Maths Long Term Plan Year 4

Year 4 Maths	
National Curriculum Objectives for Year 4	**Key Links**
Pupils should be taught: The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.	https://resources.whiterosemaths.com/resources/year-4/ https://www.mathletics.com/uk/ https://www.timestables.co.uk/multiplication-tables-check/ **Recap knowledge:** Times tables Written methods for + - x ÷ Links between multiplication and division Inverse operations Rounding & estimating Greater than, less than, equal to (numbers, fractions and decimals) Time

Topics		Working towards	Expected progress	Greater depth / extension	Key vocabulary
Autumn 1	Number: Place Value	•Begin to count in multiples of 6, 7, 9, 25 and 1000 • Begin to find 1000 more or less than a given number • Begin to count backwards through 0 to include negative numbers • Begin to know that ten hundreds are equivalent to one thousand, and that 1000 is ten times the size of 100, and use this to work out how many hundreds there are in other four-digit multiples of 100 • Begin to recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit	•Count in multiples of 6, 7, 9, 25 and 1000 • Find 1000 more or less than a given number • Count backwards through 0 to include negative numbers • Know that ten hundreds are equivalent to one thousand, and that 1000 is ten times the size of 100, and use this to work out how many hundreds there are in other four-digit multiples of 100 • Recognise the place value of each digit in a four-digit number • Compose and decompose four-digit numbers using standard and non-	•Apply their number and place value knowledge to answer increasingly complex reasoning and problem solving questions •Use mathematical vocabulary to explain ideas fluently and make generalisations • Solve number and place value questions of greater complexity by applying procedures fluently • Explore and investigate numbers up to 10,000 by	Place value, thousands, hundreds, tens, ones, partition, represents, greater than, less than, equal to, compare, order, find _ more / _ less, numerals, digits, estimate, written form, expanded method, place holder, multiples, Roman

		numbers using standard and non-standard partitioning • Begin to order and compare numbers beyond 1000 • Begin to identify, represent and estimate numbers using different representations • Begin to reason about the location of any four-digit number, including identifying the previous and next multiple of 100 and 1000 • Begin to round any number to the nearest 10, 100 or 1000 • Begin to divide 1000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1000 with 2, 4, 5 and 10 equal parts • Begin to solve number and practical problems that involve all of the above; • Begin to read Roman numbers to 100.	standard partitioning, writing the related addition calculation, and being able (with standard partitioning) to subtract any single place value part from the whole number • Order and compare numbers beyond 1000 • Identify, represent and estimate numbers using different representations • Reason about the location of any four-digit number, including identifying the previous and next multiple of 100 and 1000 • Round any number to the nearest 10, 100 or 1000 • Divide 1000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1000 with 2, 4, 5 and 10 equal parts • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • Read Roman numbers to 100 (I to C).	representing them in different ways.	numerals, negative numbers, number line, round to the nearest Th, H, T, O
	Statistics	• Interpret data • Present data as a bar chart • Answer comparison, sum and difference questions about data presented in tables, pictograms and bar charts • Interpret and present data in a two-circle Venn diagram	• Identify the difference between discrete and continuous data • Interpret discrete and continuous data • Present data as grouped bar charts • Begin to interpret data in time graphs and line graphs • Answer comparison, sum and difference questions about data presented in tables, pictograms, grouped bar charts and climate graphs • Interpret and present data in a two-	• Interpret a wide range of discrete and continuous data • Present data as grouped or stacked bar charts • Interpret and present data in line graphs • Answer comparison, sum and difference questions about data presented in tables, pictograms, grouped or stacked bar charts, climate graphs and line graphs	Interpret, present, data, comparison, pictograms, bar graphs / charts, time and line graphs, x and y axis, Venn diagrams, Carroll diagram

	Number: Addition and Subtraction	•Have a secure understanding of addition and subtraction facts that bridge ten, through continued practice. • Calculate complements to 100. • Understand the inverse relationship between addition and subtraction, and how both relate to the part–whole structure. • Understand and use the commutative property of addition, and understand the related property for subtraction. • Add and subtract up to three-digit numbers using columnar methods.	circle Venn diagram and a Carroll diagram. •Add and subtract numbers with up to four digits using the formal written methods of column addition and subtraction. • 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. • Continue to practise mental methods to aid fluency	• Interpret and present data in a three-circle Venn diagram and a Carroll diagram. •Use reasoning about number facts to answer increasingly complex questions. • Explain ideas fluently using mathematical vocabulary and make generalisations. • Confidently record addition and subtraction in columns including decimals.	Addition, subtraction, difference, minus, total, altogether, exchange, column, formal method (written method), estimate, inverse operations, commutative, representation / X represents the ___ (amount to be added, subtracted, total)
Progression	**Year 3 expectations:** **Number: Place value-** •Read numbers up to 1000 in numerals and words •recognise multiples of four, eight, 50 and 100 •find missing numbers in a given sequence •solve problems involving multiples •solve problems involving place value •solve problems involving partitioning •solve problems involving comparing and ordering numbers •solve problems involving numbers in different representations •solve place value problems involving measures. **Statistics –** •Create scaled bar charts and pictograms •create Venn and Carroll diagrams •create a table of information •ask and answer two-step questions about charts, tables and diagrams **Number: Addition and Subtraction-** •Add and subtract numbers with up to four digits using the formal written methods of column addition and subtraction •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 •continue to practise both mental methods to aid fluency. **Year 5 expectations:** **Number: Place value -** • read and write most numbers up to 1 000 000 • identify the value of most digits in numbers up to 1 000 000 • use concrete, visual and abstract representations to help identify numbers with two decimal places • order most numbers up to 1 000 000 • compare most numbers up to 1 000 000 using the greater than and less than symbols • round numbers up to 1 000 000 to the nearest 10, 100, 1000, 10 000 or 100 000 using a number line • count backwards and forwards across zero using number lines • compare and order negative numbers • solve age appropriate problems			

	involving negative numbers • count forwards and backwards in steps of powers of 10 • read Roman numerals up to 1000 (M) • identify years written in Roman numerals • solve reasoning problems using all of the above. **Statistics –** •Interpret data presented in a double line graph • answer comparison, sum and difference questions about data presented in a double line graph • interpret information in a range of tables • answer questions about information presented in timetables, applying their knowledge of time. **Number: Addition and Subtraction -** Add and subtract numbers with at least 5 digits using mental and written methods • round numbers to the nearest 10, 100, 1000, 10 000 • use inverse operations to check answers to addition and subtraction calculations • mentally round numbers to check answers to calculations and determine, in the context of a problem, levels of accuracy • choose a sensible way of calculating when solving a problem • solve one-step and two-step word problems • independently choose appropriate methods for mental calculation • practise mental calculation with increasingly large numbers.				
Cross curricular links / examples	• Roman Numerals links to our topic of the Romans • Comparing and order time periods in chronological order • Science investigations for electricity, identifying voltage / watts • Geography – populations of rainforest animals •Spanish counting				
<u>Autumn 2</u>	*Number: Addition and Subtraction continued* Measurement: Area Number: Multiplication and Division	•Calculate the area of rectangles and squares by using arrays and multiplication • Recall multiplication and division facts for multiplication tables up to 12 × 12 • Use place value and multiplication tables facts when multiplying and dividing mentally, including multiplying by 0 and 1, dividing by 1, and multiplying together three numbers • Identify factor pairs and use inverses when solving problems • Use the expanded written method to multiply two and three-digit by one digit numbers	•Calculate the area or rectangles and squares by recalling multiplication knowledge. • Recall multiplication and division facts for multiplication tables up to 12 × 12 with increasing speed and accuracy • Begin to calculate multiples of numbers beyond 12 × 12 • Use a range of mental calculation strategies for multiplication and division with increasing accuracy including multiplying by 0 and 1, dividing by 1, and multiplying together three numbers • Use factor pairs and inverses when solving multiplication and division problems	• Calculate the area of an L-shaped rectilinear shape (shapes made up of four rectangles). •Quickly recall multiplication and division facts for multiplication tables up to 12 × 12 • Calculate multiples of numbers beyond 12 × 12 • Perform multiplication and division calculations mentally including multiplying by 0 and 1, dividing by 1, and multiplying together three numbers • Use factor pairs and inverses accurately when solving	Area, length, width, formula / rule L X W = Area, cm² centimeter square, rectilinear shapes Multiplication, multiply, lots of, groups of, division, divide, divisor, share equally, split into groups of, commutative law, distributive law, inverse operations, factors, multiples, product of, written method /

		• Calculate using the short method for division where there are no remainders • Use partitioning and rounding and adjusting to solve two-digit by one-digit multiplication problems • Use known multiplication and division facts to scale up and down • Begin to use branching diagrams to solve correspondence problems • Begin to solve division problems involving fractions.	• Use the expanded method and short method to multiply two-digit and three digit by one digit numbers • Calculate using the short written method for division for two-digit and three digit by one-digit numbers, including those with remainders • Use partitioning and rounding and adjusting to solve two-digit by one-digit number problems with increasing confidence • Use multiplication and division facts to scale up and down • Solve division problems involving fractions.	multiplication and division problems • Use the expanded method and the short method, to multiply two-digit and three-digit by one-digit numbers, with increasing accuracy • Calculate accurately using the short written method for division for two-digit and three-digit by one-digit numbers, including those with remainders • Use the distributive law, partitioning and re-combining, or rounding and adjusting confidently to solve two-digit by one-digit multiplication problems • Use multiplication and division facts within and beyond multiplication tables knowledge to scale up and down • Use and devise their own branching diagrams and begin to use multiplication to calculate the number of options when solving correspondence problems • Solve division problems involving fractions with confidence	expanded written method (formal method, bus stop method (short division), remainder, partitioning, rounding, scale/ intervals, fractions *(begin to link knowledge)*

Progression 	**Year 3 expectations:** **Number: Multiplication and Division-** • Recall multiplication and division facts for the 3x, 4x and 8x tables with increasing speed and accuracy •use multiplication and division facts from the 3x, 4x and 8x tables to solve word problems with more than one step •identify patterns in known multiplication tables •multiply multiples of 10 (including three-digit numbers) mentally using known facts •use the grid method to solve multiplication problems which go beyond known facts; begin to use expanded multiplication when working with numbers beyond known facts •use number lines to solve division problems beyond known facts with increasing accuracy and speed •begin to use the bus stop method as a written method for division • solve missing number problems which go beyond known facts. **Year 5 expectations:** **Number: Multiplication and Division-** •Find factor pairs and identify the common factors of two or more numbers • recall the prime numbers up to 20 and be able to find the prime numbers up to 100 using their multiplication tables knowledge • multiply numbers up to four digits by one or two-digit numbers using short and long multiplication • multiply and divide numbers mentally using known facts e.g. doubling, halving, partitioning and recombining and beginning to use known facts to multiply and divide decimals • use the formal method of short division to divide numbers up to four digits by a one-digit number • interpret remainders as whole numbers, decimals and simple fractions and begin to choose the best way to express remainders, depending on the context of the problem • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • identify and use square numbers, cube numbers and powers • recognise that the equals sign indicates equivalence and make equations balance • solve a wide range of multiplication and division problems, applying their mental and written methods including scaling, exchange rate and speed problems				
Cross curricular links / examples	• Christmas enterprise activity – purchasing a product, multiplying amounts for products or materials required. • Spanish counting knowledge used for some multiples				
<u>Spring 1</u>	*Continued* Number: Multiplication and Division Measurement: Length and Perimeter	•Estimate the length of lines in centimetres, up to one decimal place • Convert between: millimetres, centimetres. metres and kilometres (below 20 units) • Compare two measurements of length using or = (multiples of 250) • Solve length problems, calculating difference • Estimate the mass of items • Order three measurements from smallest to greatest •Measure the sides of rectangles and squares in centimetres and add the measurements together to calculate the perimeter	•Convert between: millimetres, centimetres. metres and kilometres (below 30 units) • Order mixed units of length measurement with decimal notation • Solve length problems, calculating the difference (kilometres with one decimal place) between two distances – answers up to 120km • Order a set of four mixed mass measurements which contain tenths or hundredths •Measure the sides of rectangles and squares in centimetres and add the measurements together to calculate the perimeter with accuracy	•Convert between: millimetres, centimetres. metres and kilometres (below 150 units) • Order a range of measurements • Measure the sides of rectangles and squares in whole and half centimetres and add the measurements together to calculate the perimeter • Measure the sides of squares in whole and half centimetres and use a formula to calculate the perimeter in centimetres	Measurement, Centimetre, millimetres, kilometres, convert between, perimeter, area, length, width, formula / rule L X W = Area, cm^2 centimeter square, rectilinear shapes

	Number: Fractions	• Use a formula to calculate the perimeters of squares in centimetres and metres (multiples of 10) •Find groups of equivalent fractions using supporting materials • Recognise hundredths and count in steps of one hundredth using a hundredths square. • Add and subtract fractions up to one whole • Identify some pairs of fraction and decimal equivalents • Solve one-step problems involving fractions.	• Use a formula to calculate the perimeters of squares and rectangles in centimetres and metres •Find groups of equivalent fractions by multiplying • Recognise hundredths and count in steps of multiple hundredths using a hundred square if needed • Add and subtract fractions up to and over one whole using fraction bars • Identify fraction and decimal equivalents for halves, quarters and tenths • Solve a variety of problems involving fractions selecting support where needed.	• Use a formula to calculate the perimeters of squares and rectangles in metres (multiples of 5) •Find groups of equivalent fractions by multiplying and dividing • Recognise hundredths and count in steps of multiple hundredths • Add and subtract fractions up to and over one whole • Identify a range of fraction and decimal equivalents including thousandths • Solve problems involving fractions.	Numerator, denominator, tenths, hundredths, equivalent, fraction bars / representations, whole, part, fraction of an amount / quantity, order and compare, number line / fraction line
Progression 	**Year 3 expectations:** **Measurement: Perimeter-** • Estimate and measure to the nearest centimetre •estimate and measure to the nearest metre •estimate and measure in multiples of five millimetres •measure and draw lines in mixed units (centimetres and millimetres) •solve word problems by adding and subtracting three measurements in centimetres •solve addition problems involving metres by adding two three-digit numbers totalling up to 550m •solve subtraction problems involving metres by subtracting two three-digit numbers, involving exchanging •solve addition and subtraction problems involving millimetres by adding four amounts •use < > and = to compare two mixed unit length measurements •order mixed unit length measurements •calculate the perimeter of squares, perimeter given **Number: Fractions -** •Add and subtract fractions with the same denominator •compare and order simple fractions • use resources to identify equivalent fractions •draw number lines to round decimals to the nearest whole number •compare fraction number lines and number sequences •use resources to support finding a fraction of a set of objects or number. **Year 5 expectations:** **Measurement: Perimeter and area -** • using measurements up to 1 decimal place • calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculating the length of any unknown sides • choose a formula to calculate the perimeter of rectangles • find the area of rectangles, multiplying the length by the width. **Number: Fractions -** •Compare and order fractions using multiplication to find equivalent fractions; • identify equivalent improper fractions and mixed numbers • convert between improper fractions and mixed numbers to add and subtract fractions with the same denominator • add and subtract proper fractions with different denominators • multiply proper fractions or mixed numbers by whole numbers by drawing diagrams • use place value to convert between decimal and fraction tenths and thousandths • give percentage and decimal equivalents for half, quarters, fifths and fractions with a denominator of a multiple of 10 or 25.			

Cross curricular links / examples	• Story board planning – dividing paper / page into eg. Eighths. • Instructions – making a sandwich and cutting into pieces • Science experiment of changing amounts such as half the ingredient, a third of the voltage				
<u>Spring 2</u>	Number: Decimals	•Recognise hundredths and count in steps of one hundredth using a hundredths square • Identify some pairs of fraction and decimal equivalents • Complete place value grids to divide by 10 and 100 • Round decimals to the nearest whole number using number lines to support them • Compare decimals with same number of decimal places using number lines to support • Solve one-step problems involving decimals and or fractions.	•Recognise hundredths and count in steps of multiple hundredths using a hundred square if needed • Identify fraction and decimal equivalents for halves, quarters and tenths • Use place value grids to divide by 10 and 100 • Draw number lines to round decimals to the nearest whole number • Compare decimals with same number of decimal places • Solve a variety of problems involving decimals and fractions selecting support where needed.	•Recognise hundredths and count in steps of multiple hundredths • Identify a range of fraction and decimal equivalents including thousandths • Divide any number by 10 and 100 • Round decimal numbers to the nearest whole number • Compare decimals with one and two decimal places • Solve problems involving fractions.	Place value, whole numbers, part of the whole, decimal, decimal point, equivalence, tenths, hundredths, round to one decimal place, round to two decimal places, nearest whole, compare and order, number line.
Progression 	**Year 3 expectations:** **Number: Decimals-** • Draw number lines to round decimals to the nearest whole number. . **Year 5 expectations:** **Number: Decimals -** • Use place value to convert between decimal and fraction tenths and thousandths • compare and order numbers with up to three decimal places when they have different numbers of decimal places • give percentage and decimal equivalents for half, quarters, fifths and fractions with a denominator of a multiple of 10 or 25				
Cross curricular links / examples	•Science – investigation of lengths travelled when powered by electricity •DT- designing the sizing of various models eg. Roman chariot, Viking longship, chocolate bar box / wrapping				
<u>Summer 1</u>	Measurement: Money	• Record pence (less than a pound) using a £ sign and subtract single pence from whole pounds	•Add and subtract up to three money amounts.	•Use written methods to add and subtract amounts of money	Pounds (£), pence (p), decimal

		• Add together up to three money amounts which have 99p in them (e.g. £14.99) – totals up to £25	•Convert money amounts written in pence to decimal notation, e.g. 547p = £5.47 and vice versa (less than £15).	•Convert money amounts written in pence to decimal notation, e.g. 547p = £5.47 and vice versa (less than £30); • Order five money amounts, some written in pence, some in decimal form •Solve problems involving money / amounts.	notations, convert, equivalent pence to pounds, coins and their values = 1p, 2p, 5p, 10p, 20p, 50p, £1, £2 Notes and their values = £5, £10, £20, £50
	Measurement: Time	•Convert 12-hour times to 24-hour and 24-hour to 12-hour (o'clock and ½ past times) • Solve time problems which involve conversion from hours and minutes to minutes and vice versa (times 15 minute intervals) • Convert and compare: years and months; weeks and days; minutes and seconds.	•Convert 12-hour times to 24-hour and 24-hour to 12- hour (5 minute intervals) • Begin to solve simple problems involving conversion of digital and analogue times • Solve time problems which involve conversion from hours and minutes to minutes and vice versa (times 5 minute intervals)	•Calculate the actual time where the times shown on clocks are fast or slow • Solve simple problems involving conversion of digital and analogue times • Solve time problems which involve conversion from hours and minutes to minutes and vice versa (times minute intervals) • Calculate the difference between two ages	O'Clock, clockwise, anticlockwise, minute hand, hour hand, intervals, minutes hours, conversion, 12 hour times, 24 hour times, digital, analogue, months of the year, days of the week, timetables
	Measurement: Mass and capacity	***Recapping:*** •Children read scales to measure mass in intervals of 25g and 200g •Add and subtract in kilograms, adding up to 1000kg and subtraction involving exchanging; read scales to measure capacity in intervals of 20ml.	•Draw their own scale to mark given masses. • Add in kilograms, adding totals over 1000kg. •Mark cylinders to given capacity measures.	•Solve problems involving mass and capacity	Scales, measure, unit of measure, grams, kilograms, litres, millitres, capacity, intervals
Progression	**Year 3 expectations:** **Measurement: Money -** •Compare money amounts up to £1 •make different money combinations, using coins up to £ • add together up to three items in pence, where the total equals up to £1 •add together up to three items in pounds, where the total equals up to £15 •calculate the change required when paying for a single and several items, paying with £1.				

	**Measurement: Time -** •Read the time in minute intervals on an analogue clock •read digital clocks in five minute intervals and state the time in analogue form •read clocks with Roman numerals in five minute intervals •order times which use a.m. and p.m. •calculate the number of days from one date to another, up to 50 days •calculate and compare the length of events using digital times in ten minute intervals. **Measurement: Mass and capacity –** • read scales to measure mass in intervals of 25g and 200g, add and subtract in kilograms, adding up to 1000kg and subtraction involving exchanging •read scales to measure capacity in intervals of 20ml. **Year 5 expectations:** **Measurement: Time –** •convert 12 hour times to 24 hour and 24 hour to 12 hour (5minute intervals) Convert between minutes and seconds using measurements up to 1 decimal place •solve reasoning-style problems involving conversion of time units, including interpreting timetables. **Measurement: Mass, capacity and volume -** •solve reasoning-style problems involving conversion of metric units of measurements •apply knowledge to solve problems involving volume.				
Cross curricular links / examples	• Life skills – trips to the shops to purchase items • Ancient Greek Banquet planning / budget to create a menu. • DT – making chocolate bars • Science - Measuring liquid and ingredients to cause a volcanic eruption •Roman numerals linking to roman numeral clocks				
<u>Summer 2</u>	Geometry: Properties of Shape	•Recognise and name a range of triangles and quadrilaterals • Identify and describe right angles • Identify if a 2D shape has one or more lines of symmetry.	•Compare and classify triangles and quadrilaterals based on their mathematical properties • Identify, compare and order angles up to 180° using the vocabulary right-angled, acute and obtuse • Complete a symmetrical image or pattern with a horizontal or vertical line of symmetry	•Explain how some 2D shapes can belong to more than one classification • Talk about a range of angle facts and use them to describe shapes and derive facts about them • Complete a symmetrical image or pattern where there is a diagonal line of symmetry or the original image does not intersect the mirror line.	Isosceles, scalene, right angles, equilateral, triangle, angles – acute, right-angled, obtuse, 90°, 180°, 2D and 3D shape names, vertical, horizontal, parallel, perpendicular, symmetry, reflection
	Geometry: Position and Direction	•Read a coordinate in the first quadrant • Translate an object or shape in one direction on a 2D grid.	•Read and write a coordinate in the first quadrant • Translate an object or shape horizontally then vertically on a 2D grid.	• Read, write and plot coordinates in the first quadrant •Translate an object or shape on a 2D grid by writing a more complex set of instructions	Plot, coordinates, x and y axis, first quadrant, translate,

				•Plot specified points to complete a given polygon or picture.	horizontal, vertical
Progression 	**Year 3 expectations:** **Geometry: Properties of Shape-** •Describe the properties of 3D shapes using the vocabulary faces, edges and vertices •recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn •identify whether angles are greater than or less than a right angle •identify pairs of perpendicular and parallel lines. **Geometry: Position and Direction** ***(from Year 2)*** - •use mathematical vocabulary to describe position, direction and movement, including movement in a straight line• distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns in clockwise and anticlockwise directions. **Year 5 expectations:** **Geometry: Properties of Shape –** • Reason about 2D shapes based on lengths and angles •identify the nets of a range of 3D shapes • estimate acute, obtuse and reflex angles • measure angles using a protractor • begin to draw angles using a protractor • find angles at a point and one whole turn. **Geometry: Position and Direction -** • Draw a translated shape • draw a reflected shape •Begin to recognise and work with co-ordinates.				
Cross curricular links / examples	• Science investigation and presentation of results via various graphs, Venn and Carroll diagrams sorting and classifying animals • Non-chronological report writing, representing information in various forms •Art work includes shapes and lines, portrait art using a mirror to reflect reflections and complete the portrait, including symmetrical figures •PE team building OAA type games for positional awareness, directional instructions to locate particular positions				