common 2-D and 3-D shapes, including: › 2-D shapes [for example, rectangles (including squares), circles and triangles] › 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	• describe position, direction and movement, including whole, half, quarter and three-quarter turns

Mathematics
Year 2

MATHEMATICS Year 2

Strand	Objective	Child Speak Target
Number Place Value	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.	*I can count forward and backward in steps of 2, 3, and 5 from 0, and make jumps in tens from any number.*
Number Place Value	Recognise the place value of each digit in a two-digit number (tens, ones).	*I know what each digit means in Tens and Unit numbers such as 24.*
Number Place Value	Identify, represent and estimate numbers using different representations, including the number line.	*I can find and show numbers on a number line.*
Number Place Value	Compare and order numbers from 0 up to 100.	*I can order numbers up to 100 and tell you which numbers are bigger or smaller.*
Number Place Value	Use greater than, less than and = signs.	*I use the greater than, less than and equals signs in maths and know what they mean.*
Number Place Value	Read and write numbers to at least 100 in numerals and in words.	*I can read and write numbers to 100 in digits and words.*
Number Place Value	Use place value and number facts to solve problems.	*I solve problems using number facts such as 18+2=20 and what I know about the value of digits in a number.*
Addition Subtraction	Using concrete objects and pictorial representations, including those involving numbers, quantities and measures.	*I answer addition and subtraction maths problems using objects to help me work it out.*
Addition Subtraction	Applying their increasing knowledge of mental and written methods.	*I can solve addition and subtraction problems and work out how I answer it on paper or show you how I did it in my head by explaining step by step.*
Addition Subtraction	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.	*I answer problems with addition and subtraction using my number facts to 20 and other number facts up to 100.*
Addition Subtraction	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones.	*I can add and subtract numbers such as 34 - 8 or 52 + 5 using objects or pictures to help.*
Addition Subtraction	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a	*I add and subtract two-digit numbers using objects to help me.*

	two-digit number and tens.	
Addition Subtraction	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including two two-digit numbers.	*I can add or subtract numbers such as 42 - 22 or 56 + 29 using objects or pictures to help me.*
Addition Subtraction	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding three one-digit numbers.	*I can add or subtract three numbers such as 2 + 5 + 9.*
Addition Subtraction	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	*I know that adding to numbers together can be done in any order but subtracting numbers can only be done in one order.*
Addition Subtraction	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	*I can check my answers or solve missing number problems by doing an inverse check.*
Multiplication Division	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	*I know my 2 and 5 and 10 times tables by heart and can tell whether a number is odd or even.*
Multiplication Division	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	*I use multiplication (×), division (÷) and equals (=) signs when writing out my times tables.*
Multiplication Division	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	*I know that the multiplication of two numbers can be done in any order, but that the division of numbers can only be done in one order.*
Multiplication Division	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	*I can solve multiplication and division problems using times table facts and objects or pictures to help me.*
Fractions	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.	*I can find 1/3 or 1/4 or 2/4 or 3/4 of a shape, length or set of objects.*
Fractions	Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	*I can write simple fractions sentences such as 1/2 of 6 = 3 and know that 2/4 equals 1/2.*

Measurement	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.	*I can choose, use and measure the correct unit to measure length or height in any direction (m/cm); weight (kg/g); temperature (°C); or capacity (litres/ml).*
Measurement	Compare and order lengths, mass, volume/capacity and record the results using symbols for greater than, less than and =.	*I can compare and order lengths, weight and capacity and then record the results using symbols for greater than, less than and equals.*
Measurement	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	*I know and use the symbols for pounds (£) and pence (p) and can add together different amounts of money, such as 253p and £2.*
Measurement	Find different combinations of coins that equal the same amounts of money.	*I can find different combinations of coins that equal the same amounts of money.*
Measurement	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	*I have solved money problems such as how much change do I get from 50p if I buy an apple for 35p?*
Measurement	Compare and sequence intervals of time.	*I can put the time of events in order.*
Measurement	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.	*I can tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.*
Measurement	Know the number of minutes in an hour and the number of hours in a day.	*I know there are 60 minutes in an hour and 24 hours in a day.*
Shape	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	*I can describe the properties of some 2-D shapes, including the number of sides they have and facts about their symmetry.*
Shape	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.	*I can describe the properties of some 3-D shapes, including the number of edges, faces and vertices they have.*
Shape	Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid].	*I can tell you which 2-D shapes appear as the faces on 3-D shapes, such as triangles on a pyramid.*
Shape	Compare and sort common 2-D and 3-D shapes and everyday objects.	*I can compare 2-D and 3-D shapes with everyday objects around me.*

Position	Order and arrange combinations of mathematical objects in patterns and sequences.	*I can order combinations of mathematical objects in patterns and sequences.*
Position	Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).	*I can describe my position, direction and movement, including describing turns as quarter, half and three-quarter turns in clockwise and anti-clockwise directions.*
Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	*I can read and construct picture graphs, tally charts and tables.*
Statistics	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	*I can sort objects into categories and tell you how many objects are in each category and show which category has the most.*
Statistics	Ask and answer questions about totalling and comparing categorical data.	*I work on sorting objects and can answer questions about the groups of objects I have sorted.*

Rising Stars

	YEAR 2	
Sequence 1	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify and represent numbers using objects and pictorial representations including the number line • compare and order numbers from 0 up to 100	• read and write numbers to at least 100 in numerals • use place value and number facts to solve problems • compare and order lengths, mass, volume/capacity • compare and sequence intervals of time ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
Sequence 2	• count in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • use place value and number facts to solve problems • solve problems with addition and subtraction: › using concrete objects and pictorial representations, including those involving numbers, quantities and measures › applying their increasing knowledge of mental methods and written methods • recall and use addition and subtraction facts to 20 fluently	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: › a two-digit number and ones › a two-digit number and tens › adding three one-digit numbers • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change • ask and answer questions about totalling and comparing categorical data
Sequence 3	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	• compare and sort common 2-D and 3-D shapes and everyday objects • order and arrange combinations of mathematical objects in patterns and sequences • use mathematical vocabulary to describe position, direction and movement
Sequence 4	• count in steps of 2 and 5 from 0 and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use >, < and = signs • read and write numbers to at least 100 in numerals	• use place value and number facts to solve problems • compare and order lengths, mass, volume/capacity and record the results using >, < and = • compare and sequence intervals of time • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity

Sequence 5	• count in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • use place value and number facts to solve problems • solve problems with addition and subtraction: › using concrete objects and pictorial representations, including those involving numbers, quantities and measures › applying their increasing knowledge of mental methods and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: › a two-digit number and ones › a two-digit number and tens › adding three one-digit numbers	• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins to equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change • ask and answer questions about totalling and comparing categorical data
Sequence 6	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recognise odd and even numbers • interpret and construct simple pictograms, tally charts, block diagrams and simple tables	• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
Sequence 7	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins to equal the same amounts of money • tell and write the time to five minutes • know the number of minutes in an hour and the number of hours in a day
Sequence 8	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use >, < and = signs • read and write numbers to at least 100 in numerals • use place value and number facts to solve problems	• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • compare and order lengths, mass, volume/capacity and record the results using >, < and = • compare and sequence intervals of time

Sequence 9	• count in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • use place value and number facts to solve problems • solve problems with addition and subtraction: › using concrete objects and pictorial representations, including those involving numbers, quantities and measures › applying their increasing knowledge of mental methods and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: › a two-digit number and ones › a two-digit number and tens	› two two-digit numbers › adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins to equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change • ask and answer questions about totalling and comparing categorical data
Sequence 10	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	• compare and sort common 2-D and 3-D shapes and everyday objects • order and arrange combinations of mathematical objects in patterns and sequences • use mathematical vocabulary to describe position, direction and movement
Sequence 11	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use >, < and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • compare and order lengths, mass, volume/capacity and record the results using >, < and = • compare and sequence intervals of time • interpret and construct simple pictograms, tally charts, block diagrams and simple tables • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
Sequence 12	• count in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • use place value and number facts to solve problems • solve problems with addition and subtraction: › using concrete objects and pictorial representations, including those involving numbers, quantities and measures › applying their increasing knowledge of mental methods and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: › a two-digit number and ones › a two-digit number and tens › two two-digit numbers › adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems

		• ask and answer questions about totalling and comparing categorical data
Sequence 13	• count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• recognise, find, name and write fractions ⅓ , ¼ , ²⁄₄ and ³⁄₄ of a length, shape, set of objects or quantity • write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of ²⁄₄ and ½ • tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • know the number of minutes in an hour and the number of hours in a day
Sequence 14	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • compare and sort common 2-D and 3-D shapes and everyday objects • order and arrange combinations of mathematical objects in patterns and sequences	• use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) • recognise, find, name and write fractions ⅓ , ¼ , ²⁄₄ and ³⁄₄ of a length, shape, set of objects or quantity • write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of ²⁄₄ and ½

Mathematics
Year 3

MATHEMATICS Year 3

Strand	Objective	Child Speak Target
Number Place Value	Count from 0 in multiples of 4, 8, 50 and 100.	*I can count from 0 in steps of 4, 8, 50 and 100.*
Number Place Value	Find 10 or 100 more or less than a given number.	*I can find 10 or 100 more or less than a given number.*
Number Place Value	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).	*I know what each digit means in Hundred Tens and Unit numbers such as 204.*
Number Place Value	Compare and order numbers up to 1000.	*I can compare and order numbers up to 1000.*
Number Place Value	Identify, represent and estimate numbers using different representations.	*I can identify and estimate numbers in different units such as length (mm and m) and weight (g and kg).*
Number Place Value	Read and write numbers up to 1000 in numerals and in words.	*I read and write numbers up to 1000 in numerals and in words.*
Number Place Value	Solve number problems and practical problems involving working with and estimating numbers up to 1000 in a variety of units.	*I can solve number problems, working with numbers up to 1000 and in different units of measurement.*
Addition Subtraction	Add and subtract numbers mentally, including three-digit number and ones.	*I can add and subtract numbers in my head, including questions such as 432 - 7.*
Addition Subtraction	Add and subtract numbers mentally, including three-digit number and tens.	*I can add and subtract numbers in my head, including questions such as 432 - 70.*
Addition Subtraction	Add and subtract numbers mentally, including three-digit number and hundreds.	*I can add and subtract numbers in my head, including questions such as 432 - 300.*
Addition Subtraction	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	*I can use written methods to add or subtract two three-digit numbers.*
Addition Subtraction	Estimate the answer to a calculation and use inverse operations to check answers.	*I can estimate the answer to a question before I work it out and then use inverse operations to check the answer when I have finished.*
Addition	Solve problems, including missing number problems, using number facts, place value, and	*I solve problems such as missing numbers (for example, 452 - ? = 122) using my knowledge of number facts and methods of addition and*

Subtraction	more complex addition and subtraction.	*subtraction.*
Multiplication Division	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	*I know my 3, 4 and 8 times tables.*
Multiplication Division	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	*I can answer multiplication and division questions such as 16 x 5 or 45 divided by 9.*
Multiplication Division	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	*I can solve more complex problems and missing number questions involving multiplication and division.*
Fractions	Count up and down in tenths.	*I can count up and down in tenths.*
Fractions	Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.	*I know that tenths can be found by dividing an object or shape into ten equal parts or by dividing numbers by 10.*
Fractions	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	*I can find a fraction (such as 2/5 or 3/4) of a set of objects.*
Fractions	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	*I know how to find fractions of a number or shape - such as 3/5 ,1/4 or 4/6.*
Fractions	Recognise and show, using diagrams, equivalent fractions with small denominators.	*I can show that some fractions have the same value - such as 1/2, 3/6 and 5/10 or 1/3 and 3/9.*
Fractions	Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7].	*I can add and subtract fractions with the same denominator [for example, 5/7 + 1/7 = 6/7].*
Fractions	Compare and order unit fractions, and fractions with the same denominators.	*I can compare and order unit fractions, and fractions with the same denominators.*
Fractions	Solve problems that involve my understanding of fractions.	*I solve problems that finding, ordering or comparing fractions.*

Measurement	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	*I can measure and compare in these units: lengths (m/cm/mm), weight (kg/g) and capacity (l/ml).*
Measurement	Measure the perimeter of simple 2-D shapes.	*I can measure the perimeter od a 2-D shape such as a square or triangle.*
Measurement	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	*I can work on money problems, adding and subtracting amounts of money and working out how much change is left. I use both £ and p in my problems.*
Measurement	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.	*I can tell and write the time from a clock with numbers or Roman numerals or using 12 and 24 hour clocks.*
Measurement	Estimate and read time with increasing accuracy to the nearest minute.	*I can tell the time accurately to the nearest minute.*
Measurement	Record and compare time in terms of seconds, minutes and hours.	*I can measure and record time passing in seconds, minutes and hours.*
Measurement	Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.	*I know and use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight in my maths work.*
Measurement	Know the number of seconds in a minute and the number of days in each month, year and leap year.	*I know the number of seconds in a minute and the number of days in each month, year and leap year.*
Measurement	Compare durations of events [for example to calculate the time taken by particular events or tasks].	*I can calculate how long an event or task took to complete.*
Shape	Draw 2-D shapes and make 3-D shapes using modelling materials.	*I draw 2-D shapes and make 3-D shapes using modelling materials.*
Shape	Recognise 3-D shapes in different orientations and describe them.	*I recognise and can describe 3-D shapes even when they have been turned about in different ways.*
Shape	Recognise angles as a property of shape or a description of a turn.	*I know an angle is used to measure how far something turns. An angle is also the point in a 2-D shape.*
Shape	Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn .	*I know what a right angles is and I know that two right angles make a half-turn, three make three quarters of a turn and four right angles make a complete turn.*
Shape	Identify whether angles are greater than or less	*I can tell whether an angle is greater than or less than a right angle.*

	than a right angle.	
Shape	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	*I know when a line is horizontal or vertical or when two lines are perpendicular or parallel.*
Statistics	Interpret and present data using bar charts, pictograms and tables.	*I can answer questions about bar charts, pictograms and tables and make my own bar charts, pictograms and tables.*
Statistics	Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	*I can answer maths problems such as 'How many more?' and 'How many fewer?' by finding the information in bar charts, pictograms and tables.*

Rising Stars

	YEAR 3	
Sequence 1	• count from 0 in multiples of 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000	• identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • solve number problems and practical problems involving these ideas
Sequence 2	• add and subtract numbers mentally, including: › a three-digit number and ones › a three-digit number and tens › a three-digit number and hundreds • add and subtract numbers with up to three digits • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • add and subtract amounts of money to give change, using both £ and p in practical contexts • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Sequence 3	• count from 0 in multiples of 4, 8, 50 and 100 • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know	• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects
Sequence 4	• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise that angles are a property of shape or a description of a turn	• identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.
Sequence 5	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words	• solve number problems and practical problems involving these ideas • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • 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

Sequence 6	• add and subtract numbers mentally, including:
	  › a three-digit number and ones
	  › a three-digit number and tens
	  › a three-digit number and hundreds
	• add and subtract numbers with up to three digits
	• estimate the answer to a calculation and use inverse operations to check answers
	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
		• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
		• add and subtract amounts of money to give change, using both £ and p in practical contexts
		• interpret and present data using bar charts, pictograms and tables
		• solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables

Sequence 7	• identify, represent and estimate numbers using different representations • 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 • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	• add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] • compare and order unit fractions with the same denominator • solve problems that involve all of the above
Sequence 8	• count from 0 in multiples of 4, 8, 50 and 100 • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects	• 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 • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • solve problems that involve all of the above
Sequence 9	• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise that angles are a property of shape or a description of a turn	• identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Sequence 10	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	• estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example, to calculate the time taken by particular events or tasks] • interpret and present data using bar charts, pictograms and tables

Sequence 11	• add and subtract numbers mentally, including: › a three-digit number and ones › a three-digit number and tens › a three-digit number and hundreds • add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	• add and subtract amounts of money to give change, using both £ and p in practical contexts • record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example, to calculate the time taken by particular events or tasks] • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
Sequence 12	• identify, represent and estimate numbers using different representations • 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 • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	• recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] • compare and order unit fractions and fractions with the same denominator • Solve problems that involve all of the above
Sequence 13	• count from 0 in multiples of 4, 8, 50 and 100 • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects	• 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 • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • solve problems that involve all of the above • know the number of seconds in a minute and the number of days in each month, year and leap year
Sequence 14	• recognise that angles are a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	• identify horizontal and vertical lines and pairs of perpendicular and parallel lines • measure the perimeter of simple 2-D shapes

Mathematics
Year 4

MATHEMATICS Year 4

Strand	Objective	Child Speak Target
Number Place Value	Count in multiples of 6, 7, 9, 25 and 1000.	*I can count in multiples of 6, 7, 9, 25 and 1000.*
Number Place Value	Find 1000 more or less than a given number.	*I can find 1000 more or less than a given number.*
Number Place Value	Count backwards through zero to include negative numbers.	*I can count backwards to negative numbers below zero.*
Number Place Value	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).	*I know what each digit means in Thousands, Hundreds Tens and Unit numbers such as 2024.*
Number Place Value	Order and compare numbers beyond 1000.	*I can order and compare numbers above 1000.*
Number Place Value	Identify, represent and estimate numbers using different representations.	*I can makes estimates of a range of things - such as how many small objects there are in a large jar, how long in cm an object is, how heavy an object may weigh in kg.*
Number Place Value	Round any number to the nearest 10, 100 or 1000.	*I can round a number to the nearest 10, 100 or 1000.*
Number Place Value	Solve number and practical problems that involve rounding, ordering and exploring negative numbers and with increasingly large positive numbers.	*I can solve number and practical problems that involve rounding, ordering and exploring negative numbers and with increasingly large positive numbers.*
Number Place Value	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.	*I can 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.*
Addition Subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	*I can add and subtract numbers with up to 4 digits using written methods (for example, using column addition and subtraction).*
Addition Subtraction	Estimate and use inverse operations to check answers to a calculation.	*I can estimate an answer and check my answer using inverse operations.*
Addition	Solve addition and subtraction two-step problems in contexts,	*I can solve longer addition and subtraction problems and*

Subtraction	deciding which operations and methods to use and why.	*explain all the steps I took and why I worked things out as I did.*
Multiplication Division	Recall multiplication and division facts for multiplication tables up to 12 × 12.	*I know all my times table up to the 12 times tables.*
Multiplication Division	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1.	*I know what the outcome is when I multiply a number by 1 or by zero.*
Multiplication Division	Use place value, known and derived facts to multiply and divide mentally, including: Dividing by 1.	*I know what the outcome is when I divide a number by 1.*
Multiplication Division	Use place value, known and derived facts to multiply and divide mentally, including: multiplying together three numbers.	*I can multiply three numbers together, such as 3 x 6 x 9.*
Multiplication Division	Recognise and use factor pairs and commutativity in mental calculations.	*I know what factor pairs are how I can multiply numbers in any order and use my knowledge to work out questions in my head.*
Multiplication Division	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	*I can multiply a two-digit or a three-digit number by a one-digit number using written methods.*
Multiplication Division	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.	*I can solve maths problems such as - how many different outfits can I make from 3 hats and 4 coats.*
Fractions	Recognise and show, using diagrams, families of common equivalent fractions.	*I can show in drawings why a number of fractions equal each other (such as 3/5 and 6/10) and are called equivalent fractions.*
Fractions	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	*I can count up and down in hundredths and know that a hundredth is made by dividing an object by one hundred and a tenth is made by dividing an object by ten.*
Fractions	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.	*I can work out the fractions of numbers such as 4/5 of 25 or 7/10 of 700.*
Fractions	Add and subtract fractions with the same denominator.	*I can add and subtract fractions with the same denominator.*
Fractions	Recognise and write decimal equivalents of any number of tenths or hundredths.	*I can tell you the decimal equivalents of any number of tenths or hundredths - such as 1/10 = 0.1 and 23/100 =*

		0.23.
Fractions	Recognise and write decimal equivalents to 1/4, 1/2, 3/4.	*I know what the decimal equivalents are for 1/4, 1/2 and 3/4.*
Fractions	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.	*I can divide a one- or two-digit number by 10 and 100 and I know what the tenths and hundredths mean after the decimal point.*
Fractions	Round decimals with one decimal place to the nearest whole number.	*I can round decimals with one decimal place to the nearest whole number.*
Fractions	Compare numbers with the same number of decimal places up to two decimal places.	*I can compare numbers such as 0.26 and 0.56 to say which is bigger or lower.*
Fractions	Solve simple measure and money problems involving fractions and decimals to two decimal places.	*I can solve measure and money problems involving fractions and decimals to two decimal places.*
Measurement	Convert between different units of measure [for example, kilometre to metre; hour to minute].	*I can convert one unit of measurement to another, such as kilometre to metre, hour to minute and cm to mm.*
Measurement	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	*I can measure and calculate the perimeter of a rectangle (including a square).*
Measurement	Find the area of rectilinear shapes by counting squares.	*I can find the area of a rectangular shape by counting the number of squares the shape takes up.*
Measurement	Estimate, compare and calculate different measures, including money in pounds and pence.	*I can estimate and compare the measurements of a range of measures (such as cm, km, g, litres) and money.*
Measurement	Read, write and convert time between analogue and digital 12- and 24-hour clocks.	*I can read, write and convert time between clocks with hands (analogue clocks) and digital 12- and 24-hour clocks.*
Measurement	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	*I can convert hours to minutes, minutes to seconds, years to months and weeks to days.*
Shape	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	*I can group 2-D shapes based on their properties (such as the number of sides) and sizes.*
Shape	Identify acute and obtuse angles and compare and order angles up to two right angles by size.	*I can find acute and obtuse angles and order a set of given angles by size.*
Shape	Identify lines of symmetry in 2-D shapes presented in different orientations.	*I can find all the lines of symmetry in 2-D shapes.*

Shape	Complete a simple symmetric figure with respect to a specific line of symmetry.	*If I have been given one half of a symmetrical shape, I can complete the other half based on the position of the line of symmetry.*
Position	Describe positions on a 2-D grid as coordinates in the first quadrant.	*I can find the coordinates of a point on a grid.*
Position	Describe movements between positions as translations of a given unit to the left/right and up/down.	*I can move (translate) a point on a grid by a given set of jumps either up/down or left/right.*
Position	Plot specified points and draw sides to complete a given polygon.	*I can plot points using coordinates and join up the points to create a shape.*
Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	*I can take continuous and discrete data and create a bar chart or time graph.*
Statistics	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	*I can solve comparison, sum and difference problems using information in bar charts, pictograms, tables and other graphs.*

Rising Stars

	YEAR 4	
Sequence 1	• count in multiples of 1000 • 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 • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers
Sequence 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	• estimate, compare and calculate different measures, including money in pounds and pence • 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
Sequence 3	• count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	• recognise and use factor pairs and commutativity in mental calculations • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling and harder correspondence problems which *n* objects are connected to *m* objects
Sequence 4	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size	• identify lines of symmetry in 2-D shapes presented in different orientations
Sequence 5	• count in multiples of 1000 • find 1000 more or less than a given number • 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) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations	• round any number to the nearest 10, 100 or 1000 • 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

Sequence 6	• 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	• estimate, compare and calculate different measures, including money in pounds and pence • 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
Sequence 7	• count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and diving tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ¼ , ½ , ¾	• 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 • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • convert between different units of measure [for example, kilometre to metre; hour to minute]
Sequence 8	• count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations	• solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling and harder correspondence problems such as n objects are connected to m objects. • 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 • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
Sequence 9	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • describe positions on a 2-D grid as coordinates in the first quadrant	• describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon
Sequence 10	• count in multiples of 1000 • find 1000 more or less than a given number • 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) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000	• solve number and practical problems that involve all of the above and with increasingly large positive numbers • convert between different units of measure [for example, kilometre to metre; hour to minute] • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

Sequence 11	• 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 • interpret and present discrete and continuous data using bar charts and time graphs	• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs • solve simple measure and money problems involving fractions and decimals to two decimal places • estimate, compare and calculate different measures, including money in pounds and pence
Sequence 12	• count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ¼ , ½ , ¾	• 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 • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • convert between different units of measure [for example, kilometre to metre; hour to minute]
Sequence 13	• count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout	• solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling and harder correspondence problems such as n objects are connected to m objects • 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 • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
Sequence 14	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations	• complete a simple symmetric figure with respect to a specific line of symmetry • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares

Mathematics
Year 5

MATHEMATICS Year 5

Strand	Objective	Child Speak Target
Number Place Value	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.	*I can read, write, order and compare numbers to at least 1 000 000 and know the value of each digit.*
Number Place Value	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.	*I count forwards or backwards in steps 10, 100, 1000, 10000 or 100000 for any given number up to 1000000.*
Number Place Value	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	*I can use negative numbers in my work and can count backwards and forwards to and from negative numbers.*
Number Place Value	Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	*I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.*
Number Place Value	Solve number problems and practical problems that involve numbers up to 1000000, negative numbers, rounding or jumping in steps.	*I can solve number problems and practical problems that involve numbers up to 1000000, negative numbers, rounding or jumping in steps.*
Number Place Value	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	*I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.*
Addition Subtraction	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	*I can add and subtract whole numbers with more than 4 digits using written methods such as column addition and subtraction.*
Addition Subtraction	Add and subtract numbers mentally with increasingly large numbers.	*I can add and subtract larger numbers in my head.*
Addition Subtraction	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	*I round numbers to check the accuracy of my solution.*
Addition Subtraction	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	*I can solve addition and subtraction multi-step problems, deciding which operations and methods to use and why.*
Multiplication Division	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	*I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.*
Multiplication	Know and use the vocabulary of prime numbers, prime factors	*I know and use the vocabulary of prime numbers, prime*

Division	and composite (non-prime) numbers.	*factors and composite (non-prime) numbers.*
Multiplication Division	Establish whether a number up to 100 is prime and recall prime numbers up to 19.	*I know whether a number up to 100 is prime and recall prime numbers up to 19.*
Multiplication Division	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.	*I can multiply 4 digit numbers by a one- or two-digit number using a written method, including long multiplication for two-digit numbers.*
Multiplication Division	Multiply and divide numbers mentally drawing upon known facts.	*I multiply and divide numbers mentally drawing upon my times table knowledge and other number facts.*
Multiplication Division	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	*I can divide 4 digit numbers by a one-digit number using the written method of short division and find the remainder.*
Multiplication Division	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	*I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.*
Multiplication Division	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).	*I know what square numbers and cube numbers are, including the notation for squared (2) and cubed (3).*
Multiplication Division	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	*I can solve multiplication and division problems using my knowledge of factors and multiples, squares and cubes.*
Multiplication Division	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	*I can solve more difficult problems involving addition, subtraction, multiplication and division and a combination of these.*
Multiplication Division	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	*I can solve problems including scaling by simple fractions and problems involving simple rates.*
Fractions	Compare and order fractions whose denominators are all multiples of the same number.	*I can compare and order fractions whose denominators are all multiples of the same number.*
Fractions	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	*I can name and write equivalent fractions of a given fraction, and show these in a drawing (including tenths and hundredths).*
Fractions	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements greater than 1 as a mixed number [for example, 2/5 + 4/5 = 6/5	*I know what mixed numbers and improper fractions are and I can convert from one to the other [for example, 2/5 + 4/5 = 6/5 = 1 1/5].*

	= 1 1/5].	
Fractions	Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	*I can add and subtract fractions with the same denominator and denominators that are multiples of the same number.*
Fractions	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	*I use diagrams and some fraction tools to multiply proper fractions (7/10) and mixed numbers (1 7/10) by whole numbers.*
Fractions	Read and write decimal numbers as fractions [for example, 0.71 = 71/100].	*I can read and write decimal numbers as fractions [for example, 0.71 = 71/100].*
Fractions	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	*I know what thousandths are and how to use them with tenths, hundredths and decimals.*
Fractions	Round decimals with two decimal places to the nearest whole number and to one decimal place.	*I can round decimals with two decimal places to the nearest whole number and to one decimal place.*
Fractions	Read, write, order and compare numbers with up to three decimal places.	*I can read, write, order and compare numbers with up to three decimal places.*
Fractions	Solve problems involving number up to three decimal places.	*I can solve problems involving numbers with up to three decimal places.*
Fractions	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.	*I know what the per cent symbol is (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.*
Fractions	Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.	*I work on problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.*
Measurement	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).	*I can convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).*
Measurement	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	*I can change metric units to become imperial units such as inches, pounds and pints.*
Measurement	Measure and calculate the perimeter of composite rectilinear	*I can calculate the perimeter of multi-shape shapes in*

	shapes in centimetres and metres.	*centimetres and metres.*
Measurement	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.	*I can calculate the area of rectangles in square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.*
Measurement	Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].	*I can estimate volume [for example, using 1 cm3 blocks to build cuboids] and capacity [for example, using water].*
Measurement	Solve problems involving converting between units of time.	*I can convert between the units of time.*
Measurement	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	*I can solve more difficult problems which involve units of measurement, decimal numbers and scales.*
Shape	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	*I can Identify 3-D shapes, including cubes and other cuboids, from 2-D drawings.*
Shape	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	*I know that angles are measured in degrees and I can estimate and compare acute, obtuse and reflex angles.*
Shape	Draw given angles, and measure them in degrees (°).	*I can draw a given angle (such as 47°), and then measure them in degrees (°).*
Shape	Identify angles at a point and one whole turn (total 360°).	*I know one whole turn - or a set of angles all around a point - measure a total of 360°.*
Shape	Identify angles at a point on a straight line and a turn (total 180°).	*I know that a straight line - or angles that add up to a straight line - measure 180°.*
Shape	Identify other multiples of 90°.	*I can identify multiples of 90° (right angles).*
Shape	Use the properties of rectangles to deduce related facts and find missing lengths and angles.	*I can find the missing lengths and angles of a rectangle.*
Shape	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	*I know regular shapes have equal sides and angles and irregular shapes do not have equal sides and angles.*
Position	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.	*I can reflect or translate a shape on a grid.*
Statistics	Solve comparison, sum and difference problems using	*I can solve problems using a line graph to fid the answers.*

	information presented in a line graph.	
Statistics	Complete, read and interpret information in tables, including timetables.	*I can find the information I need from a timetable or large table of data.*

Rising Stars

	YEAR 5	
Sequence 1	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$]	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • solve problems involving converting between units of time
Sequence 2	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables
Sequence 3	• identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • multiply numbers up to 4 digits by a one-digit number using a formal written method • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • solve problems involving multiplication and division including using their knowledge of factors and multiples • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling
Sequence 4	• identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • identify: › angles at a point and one whole turn (total 360°) › angles at a point on a straight line and ½ a turn (total 180°) › other multiples of 90°	• draw given angles, and measure them in degrees (°) • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles

Sequence 5	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • read Roman numerals to 1000 (M) and recognise years written in Roman numerals • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	• read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • solve problems involving converting between units of time
Sequence 6	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	• solve problems involving number up to three decimal places • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • measure and calculate the perimeter • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables
Sequence 7	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • compare and order fractions whose denominators are all multiples of the same number • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1{}^{1}/_{5}$] • read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$]	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths
Sequence 8	• identify multiples and factors, including finding all factor pairs • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one-digit number using a formal written method • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those with a denominator of a multiple of 10 or 25 • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling

Sequence 9	• identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (°) • identify: › angles at a point and one whole turn (total 360°) › angles at a point on a straight line and ½ a turn (total 180°) › other multiples of 90°	• use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • identify, describe and present the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
Sequence 10	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • compare and order fractions whose denominators are all multiples of the same number • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	• read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • solve problems involving converting between units of time
Sequence 11	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	• add and subtract fractions with the same denominator and denominators that are multiples of the same number • solve problems involving number up to three decimal places • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • solve problems involving converting between units of time • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables

Sequence 12	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • compare and order fractions whose denominators are all multiples of the same number • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$]	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100, and as a decimal • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
Sequence 13	• identify multiples and factors, including finding all factor pairs and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method including long multiplication for two-digit numbers • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25 • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • solve problems involving converting between units of time
Sequence 14	• use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • 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	• measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes • estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]

Mathematics
Year 6

MATHEMATICS Year 6

Strand	Objective	Child Speak Target
Number Place Value	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.	*I can work with numbers up to 10 000 000 and know what each digit represents.*
Number Place Value	Round any whole number to a required degree of accuracy.	*I can round a whole number as requested - for example to the nearest 10 or 1000 or 100000.*
Number Place Value	Use negative numbers in context, and calculate intervals across zero.	*I understand and use negative numbers in my work, for example - working out how much is between -7 and +8.*
Number Place Value	Solve number and practical problems that involve large numbers, rounding and negative numbers.	*I can solve number and practical problems that involve large numbers, rounding and negative numbers.*
Multiplication Division	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	*I can multiply 4 digit numbers by a two-digit number (for example 4307 x 34) using the written method of long multiplication.*
Multiplication Division	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.	*I can divide 4 digit numbers by a two-digit number using the written method of long division - and tell you the remainder.*
Multiplication Division	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.	*I can choose to divide 4 digit numbers by a two-digit number using the written method of short division if this is possible.*
Multiplication Division	Perform mental calculations, including with mixed operations and large numbers.	*I can multiply, divide, add and subtract large numbers in my head.*
Multiplication Division	Identify common factors, common multiples and prime numbers.	*I identify common factors, common multiples and prime numbers.*
Multiplication Division	Use their knowledge of the order of operations to carry out calculations involving the four operations.	*I know that addition, subtraction, multiplication and division should be carried out in a specific order when looking at problems.*
Multiplication Division	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	*I can solve addition and subtraction multi-step problems, deciding where to add or subtract.*
Multiplication	Solve problems involving addition, subtraction, multiplication and	*I can solve problems involving addition, subtraction,*

Division	division.	*multiplication and division.*
Multiplication Division	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	*I always estimate my answer before I begin calculating - this helps me to check at the end to make sure I am correct.*
Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.	*I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.*
Fractions	Compare and order fractions, including fractions greater than 1.	*I can compare and order fractions, including fractions greater than 1.*
Fractions	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	*I add and subtract fractions with different denominators and mixed numbers.*
Fractions	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8].	*I can multiply fractions such as 1/4 × 1/2 = 1/8.*
Fractions	Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6].	*I know how to divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6].*
Fractions	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8].	*I can change a fraction into a decimal - for example, I can change 3/8 to 0.375 by dividing 1 by 8 and multiplying by 3.*
Fractions	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.	*I can multiply and divide numbers by 10, 100 and 1000 and know what each digit means up to three decimal places.*
Fractions	Multiply one-digit numbers with up to two decimal places by whole numbers.	*I can multiply numbers such as 1.45 by a one digit number - for example 1.45 x 7.*
Fractions	Use written division methods in cases where the answer has up to two decimal places.	*I use written division methods in cases where the answer has up to two decimal places.*
Fractions	Solve problems which require answers to be rounded to specified degrees of accuracy.	*I can solve problems which include rounding to a required accuracy such as the nearest 10, 100 or 10000.*
Fractions	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	*I know the decimal value, percentage and fraction of a range of values - such as 0.5, 50 per cent and 1/2.*
Ratio	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer	*I can solve problems about relative sizes (ratio).*

	multiplication and division facts.	
Ratio	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.	*I can find the percentage of an amount - such as finding 15 per cent of 360.*
Ratio	Solve problems involving similar shapes where the scale factor is known or can be found.	*I can solve similar shape problems.*
Ratio	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	*I can solve problems about unequal sharing - such as 'I need four eggs and for every egg I need three spoonfuls of flour. How much flour do I need?'.*
Algebra	Use simple formulae.	*I know how to use simple formulae such as n - 10 = 2.*
Algebra	Generate and describe linear number sequences.	*I can create a sequence of numbers that follow a rule.*
Algebra	Express missing number problems algebraically.	*I can use a letter (such as n or x) to show a missing number - such as 10 - x = 5.*
Algebra	Find pairs of numbers that satisfy an equation with two unknowns.	*I can find pairs of numbers that satisfy an equation with two unknowns.*
Algebra	Enumerate possibilities of combinations of two variables.	*I can list possible answers to missing numbers such as listing the possible answers of a and b in a + 6 = b - 10.*
Measurement	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	*I solve problems about different units of measures with three decimal places.*
Measurement	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.	*I can convert measurements of length, weight, volume and time up to three decimal places in length (for example 0.345kg = 345g).*
Measurement	Convert between miles and kilometres.	*I can convert between miles and kilometres.*
Measurement	Recognise that shapes with the same areas can have different perimeters and vice versa.	*I know that even though shapes may have the same area, the perimeter may be different - or a shapes with the same perimeter may have a different areas.*
Measurement	Recognise when it is possible to use formulae for area and volume of shapes.	*I can use a formulae for area and volume of shapes.*

Measurement	Calculate the area of parallelograms and triangles.	*I can calculate the area of parallelograms and triangles.*
Measurement	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].	*I can work with the volume of cubes and cuboids using cubic centimetres (cm3) and cubic metres (m3), and other units too such as mm3 and km3.*
Shape	Draw 2-D shapes using given dimensions and angles.	*I accurately draw 2-D shapes using given dimensions and angles.*
Shape	Recognise, describe and build simple 3-D shapes, including making nets.	*I can recognise, describe and build 3-D shapes, including making nets.*
Shape	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	*I can classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.*
Shape	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.	*I know the parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.*
Shape	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	*I can work with angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.*
Position	Describe positions on the full coordinate grid (all four quadrants).	*I can use the four quadrants in a coordinate grid.*
Position	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	*I can draw and translate shapes using coordinates or reflect a shape on the grid.*
Statistics	Interpret and construct pie charts and line graphs and use these to solve problems.	*I can use and construct pie charts and line graphs and use these to solve problems.*
Statistics	Calculate and interpret the mean as an average.	*I can calculate the mean as an average.*

Rising Stars

	YEAR 6	
Sequence 1	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy • solve number and practical problems that involve all of the above • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	• use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • convert between miles and kilometres
Sequence 2	• perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition and subtraction • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • solve problems which require answers to be rounded to specified degrees of accuracy • use simple formulae	• generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems
Sequence 3	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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 • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve problems involving addition, subtraction, multiplication	• multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation

	and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	to up to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average
Sequence 4	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	• use simple formulae • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • recognise that shapes with the same areas can have different perimeters and vice versa • calculate the area of parallelograms and triangles • recognise when it is possible to use the formulae for area and volume of shapes
Sequence 5	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy • use negative numbers in context, and calculate intervals across zero • solve number and practical problems that involve all of the above	• identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving the answers up to three decimal places • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
Sequence 6	• use negative numbers in context, and calculate intervals across zero • perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition and subtraction • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • solve problems which require answers to be rounded to specified degrees of accuracy • use simple formulae	• generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems

Sequence 7	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions >1 • associate a fraction with division and calculate decimal fraction equivalents [for example 0.375] for a simple fraction [for example ⅜] • recall and use equivalences between simple fractions, decimals and percentages, including in different context • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers to three decimal places • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically	• find pairs of numbers that satisfy an equation with two unknowns • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems
Sequence 8	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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 • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve problems involving addition, subtraction, multiplication and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	• solve problems involving the relative sizes of two quantities, where missing values can be found by using integer multiplication and division facts • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places • convert between miles and kilometres • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average

Sequence 9	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes • use simple formulae	• express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • calculate the area of parallelograms and triangles • recognise when it is possible to use the formulae for area and volume of shapes • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units [for example, mm^3 and km^3] • solve problems involving similar shapes where the scale factor is known or can be found
Sequence 10	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy • use negative numbers in context, and calculate intervals across zero • solve number and practical problems that involve all of the above • use common factors to simplify fractions; use common multiples to express fractions in the same denomination	• compare and order fractions, including fractions >1 • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • convert between miles and kilometres
Sequence 11	• perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • solve problems which require answers to be rounded to specified degrees of accuracy • use simple formulae	• generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average

Sequence 12	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions >1 • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example 3/8] • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • use simple formulae	• generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems
Sequence 13	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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 • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve problems involving addition, subtraction, multiplication and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] • divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] • multiply one-digit numbers with up to two decimal places by whole numbers	• use written division methods in cases where the answer has up to two decimal places • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • solve problems involving the relative sizes of two quantities, where missing values can be found by using multiplication and division facts • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average

Sequence 14	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes • recognise that shapes with the same areas can have different perimeters and vice versa	• calculate the area of parallelograms and triangles • recognise when it is possible to use the formulae for area and volume of shapes • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units [for example, mm^3 and km^3] • use simple formulae • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables • solve problems involving similar shapes where the scale factor is known or can be found