Mathematics

Long Term Planning

St Anthony's Catholic Primary School

At St Anthony's we are following the Rising Star Scheme of Learning, supplemented with resources from other sources including NRich, Third Space Learning, Teach Active, Target Maths, MyMaths

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Through enhanced and continuous provision Children in Reception will: M - Count objects, actions and sounds. Subitise. Link the number symbol (numeral) with its cardinal number value. Count beyond ten. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns. Compare length, weight and capacity.			Through continuous provision Children I Reception will: CL - Learn new vocabulary and use throughout the day in different contexts. Ask questions to find out more and to check they understand what has been said to them. PSED - See themselves as a valuable individual. Show resilience and perseverance in the face of challenge. PD - Develop their small motor skills so that they can use a range of resources competently, safely and confidently. KUW - Draw information from a simple map. Explore the natural world around them. Understand the effect of changing seasons on the natural world around them. Children will experience mathematics in all areas of provision both inside and outside, through our daily routines and in response to their interests and needs		

Reception	**Week 1-2** **Orientation** • Getting to know the setting **Week 3** **Number** • Sorting and Matching **Week 4** **Number** • Compare amounts **Week 5** **Measurement** • Use everyday language to Talk about size, weight, capacity **Week 6** **Geometry** • Recognise, create and describe patterns	**Weeks 7-8** **Numbers and place value** • Representing, comparing and ordering numbers to 3 **Week 9** **Geometry: Properties and shapes** • Explore the characteristics of everyday objects and shapes and use mathematical language to describe them (example 2 D shapes - triangles and circles) **Week 10** **Geometry : position and Direction** • Using positional language **Week 11** **Number :Place Value** • Representing and ordering numbers to 5 **Week 12** **Number and place value** • Say which is 1more or 1 less than a given number	**Weeks 1-2** **Number, place value** • Count reliably numbers 1-5 Introducing zero **Weeks 3-4** **Measures** • Use everyday language to talk about size, weight, capacity • Comparing mass and capacity **Weeks 4-6** **Numbers, place value** Count reliable to 8 • composition of 6-7 • composition to 8	**Week 7** **Addition and subtraction** • Add and subtract two single numbers **Week 8** **Measures** • Use everyday language to talk about length, height and time **Weeks 9-10** **Number, place value** • Representing, comparing and ordering numbers to 10 **Week 11-12** **Geometry** • Explore the characteristics of everyday objects and shapes and use mathematical language to describe them example 3D shapes and pattern Consolidation	**Weeks 1-2** **Number and place value** • Count reliably with numbers 1-20 **Week 3** **Geometry: position and direction** • Spatial reasoning **Weeks 4-5** **Addition and subtraction** Add and subtract two single numbers Count on or back to find the answer **Week 6** **Geometry: position and direction** • Spatial reasoning	**Weeks 7 -8** **Multiplication and division** Solve problems including doubling and halving and sharing **Week 9** **Numbers ,place value** • Compare and order numbers 1-20 **Week 10** **Number- properties** • Recognise odd and even numbers **Weeks 11-12** **Consolidation of spatial reasoning** **Consolidation of numbers to 20**

Year 1	**Weeks 1-5** **Number- Place Value** **counting/matching/identifying/writing** • count to and across 20, forwards and backwards, beginning with 0 or 1 • 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 **Week 6** **Measurement** • compare, describe and	**Weeks 7 - 10** **Addition and Subtraction** **Number – addition and subtraction** • given a number, identify one more and one less • represent and use number bonds and related subtraction facts within 10 • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as such as 7 = □ –9 **Weeks 11- 12** **Geometry: properties of shapes**	**Weeks 1-3** **Number - Place Value** **Addition and subtraction** • 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 ***Weeks 4-5*** ***counting/matching/identifying/writing*** count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number • given a number, identify one more and one less • identify and represent	**Weeks 7** *Count, read and write numbers to 100 in numerals; count in multiples of twos and tens* **Weeks 8-10** **Measurement** • measure and begin to record the following: – lengths and heights – mass/weight – capacity and volume • 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]	**Weeks 1** **Number - Place Value** *Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens* **Weeks 2-3** **Multiplication and division** • 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 **Weeks 4--5** **Fractions**	Weeks 7 *Recognise and know the value of different denominations of coins and notes* **Week 8** **Number and place value** *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* **Weeks 9**

	solve practical problems for: - lengths and heights [for example, long / short, longer /shorter, tall / short, double / half]	• 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] **Geometry: position and direction** Describe position, direction and movement.	numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least **Weeks 6** count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number	- capacity / volume [for example, full / empty, more than,less than, half, half full, quarter] **Week 11-12** **Measurement Time** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening	• 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 **Week 6** **Geometry: position and direction** Describe position, direction and movement, *including whole, half, quarter and three-quarter turns*	Addition and subtraction *Add and subtract 1-digit and 2-digit number 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* **Weeks 10 -11** **Measurement- Time** Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. **Weeks 11-12** **Geometry: properties of shapes** *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]*
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	**2.1** **NUMBER SENSE** **Number, place value and rounding** ● 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 ● read and write numbers to at	**2.3** **GEOMETRIC REASONING** **Geometry: properties of shapes** ● identify and describe the properties of 2-D shapes, includingthe 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	**2.6** **NUMBER SENSE** **Number and place value** ● *count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward* **Multiplication and division** ● recognise odd and even numbers **Statistics** ● 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.	**2.8** **NUMBER SENSE** **Number and place value** ● *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*	**2.11** **NUMBER SENSE** **Number and place value** ● *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;*	**2.13** **MULTIPLICATIVE REASONING** **Number and place value** ● *count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward* **Multiplication and division** ● *recall and use multiplication and division facts for the 2, 5and 10 multiplication tables, including recognising odd andeven numbers* ● *calculate mathematical*

	least 100 in numerals ● use place value and number facts to solve problems **Measurement** ● compare and order lengths, mass, volume / capacity ● compare and sequence intervals of time **Statistics** ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity **2.2** **ADDITIVE REASONING** **Number and place value** ● *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* ***2.3*** **Addition and subtraction** ● 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	everyday objects **Geometry: position and direction** ● order and arrange combinations of mathematical objects inpatterns and sequences **2.4** **NUMBER SENSE** **Number and place value** ● *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* **Measurement** ● *compare and order lengths, mass, volume / capacity*and record the results using >, < and = ● *compare and sequence intervals of time* **Statistics**	**2.7** **MULTIPLICATIVE REASONING** **Number and place value** ● *count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward* **Multiplication and division** ● recall and use multiplication and division facts for the 2, 5and 10 multiplication tables, *including recognising odd andeven 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, usingmaterials, arrays, repeated addition, mental methods, andmultiplication and division facts, including problems incontexts **Measurement** ● *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.	*least 100 in numerals* ● *use place value and number facts to solve problems* **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 ● *compare and order lengths, mass, volume / capacity and record the results using >, < and =* ● *compare and sequence intervals of time.* **2.9** **ADDITIVE REASONING** **Number and place value** ● *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* **Addition and subtraction** ● s*olve problems with addition and subtraction:* – *using concrete objects and pictorial representations, including those involving numbers, quantities and measures*	*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* **Measurement** ● *choose and use appropriate standard units to estimate andmeasure length / height in any direction (m / cm); mass (kg/ g); temperature (°C); capacity (litres / ml) to the nearestappropriate unit, using rulers, scales, thermometers andmeasuring vessels* ● *compare and order lengths, mass, volume / capacity and* *record the results using >, < and =* ● *compare and sequence intervals of time* **Statistics** ● *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.* **2.12** **ADDITIVE REASONING**	*statements for multiplication and division within the multiplication tables and write them usingthe 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* **Fractions** ● recognise, find, name and write fractions ⅓, ¼, ²⁄₄ and ³⁄₄ofa 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. **Measurement** ● *tell and write the time*

	● 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 **2.4** **Measurement** ● 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	● *ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity* **2.5** **ADDITIVE REASONING** **Number and place value** ● *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* **Addition and subtraction** ● *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* ● *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, pictorialrepresentations, and mentally, including:* – *a two-digit number and ones* – *a two-digit number and tens* – *adding three one-digit*		– *applying their increasing knowledge of mental 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, pictorialrepresentations, 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 calculationsand solve missing number problems* **Measurement** ● *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*	**Number and place value** ● *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* **Addition and subtraction** ● *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 methodsand 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*	*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.* **2.14** **GEOMETRIC REASONING** **Geometry: properties of shape** ● *identify and describe the properties of 2-D shapes, includingthe 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* **Geometry: position and direction** ● *order and arrange combinations of mathematical objects*

		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 solve missing number problems **Measurement** ● 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* **Statistics** *ask and answer questions about totalling and comparing categorical data.*		**Statistics** ● *ask and answer questions about totaling and comparing categorical data.* **2.10** **GEOMETRIC REASONING** **Geometry: properties of shape** ● *identify and describe the properties of 2-D shapes, includingthe 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* **Geometry: position and direction** ● *order and arrange combinations of mathematical objects in patterns and sequences* ● *use mathematical vocabulary to describe position, direction and movement.*	*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 solve missing number problems* **Statistics** *ask and answer questions about totaling and compare categorical data.*	*inpatterns and sequences* ● *use mathematical vocabulary to describe position, directionand movement,*including movement in a straight line and distinguishing between rotation as a turn and in termsof right angles for quarter, half and three-quarter turns(clockwise and anti-clockwise) **Fractions** ● *recognise, find, name and write fractions ⅓, ¼, ¾ and ¾ of a length, shape, set of objects or quantity* *write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of ¾ and ½.*
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	**3.1** **NUMBER**	**3.3** **MULTIPLICATIVE REASONING**	**3.6** **ADDITIVE REASONING**	**3.8** **MULTIPLICATIVE REASONING**	. **3.11** **ADDITIVE REASONING**	**3.13** **MULTIPLICATIVE**

	SENSE **Number and place value** ● 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 up to 1000 in numerals and in words ● solve number problems and practical problems involving these ideas **3.2** **ADDITIVE REASONING** **Addition and subtraction** ● 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, usingnumber facts, place	**Number and place value** ● *count from 0 in multiples of 4, 8, 50 and 100* **Multiplication and division** ● 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. **3.4** **GEOMETRIC REASONING** **Geometry: properties of shapes** ● draw 2-D shapes, and make 3-D shapes using modeling materials; 3-D shapes in different orientations and describe them **Geometry: position and direction** ● recognise that angles are a property of shape or a description of a turn ● identify right angles, recognise that two right anglesmake a half-turn, three make three quarters of a turn	**Addition and subtraction** ● *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 andsubtraction* **Measurement** ● *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* **Statistics** ● *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.* **3.7** **NUMBER SENSE**	**Number and place value** ● *count from 0 in multiples of 4, 8, 50 and 100* **Multiplication and division** ● *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* **Fractions** ● *count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10* ● 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. **3.9** **GEOMETRIC REASONING**	**Addition and subtraction** ● *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, usingnumber facts, place value, and more complex addition andsubtraction* **Measurement** ● *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, usingboth £ and p in practical contexts* ● *record and compare time in terms of seconds, minutes andhours; use vocabulary such as o'clock, a.m. / p.m., morning/,afternoon, noon and midnight*	**REASONING** **Number and place value** ● *count from 0 in multiples of 4, 8, 50 and 100* **Multiplication and division** ● *recall and use multiplication and division facts for the 3, 4and 8 multiplication tables* ● *write and calculate mathematical statements for multiplicationand 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; solve positive integerscaling problems and correspondence problems in which* nobjects *are connected to* m *objects.* **Fractions** ● *count up and down in tenths; recognise that tenths arise from dividing an object*

	value, and more complex addition andsubtraction **Measurement** ● 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, usingboth £ and p in practical contexts **Statistics** ● interpret and present data using bar charts, pictograms andtables ● 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.	and four a complete turn; identify whether angles are greater than or less than a right angle **3.5** **NUMBER SENSE** **Number and place value** ● *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* **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 ● *measure, compare, add and subtract: lengths (m / cm / mm); mass (kg / g); volume / capacity (l / ml)* **Fractions** ● count up and down in tenths,	**Number and place value** ● *identify, represent and estimate numbers using different representations* **Fractions** ● *count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10* ● 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 and fractions with the same denominator ● solve problems that involve all of the above.	**Geometry: properties of shapes** ● *draw 2-D shapes, and make 3-D shapes using modeling 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 makea half-turn, three make three quarters of a turn and four acomplete turn; identify whether angles are greater than orless than a right angle* ● identify horizontal and vertical lines and pairs of perpendicular and parallel lines. **3.10** **NUMBER SENSE** **Number and place value** ● *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*	● *know the number of seconds in a minute and the numberof days in each month, year and leap year* ● *compare durations of events, [for example, to calculate thetime taken by particular events or tasks]* **Statistics** ● *interpret and present data using bar charts, pictograms and tables* *solve one-step and two-step questions [for example, 'Howmany more?' and 'How many fewer?'] using informationpresented in scaled bar charts and pictograms and tables.* **3.12** **NUMBER SENSE** **Number and place value** ● *identify, represent and estimate numbers using different representations* **Fractions** ● *count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and dividing one-digit numbers or quantities by 10* ● *recognise and use fractions as numbers: unit*	*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.* **Measurement** ● *know the number of seconds in a minute and the numberof days in each month, year and leap year.* **3.14** **GEOMETRIC REASONING** **Geometry: properties of shape** ● *recognise that angles are a property of shape or a description of a turn* ● *identify right angles, recognise that two right angles makea half-turn, three make three quarters of a turn and four acomplete turn; identify whether angles are greater than orless than a right angle* ● *identify horizontal and vertical lines and pairs*

		recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.		*different representations* ● *read and write numbers up to 1000 in numerals and in words* ● *solve number problems and practical problems involving these ideas* **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* ● 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 numberof days in each month, year and leap year ● compare durations of events, [for example, to calculate the time taken by particular events or tasks] **Statistics** *interpret and present data using bar charts, pictograms and tables.*	*fractions andnon-unit fractions with small denominators* ● recognise and show, using diagrams, equivalent fractionswith small denominators ● *add and subtract fractions with the same denominator within one whole [for example, ⅖ + ⅕ = ⅗]* ● *compare and order unit fractions and fractions with the same denominator.* ● *solve problems that involve all of the above.*	*of perpendicular and parallel lines* ● measure the perimeter of simple 2-D shapes.
	Autumn1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Yea	**Weeks 1-3**	Weeks 7 **REASONING**	**Weeks 1** Multiply two-digit and three-	**Weeks 7** **Fractions- Number**	Weeks 1-2 **Number and place value**	**Weeks 7-8** **Number and place**

r 4	**Number and place value** ● 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. Weeks 4-5 **REASONING** **Addition and subtraction** ● 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	**Multiplication and divisions** ● recall multiplication and division facts for multiplication tables up to 12 × 12 ● 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. Week 8 **Measurement** Convert between different units of measure [for example, cm to metre]. **Week 9** **Perimeter** Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres **Weeks 10 -11** **Geometry: properties of shape** ● compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties	digit numbers by a one-digit number using formal written layout. Weeks 2-4 **Fractions (including decimals)** ● recognise and show, using diagrams, families of common equivalent fractions ● recognise and write decimal equivalents to ¼, ½, ¾ ● recognise and write decimal equivalents of any number of tenths or hundredths ● count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten ● 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 **Week 5** **Numbers and decimals** ● 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	add and subtract fractions with the same denominator Weeks 8-9 **Fractions (including decimals)** ● solve simple measure and money problems involving fractions and decimals to two decimal places **Weeks 10-11** **Geometry: position and direction** ● 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. **Week 12** **Measurement** ● read, write and convert time between analogue and digital12- and 24-hour clocks ● solve problems involving converting from hours to minutes; minutes to	● *count in multiples of 6, 7, 9, 25 and 1000* **Addition and subtraction** ● 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 context deciding which operations and methods to use and why ● 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. ● **Week 3** **Statistics** ● interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and	**value** ● count in multiples of 6, 7, 9, 25 and 1000 **Multiplication and division** ● use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividingby 1; multiplying together three numbers ● multiply two-digit and three-digit numbers by a one-digit number using formal written layout *solve problems involving multiplying* ● 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.

	problems in contexts, deciding which operations and methods to use and why Week 6 **Statistics** ● interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	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. **Week 12** **Statistics** ● interpret and present discrete and continuous data using appropriate graphical methods, including - bar charts and -time graphs	**Week 6** **Measurement** convert between different units of measure [for example, grams to kilograms]	seconds; years to months; weeks to days. ,	time graphs ● solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Week 4 **Fractions (including decimals)** ● solve simple measure and money problems involving fractions and decimals to two decimal places **Week 5-6** **Measurement** ● *convert between different units of measure [for example, kilometre to metre).* ● estimate, compare and calculate different measures, including money in pounds and pence **Measurement** find the area of rectilinear shapes by counting squares.	**Weeks 9-10** **Fractions (including decimals)** ● *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* **Weeks 11-12** **REASONING** **Geometry: properties of shapes** ● *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 find the area of rectilinear shapes by counting squares.
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Year 5	Weeks 1-3 **Number and place value** ● 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 involveall of the above **Weeks 4-5** **Addition and Subtraction** **Addition and subtraction** ● 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	**Weeks 7-8** **Multiplication and division multiples/factors/ formal** ● identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers **Weeks 9-10** **Multiplication and Division** ● multiply numbers up to 4 digits by a one-digit number using a formal written method ● multiply and divide numbers mentally drawing upon knownfacts ● divide numbers up to 4 digits by a one-digit number usingthe formal written method of short division and interpretremainders 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 **Week 11** **Fractions (including decimals and percentages)** ● *read and write decimal*	**Weeks 1-2** **Fractions (including decimals and percentages)** ● 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 mathematicalstatements >1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] Weeks 3 ● *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* *Week 4* ● recognise the per cent symbol (%) and understand that percent relates to "number of parts per hundred", and write ● percentages as a fraction with denominator 100, and as adecimal *identify, name and write equivalent fractions of a given* *fraction, represented visually including tenths and hundredths* **Week 5** **Fractions (including decimals and percentages)** ● solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those with a denominator of a multiple of 10 or 25	**Weeks 7** **Week 7** **Statistics** *solve comparison, sum and difference problems using information presented in a line graph* ● *complete, read and interpret information in tables, including timetables.* **Week 8-9** **Multiplication and division** ● *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 and divide numbers mentally drawing upon knownfacts* ● *divide numbers up to 4 digits by a one-digit number usingthe formal written method of short division and interpretremainders appropriately for the context* ● *multiply and divide whole numbers and those involving decimals by 10, 100 and*	**Week 1-2** **Addition and subtraction** **Consolidation** ● *add and subtract whole numbers with more than 4 digits,* *including using formal written methods (columnar additionand subtraction)* ● *add and subtract numbers mentally with increasingly larger 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* *Weeks 3-4* *Fractions Consolidation* ● add and subtract fractions with the same denominator and denominators that are multiples of the same number **Fractions (including decimals and percentages)** ● *recognise mixed numbers and improper fractions and convert from one form to the other and write mathematicalstatements >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	**Weeks 7-8** **REASONING** **Measurement** ● measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres ● calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes ● estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. Week 9-10 **Geometry: properties of shapes** ● *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*

	subtraction multi-step problems in **Week 6** **Statistics** ● solve comparison, sum and difference problems usinginformation presented in a line graph ● complete, read and interpret information in tables including timetables.	*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* **Week 12** **Measurement** ● *convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimeter and millimetre; kilogram and gram; litre and millilitre)* ● *solve problems involving converting between units of time.*	Week 6 ***Measures*** *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*	*1000* ● recognise and use square numbers and cube numbers, andthe 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 Weeks 10-11 **Geometry: properties of shapes** ● *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*	anddenominators that are multiples of the same number ● *solve problems involving number up to three decimal places* *Week 5 -6* **Measurement** ● 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.* **NUMBER SENSE** **Multiplication and division** ● *multiply and divide whole numbers and those involving decimals by 10, 100 and 1000* **Fractions (including decimals and percentages)** ● *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*	*angles* **Geometry: position and direction** ● *identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed* **Week 11** **Reasoning and problem solving:** **Measurement/ Fractions geometry** **Week 12** **Assessment**

				Week 12 **Geometry: position and direction** ● identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	*the other and write mathematicalstatements >1 as a mixed number [for example, ⅖ + ⅘ =⅚ = 1⅕]* ● *read and write decimal*	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	**6.1** **NUMBER SENSE** **Number and place value** ● read, write, order and compare numbers up to 10 000 000and 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 theabove **Fractions (including decimals and percentages)**	**6.3** **MULTIPLICATIVE REASONING** **Addition, subtraction, multiplication and division** ● multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication ● divide numbers up to 4 digits by a two-digit whole numberusing the formal written method of long division, and interpretremainders as whole number remainders,	**6.6** **ADDITIVE REASONING** **Number and place value** ● *use negative numbers in context, and calculate intervals across zero* **Addition, subtraction, multiplication and division** ● *perform mental calculations, including with mixed operations and large numbers* ● *use their knowledge of the order of operations to carry outcalculations involving the four operations*	**6.8** **MULTIPLICATIVE REASONING** **Addition, subtraction, multiplication and division** ● *multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication* ● *divide numbers up to 4 digits by a two-digit whole numberusing the formal written method of long division, andinterpret remainders as whole number remainders, fractions,or by*	**6.11** **ADDITIVE REASONING** **Addition, subtraction, multiplication and division** ● *perform mental calculations, including with mixedoperations and large numbers* ● *use their knowledge of the order of operations to carry outcalculations involving the four operations* ● *solve addition and subtraction multi-step problems in contexts,deciding which*	**6.13** **MULTIPLICATIVE REASONING** **Addition, subtraction, multiplication and division** ● *multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication* ● *divide numbers up to 4 digits by a two-digit whole number using the formal written*

	• identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100and 1000 giving answers up to three decimal places **Measurement** • 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. **6.2** **ADDITIVE REASONING** **Addition, subtraction, multiplication and division** • perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry outcalculations 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 • use estimation to check	fractions, or byrounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number usingthe 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 outcalculations 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* **Fractions (including decimals and percentages*)*** • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer hasup to two decimal places **Ratio and proportion** • solve problems involving the calculation of percentages [forexample, of measures, and such as 15% of 360] and	• *solve addition and subtraction multi-step problems in contexts,deciding which operations and methods to use and why* • *solve problems involving addition, subtraction* • *use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy* **Fractions (including decimals and percentages)** • *solve problems which require answers to be rounded to specified degrees of accuracy* **Algebra** • *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* **Measurement** • *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*	*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 mixedoperations and large numbers* • *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 outcalculations 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* **Fractions (including decimals and percentages)** • *multiply one-digit numbers with up to two decimal places by whole numbers* • *use written division methods in cases where the answer hasup to two decimal places* **Ratio and proportion** • *solve problems involving the calculation of percentages [forexample, of measures, and such as 15% of 360] and*	*operations and methods to use and why* • *solve problems involving addition, subtraction,multiplication and division* • *use estimation to check answers to calculations anddetermine, in the context of a problem, an appropriatedegree of accuracy* **Fractions (including decimal and percentages)** • add and subtract fractions with different denominators andmixed numbers, using the concept of equivalent fractions • *solve problems which require answers to be rounded tospecified degrees of accuracy* **Algebra** • *use simple formulae* • *generate and describe linear number sequences* • *express missing number problems algebraically* • *find pairs of numbers that satisfy an equation with twounknowns* • *enumerate possibilities of combinations of two variables* **Measurement** • *solve problems involving the calculation and conversionof units of measure, using decimal notation to threedecimal places where appropriate*	*method of long division, andinterpret 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 mixedoperations and large numbers* • *identify common factors, common multiples and primenumbers* • *use their knowledge of the order of operations to carry outcalculations involving the four operations* • *solve problems involving addition, subtraction,multiplication and division* • *use estimation to check answers to calculations anddetermine, in the context of a problem, an appropriate degree of accuracy* **Fractions (including decimals and percentages)**

	answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy **Fractions (including decimals and percentages)** ● solve problems which require answers to be rounded to specified degrees of accuracy **Algebra** ● 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 **Measurement** ● 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* **Statistics** ● interpret and construct pie charts and line graphs and use these to solve problems.	the useof percentages for comparison **Algebra** ● *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.* **Measurement** ● *solve problems involving the calculation and conversion ofunits of measure, using decimal notation to three decimalplaces 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* **Statistics** ● *interpret and construct pie charts and line graphs and use these to solve problems* ● calculate and interpret the mean as an average. **6.4** **GEOMETRIC REASONING**	**Statistics** *interpret and construct pie charts and line graphs and* *use these to solve problems.* **6.7** **NUMBER SENSE** **Fractions (including decimals and percentages)** ● 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 contexts ● *identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100and 1000 giving answers up to three decimal places* **Algebra** ● *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*	*the useof percentages for comparison* ● solve problems involving the relative sizes of two quantities,where missing values can be found by using integermultiplication and division facts ● solve problems involving unequal sharing and grouping using knowledge of fractions and multiples **Algebra** ● *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* **Measurement** ● *solve problems involving the calculation and conversion ofunits of measure, using decimal notation to three decimalplaces 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* **Statistics** ● *interpret and construct pie*	● *use, read, write and convert between standard units,converting measurements of length, mass, volume andtime from a smaller unit of measure to a larger unit,and vice versa, using decimal notation to three decimalplaces* **Statistics** ● *interpret and construct pie charts and line graphs anduse these to solve problems* *calculate and interpret the mean as an average.* **6.12** **NUMBER SENSE** **Fractions (including decimals and percentages)** ● *use common factors to simplify fractions; use commonmultiples to express fractions in the same denomination* ● *compare and order fractions, including fractions >1* ● *associate a fraction with division and calculate decimalfraction equivalents [for example, 0.375] for a simplefraction [for example, ⅜]* ● *recall and use equivalences between simple fractions,decimals and percentages, including in differentcontexts*	● multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ × ½ = ⅛] ● divide proper fractions by whole numbers [for example, ⅓ ÷ 2 = ⅙] ● *multiply one-digit numbers with up to two decimal placesby whole numbers* ● *use written division methods in cases where the answer hasup to two decimal places* **Ratio and proportion** ● *solve problems involving the calculation of percentages [forexample, of measures, and such as 15% of 360] and the useof percentages for comparison* ● *solve problems involving the relative sizes of twoquantities, where missing values can be found by usingmultiplication and division facts* ● *solve problems involving unequal sharing and groupingusing knowledge of fractions and multiples* **Algebra** ● *use simple formulae* ● *generate and describe*

		Geometry: properties of shapes ● draw 2-D shapes using given dimensions and angles ● recognise, describe and build simple 3-D shapes, includingmaking 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 istwice the radius ● recognise angles where they meet at a point, are on a straightline, or are vertically opposite, and find missing angles **Algebra** ● *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* **Measurement** ● 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	**Measurement** ● *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* **Statistics** ● *interpret and construct pie charts and line graphs and use these to solve problems.*	*charts and line graphs and use these to solve problems* *calculate and interpret the mean as an average.* **6.9** **GEOMETRIC REASONING** **Geometry: properties of shapes** ● *draw 2-D shapes using given dimensions and angles* ● *recognise, describe and build simple 3-D shapes, includingmaking 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 istwice the radius* **Geometry: position and direction** ● 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 **Algebra** ● *use simple formulae* ● *express missing number problems algebraically* ● *find pairs of numbers that satisfy an equation with two*	● *identify the value of each digit in numbers given to threedecimal places and multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places* **Algebra** ● *use simple formulae* ● *generate and describe linear number sequences* ● *express missing number problems algebraically* ● *find pairs of numbers that satisfy an equation with twounknowns* **Measurement** ● *solve problems involving the calculation and conversionof units of measure, using decimal notation to threedecimal places where appropriate* ● *use, read, write and convert between standard units,converting measurements of length, mass and time froma smaller unit of measure to a larger unit, and vice versa,using decimal notation to three decimal places* **Statistics** ● *interpret and construct pie charts and line graphs anduse these to solve problems.*	*linear number sequences* ● *express missing number problems algebraically* ● *find pairs of numbers that satisfy an equation with twounknowns* ● *enumerate possibilities of combinations of two variables* **Measurement** ● *solve problems involving the calculation and conversionof units of measure, using decimal notation to threedecimal places where appropriate* ● *use, read, write and convert between standard units,converting measurements of length, mass and time froma smaller unit of measure to a larger unit, and vice versa,using decimal notation to three decimal places* **Statistics** ● *interpret and construct pie charts and line graphs anduse these to solve problems* *calculate and interpret the mean as an average.* **6.14** **GEOMETRIC**

		the formulae for area and volume of shapes. **6.5** **NUMBER SENSE** **Number and place value** ● *read, write, order and compare numbers up to 10 000 000and 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 problems and practical problems that involveall of the above* **Fractions (including decimals and percentages)** ● *identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100and 1000 given answers up to three decimal places* **Measurement** ● *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.*		*unknowns* ● *enumerate possibilities of combinations of two variables* **Measurement** ● *calculate the area of parallelograms and triangles* ● *recognise when it is possible to use the formulae for areaand volume of shapes* ● calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimeters(cm^3) and cubic metres (m^3) and extending to other units,[for example, mm^3 and km^3] **Ratio and proportion** ● Solve problems involving similar shapes where the scale factor is known or can be found. **6.10** **NUMBER SENSE** **Number and place value** ● *read, write, order and compare numbers up to 10 000 000and 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*		**REASONING** **Geometry: properties of shapes** ● *draw 2-D shapes using given dimensions and angles* ● *recognise, describe and build simple 3-D shapes, includingmaking nets* ● *compare and classify geometric shapes based on theirproperties and sizes and find unknown angles in anytriangles, quadrilaterals, and regular polygons* ● *illustrate and name parts of circles, including radius,diameter and circumference and know that the diameter I stwice the radius* ● *recognise angles where they meet at a point, are on astraight line, or are vertically opposite, and find missingangles* **Geometry: position, direction, motion** ● *describe positions on the full coordinate grid (all fourquadrants)* ● *draw and translate simple shapes on the coordinate plane,and reflect them in the axes*

				• *solve number problems and practical problems that involveall of the above* **Fractions (including decimals and percentages)** • *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* **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 up to three decimal places* • *convert between miles and kilometres.*		**Algebra** • *use simple formulae* • *express missing number problems algebraically* • *find pairs of numbers that satisfy an equation with twounknowns* • *enumerate possibilities of combinations of two variables* **Measurement** • *recognise that shapes with the same areas can havedifferent perimeters and vice versa* • *calculate the area of parallelograms and triangles* • *recognise when it is necessary to use the formulae forarea and volume of shapes* • *calculate, estimate and compare volume of cubes andcuboids using standard units, including cubic centimeters(cm^3) and cubic metres (m^3) and extending to other units,[for example, mm^3 and km^3]* **Ratio and proportion** • *solve problems involving similar shapes where the scalefactor is known or can be found.*