Y3/4 Block A Term 1 (15 lessons) **3/4 A1** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	

Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument
 	
Number and Place Value
• ***count from 0 in multiples of 4, 8, 50 and 100***
• ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)***
• order and compare numbers to and beyond 1000
• identify, represent and estimate numbers using different representations
• read and write numbers to at least 1000 in numerals and in words
• 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 understand how, over time, the numeral system changed to include the concept of zero and place value.
	Year 3
	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 (number-lines –Diennes – column)
	
	Measures
	• measure, compare, add and subtract**: lengths (m/cm/mm);** mass (kg/g); volume/capacity (l/ml)
	• know the number of seconds in a minute and the number of days in each month, year and leap year
	
	Geometry: properties of shape
	• recognise angles as 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
		Year 4
		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 contexts, (inc. money), deciding which operations and methods to use and why.
		
		Measures
		• convert between different units of **measure (e.g. kilometre to metre**; hour to minute)
		• *read, write and convert time between analogue and digital 12 and 24-hour clocks (mostly mental)*
		
		Geometry: Properties of shapes
		• 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

Y3/4 Block B Term 1 (15 lessons) **3/4B1** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	
Problem solving and reasoning • Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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 understand how, over time, the numeral system changed to include the concept of zero and place value.	**Year 3** **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, using mental and progressing to formal written methods (numberlines – grid – column) • solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects. **Fractions** (see NC notes and guidance) • 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 (1/3, ¼, 1/5) and non-unit fractions (2/3, ¾, 2/5))with small denominators • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • compare and order unit fractions, and fractions with the same denominator • solve problems that involve all of the above.	**Year4** **Multiplication and division** • 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 • 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 problems and harder correspondence problems such as n objects are connected to m objects. **Fractions, decimals and percentages** • count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

<table>
<tr><td>Y3/4 Block C Term 1 (15 lessons)
3/4C1
Ongoing/embedded AT1 and mental calculations</td><td colspan="2">Learning Objectives :
By the end of this sequence of lessons all pupils will be able to…..
These objectives will also be revisited throughout the year</td></tr>
<tr><td rowspan="2">Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument

Number and Place Value
• count from 0 in multiples of 4, 8, 50 and 100
• count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)
• order and compare numbers to and beyond 1000
• identify, represent and estimate numbers using different representations
• read and write numbers to at least 1000 in numerals and in words
• 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</td><td>Year 3</td><td>Year4</td></tr>
<tr><td>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 (numberlines – dienes – column)
• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Measures
• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
• measure the perimeter of simple 2-D shapes
• know the number of seconds in a minute and the number of days in each month, year and leap year

Statistics
• interpret and present data using bar charts, pictograms and tables
• solve one-step and two-step questions such as ‘How many more?’ and ‘How many fewer?’ using information presented in scaled bar charts and pictograms and tables.</td><td>Addition and subtraction
• add and subtract numbers with up to 4 digits using the efficient 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.

Measures
• convert between different units of measure (e.g. kilometre to metre; hour to minute)
• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
• find the area of rectilinear shapes by counting
• read, write and convert time between analogue and digital 12 and 24-hour clocks

Statistics
• interpret and present discrete data using bar charts and continuous data using line graphs
• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.
Compare the impact of representations where scales have intervals of differing step sizes</td></tr>
</table>

Y3/4 Block D Term 1 (15 lessons) **3/4D1** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	
Problem solving and reasoning • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 1000*** • ***count backwards through zero to include negative numbers*** • ***recognise the place value of each digit in 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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 understand how, over time, the numeral system changed to include the concept of zero and place value.	**Year 3** **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, using mental and progressing to formal written methods (numberline – grid – column) • solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects. **Fractions** • add and subtract fractions with the same denominator within one whole (e.g. $^5/_7 + {}^1/_7 = {}^6/_7$) • **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** • compare and order unit fractions, and fractions with the same denominator **Geometry: properties of shape** • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations; and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, identify whether angles are greater than or less than a right angle identify horizontal, vertical, perpendicular and parallel lines in relation to other lines	**Year 4** **Multiplication and division** • 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 commutatively 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 and harder multiplication problems such as which n objects are connected to m objects. **Fractions, decimals and percentages** • **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** • solve simple measure and money problems involving fractions and decimals to two decimal places. • add and subtract fractions with the same denominator. **Geometry: position and direction** • describe positions on a 2-D grid as coordinates in the first quadrant • plot specified points and draw sides to complete a given polygon.

Y3/4 Block A Term 2 (15 lessons) **3/4A2** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	

Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument
 	
Number and Place Value
• ***count from 0 in multiples of 4, 8, 50 and 100***
• ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)***
• order and compare numbers to and beyond 1000
• identify, represent and estimate numbers using different representations
• read and write numbers to at least 1000 in numerals and in words
• 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
	Year 3
	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, using number facts, place value, and more complex addition and subtraction.**
	
	Measures
	• measure, compare, add and subtract: lengths (m/cm/mm); **mass (kg/g);** volume/capacity (l/ml)
	• measure the perimeter of simple 2-D shapes
	• **add and subtract amounts of money to give change, using both £ and p in practical contexts**
	• know the number of seconds in a minute and the number of days in each month, year and leap year
	
	Geometry: properties of shape
	• recognise angles as 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
		Year 4
		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 contexts, deciding which operations and methods to use and why.
		
		Measures
		• convert between different units of measure (e.g. kilometre to metre; **kg to g,** hour to minute)
		• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
		• find the area of rectilinear shapes by counting squares
		• **estimate, compare and calculate different measures, including money in pounds and pence**
		• read, write and convert time between analogue and digital 12 and 24-hour clocks
		
		Geometry: Properties of shapes
		• 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.**

<table>
<tr><td>Y3/4 Block B Term 2 (15 lessons)
3/4B2
Ongoing/embedded AT1 and mental calculations</td><td colspan="2">Learning Objectives :
By the end of this sequence of lessons all pupils will be able to…..
These objectives will also be revisited throughout the year</td></tr>
<tr><td>Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument

Number and Place Value
• count from 0 in multiples of 4, 8, 50 and 100
• count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)
• order and compare numbers to and 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 understand how, over time, the numeral system changed to include the concept of zero and place value.</td><td>Year 3
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, using mental and progressing to formal written methods
• solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.

Fractions
• 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
• 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
• compare and order unit fractions with the same denominator
• solve problems that involve all of the above.</td><td>Year 4
Multiplication and division
• 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 commutatively 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 problems and harder correspondence problems such as n objects are connected to m objects.

Fractions, decimals and percentages
• count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten
• solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
• recognise and show, using diagrams, families of common equivalent fractions
• add and subtract fractions with the same denominator.</td></tr>
</table>

Y3/4 Block C Term 2 (15 lessons) **3/4C2** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	
Problem solving and reasoning • Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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	**Year 3** **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 + and - • 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 (money).** **Measures** • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); **volume/capacity (l/ml**) • **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, hours and o'clock; use vocabulary such as 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.** **Statistics** • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts, tables and pictograms.	**Year 4** **Addition and subtraction** • add and subtract numbers with up to 4 digits using the efficient 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(money), deciding which operations and methods to use and why.** **Measures** • convert between different units of measure (e.g. kilometre to metre**; l to ml**, 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.** **Statistics** • interpret and present discrete data using bar charts and continuous data using line graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs. • *Compare the impact of representations where scales have intervals of differing step sizes*

Y3/4 Block D Term 2 (15 lessons) **3/4D2** **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..*** **These objectives will also be revisited throughout the year**	
Problem solving and reasoning • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 1000*** • ***count backwards through zero to include negative numbers*** • ***recognise the place value of each digit in 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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 understand how, over time, the numeral system changed to include the concept of zero and place value. .	**Year 3**	**Year 4**
	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, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects. **Fractions** • add and subtract fractions with the same denominator within one whole (e.g. $^5/_7 + ^1/_7 = ^6/_7$) • 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 show, using diagrams, equivalent fractions with small denominators • compare and order unit fractions with the same denominator **Geometry: properties of shape** • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations; and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, identify whether angles are greater than or less than a right angle • **identify horizontal, vertical, perpendicular and parallel lines in relation to other lines**	**Multiplication and division** • 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 commutatively 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 and harder multiplication problems such as which n objects are connected to m objects. **Fractions, decimals and percentages** • **recognise and write decimal equivalents of any number of tenths or hundredths** • **recognise & write decimal equivalents to $^1/_4$; $^1/_2$; $^3/_4$** • 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** • **solve simple measure and money problems involving fractions and decimals to two decimal places.** **Geometry: position and direction** • **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.

Y3/4 Block A Term 3 (15 lessons) **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..***	

Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument
 	
Number and Place Value
• ***count from 0 in multiples of 4, 8, 50 and 100***
• ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)***
• order and compare numbers to and beyond 1000
• identify, represent and estimate numbers using different representations
• read and write numbers to at least 1000 in numerals and in words
• 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 understand how, over time, the numeral system changed to include the concept of zero and place value.
	Year 3
	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, using number facts, place value, and more complex addition and subtraction.
	
	Measures
	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
	• measure the perimeter of simple 2-D shapes
	• add and subtract amounts of money to give change, using both £ and p in practical contexts
	• 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
	
	Geometry: properties of shape
	• recognise angles as 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
		Year 4
		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 contexts, deciding which operations and methods to use and why.*
		
		Measures
		• convert between different units of measure (e.g. kilometre to metre; hour to minute)
		• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
		• find the area of rectilinear shapes by counting squares
		• estimate, compare and calculate different measures, including money in pounds and pence
		• 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.
		
		Statistics
		• interpret and present discrete data using bar charts and continuous data using line graphs
		• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.

Y3/4 Block B Term 3 (15 lessons) **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..***	
Problem solving and reasoning • Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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 understand how, over time, the numeral system changed to include the concept of zero and place value.	**Year 3** **Multiplication and division** • recall and use x and ÷ facts for the 3, 4 & 8s • 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 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 • 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 • compare and order unit fractions with the same denominator • solve problems that involve all of the above. **Statistics** • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions such as ‘How many more?’ and ‘How many fewer?’ using information presented in scaled bar charts, pictograms and tables.	**Year 4** **Multiplication and division** • 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 commutatively 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 problems and harder correspondence problems such as n objects are connected to m objects**.** **Fractions, decimals and percentages** • count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator. **Geometry: Properties of shapes** • 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

Y3/4 Block C Term 3 (15 lessons) **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..***	

Problem solving and reasoning
• Solve one and two-step problems involving whole numbers, simple fractions and decimals, money and measures, including time and temperature, perimeter and applying multiplicative scaling
• Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs
• Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons
• Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument
 	
Number and Place Value
• ***count from 0 in multiples of 4, 8, 50 and 100***
• ***count in multiples of 6, 7, 9, 25 and 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 3 and four-digit number (thousands, hundreds, tens, and ones)***
• order and compare numbers to and beyond 1000
• identify, represent and estimate numbers using different representations
• read and write numbers to at least 1000 in numerals and in words
• 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 understand how, over time, the numeral system changed to include the concept of zero and place value.
	Year 3
	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, using number facts, place value, and more complex addition and subtraction.
	
	Measures
	• 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
	• 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, hours and o'clock; use vocabulary such as 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.
	
	Statistics
	• interpret and present data using bar charts, pictograms and tables
	• solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts, pictograms and tables
		Year 4
		Addition and subtraction
		• add and subtract numbers with up to 4 digits using the efficient 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.
		
		Measures
		• convert between different units of measure (e.g. kilometre to metre; hour to minute)
		• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
		• find the area of rectilinear shapes by counting
		• estimate, compare and calculate different measures, including money in £s and p
		• 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.
		
		Statistics
		• interpret and present discrete data using bar charts and continuous data using line graphs
		• solve comparison, sum and difference problems using information presented in bar charts,pictograms, tables and simple line graphs.
		• *Compare the impact of representations where scales have intervals of differing step sizes*

Y3/4 Block D Term 3 (15 lessons) **Ongoing/embedded AT1 and mental calculations**	**Learning Objectives :** ***By the end of this sequence of lessons all pupils will be able to…..***	
Problem solving and reasoning • Represent a problem using number sentences involving more than one operation; draw and interpret diagrams and graphs • Report orally on solutions to problems, providing explanations and decisions supported with an argument and reasons • Identify and describe patterns, properties and relationships to establish invariants, apply in unfamiliar situations to make deductions; investigate a given statement and test with examples; collect data to create graphs and support an argument **Number and Place Value** • ***count from 0 in multiples of 4, 8, 50 and 100*** • ***count in multiples of 6, 7, 9, 25 and 1000*** • ***count backwards through zero to include negative numbers*** • ***recognise the place value of each digit in 3 and four-digit number (thousands, hundreds, tens, and ones)*** • order and compare numbers to and beyond 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • 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	**Year 3** **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, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects. **Fractions** • add and subtract fractions with the same denominator within one whole (e.g. $^5/_7 + ^1/_7 = ^6/_7$) • 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 show, using diagrams, equivalent fractions with small denominators • compare and order unit fractions with the same denominator **Geometry: properties of shape** • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations; and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, identify whether angles are greater than or less than a right angle identify horizontal, vertical, perpendicular and parallel lines in relation to other lines	**Year 4** **Multiplication and division** • 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 commutatively 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 and harder multiplication problems such as which n objects are connected to m objects. **Fractions, decimals and percentages** • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $^1/_4$; $^1/_2$; $^3/_4$ • 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 • solve simple measure and money problems involving fractions and decimals to two decimal places. **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.