The Oaks Primary School
Bringing Learning to Life

Year 4 – Progression & Small Steps

	NC Objectives	Small steps	Fluency	Resources
Autumn 1 Place Value Addition & Subtraction	- find 1000 more or less than a given number - count backwards through zero to include negative numbers - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) - order and compare numbers beyond 1000 - identify, represent and estimate numbers using different representations - round any number to the nearest 10, 100 or 1000 - solve number and practical problems that involve all of the above	**Place Value** ➔ Round 2 digit and 3 digit numbers to the nearest 10 ➔ Round to the nearest 100 ➔ Count in 1,000's also recognising 1000 is equal to ten 100 ➔ Identify and represent numbers to 9,999 using place value 1000's, 100's 10's 1's ➔ Partitioning 4 digit numbers in more than one way ➔ Estimate, label and draw number lines to 10,000 ➔ Find 1000 more or less than a given number ➔ Compare 4 digit numbers using < > = ➔ Order 4 digit numbers ➔ Round to the nearest 1000 ➔ Count in 25's and spot patterns ➔ Negative numbers ➔ Roman numerals to 100 ➔ solve number and practical problems **Addition & Subtraction** Continue to teach mental calculations for addition and subtraction ➔ Add and subtract thousands	2D Shape Time Weight and Volume Fractions Money Position and direction Addition and subtraction Multiplication and division	Numicon Reknreks Tens frames Counters Multi-link Number lines Number lines 100 square Interactive resources WRM Stickers Part part whole -NCETM unit power points -White Rose Maths / premium -Third Space Learning place value games -NCETM Mastery Documents -NRICH -Isee maths/ resoning -Master the curriculum

and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	➔ Add two 4-digit numbers with no exchange ➔ Add two 4-digit numbers with one exchange ➔ Add two 4-digit numbers with multiple exchanges ➔ Subtract two 4-digit numbers with no exchange ➔ Subtract two 4-digit numbers with one exchange ➔ Subtract two 4-digit numbers with multiple exchanges		-dialy 10 -Topmarks

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Autumn 2 Addition	• add and subtract numbers with up to 4 digits using the formal written	➔ Find the most efficient method of subtraction ➔ Estimate answers for calculations using rounding ➔ Check answers using inverse operations	Place value 3D Shape Time	

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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. • Convert between different units of measure KM M • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • 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	**Length &Perimeter** ➔ Multiply and divide by 1000 to convert between KM and M ➔ Add and subtract with 4 digit numbers to find two lengths that add to a whole number of KM ➔ Calculate th perimeter by counting squares on a grid ➔ Calculate perimeter of rectangles including squares and find missing lengths ➔ Calculate perimeter of rectilinear shapes using addition and subtraction to find missing sides **Multiplication & Division** ➔ Multiply by 10 ➔ Multiply by 100 ➔ Divide by 10 ➔ Divide by 100 ➔ Multiply by 1 and 0 ➔ Divide by 1 and itself ➔ Multiply and divide by 6 ➔ 6 times table and division facts ➔ Multiply and divide by 9 ➔ 9 times table and division facts ➔ Multiply and divide by 7 ➔ 7 times table and division facts	Length and height Fractions Money Position and direction Addition and subtraction Multiplication and division	
NC Objectives	**Small steps**	**Fluency**	**Resources**
Spring 1 Multiplicatio • recognise and use factor pairs and commutativity in mental calculations	**Multiplication & Division** ➔ 11 and 12 times table ➔ Multiply 3 numbers (associative law) ➔ Recognise and use factor pairs	Place value Addition and subtraction	Bar models Multi link Part part whole Dienes

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	• 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. • find the area of rectilinear shapes by counting squares	➔ Efficient multiplication – different ways to calculate e.g. partitioning ➔ Use informal written methods to multiply 2 digit and 1 digit Grid method ➔ expanded ➔ compact ➔ Multiply 2 digit by 1 digit using formal written method Grid method ➔ expanded ➔ compact ➔ Multiply 3 digit by 1 digit using manipulatives and formal written method ➔ Divide 2-digits by 1 digit no remainders ➔ Divide 2 digits by 1 digit with remainders ➔ Divide 3 digits by 1 digit with and without remainders ➔ Correspondence problems **Area** ➔ What is area? ➔ Calculate area by counting squares ➔ Make rectilinear shapes using a given number of squares ➔ Compare rectilinear shapes using < > **Fractions** ➔ Explore fractions in different representations recapping on numerator, denominator, unit, non-unit fractions ➔ Investigate and record equivalent fractions including through strip diagrams and using proportional reasoning to find equivalent fractions	Multiplication and division Shape Time Weight and Volume Fractions Position and direction	numicon
Spring 2 Fractions Decimals	recognise and show, using diagrams, families of common equivalent fractions • Count up and down in hundredths; recognise that hundredths arise	➔ Use manipulatives and diagrams to split fractions in to wholes and parts ➔ Count in fractions on a number line ➔ Add two or more fractions ➔ Subtract two fractions ➔ Subtract fractions from whole amounts	Place Value Time Length and height Fractions	Trundle wheels, rulers, tape measure, meter stick

		Small steps	Fluency	Resources
	when dividing an object by one 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 • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 4 1 , 2 1 , 4 3 • find the effect of dividing a one- or two-digit number by 10 and 100, identifying value of the digits in the answer as ones, tenths 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	➔ Find unit fractions of a quantity ➔ Calculate quantities in complex problems **Decimals** ➔ Recognise tenths and hundredths ➔ Recognise, write and represent tenths as decimals ➔ Read and represent tenths on a PV grid ➔ Read and represent tenths on a number line ➔ Divide 1-digit by 10 ➔ Divide 2 digit by 10 ➔ Recognise and count hundredths ➔ Represent tenths and hundredths on place value grid and number line ➔ Recognise, write and represent the relationship between hundredths and decimals ➔ Divide 1 or 2 digits by 100 ➔ Make a whole form any number of tenths or hundredths ➔ Read and write decimals to 2 decimal places ➔ Partition decimals in different ways ➔ Compare numbers with decimals up to 2 dp ➔ Order decimals with up to two decimal places ➔ Round numbers to 1 decimal place to the nearest whole number ➔ Write ½ ¼ ¾ as decimals	Money Addition and subtraction Multiplication and division	Cuisenaire rods / bars / paper strips Bar models
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Summer 1 Measurement: Money Measurement: Time Statistics	• solve simple measure and money problems involving fractions and decimals to two decimal places. • estimate, compare and calculate different measures, including money in pounds and pence	**Measurement: Money** ➔ Money in pounds and pence using decimal place ➔ Convert between different units of money ➔ Compare amount of money in the same unit and then in different units ➔ Round amonts of money written in decimal notation to the nearest pound ➔ Estimate the total of two amounts then more than two amounts	Shape Fractions Length and height Weight and Volume Place Value	

				Fluency	Resources
		• Convert between different units of measure [for example, kilometre to metre; hour to minute] • Read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	➔ Solve money problems using the four operations **Measurement: Time** ➔ Convert between hours, minutes and seconds ➔ Convert between years, months, weeks and days ➔ Convert between anologue and digital times up to 12 hours using a.m and p.m ➔ Convert between anologue and digital times up to 24 hours **Geometry: Position & direction** ➔ Describe positions in the first quadrant using coordinates ➔ Plot given points on a 2-D grid ➔ Read, write and use pairs of coordinates ➔ Move shapes and points on a coordinate grid following directions such as left/right up/down ➔ Describe the movement of shapes and points on a coordinates grid using language left/right up/down	Addition and subtraction Multiplication and division	
Summer 2 Geometry: Properties of Shape		NC Objectives	Small steps	Fluency	Resources
		• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	**Statistics** ➔ Interpret charts including, bar charts, pictograms, tables ➔ Decide on appropriate scales and gather own data using tally charts and present in bar charts ➔ Solve comparison, sun and difference problems using discrete data with a range of scales ➔ Use addition and subtraction to ask and answer questions ➔ Read and answer questions about line graphs in the context of time	Shape Time Fractions Money Place Value – comparing numbers Addition and subtraction	

	• 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. • 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	➔ Create own line graphs ➔ Solve comparison, sun and difference problems using continuous data with a range of scales ➔ Ask and answer addition and subtraction questions **<u>Geometry: properties of shape</u>** ➔ Identify obtuse, acute using right angles and degrees ➔ Draw acute and obtuse angles ➔ Estimate the size of an angle ➔ Compare and order angles in ascending and descending order ➔ Classify tringles in to isosceles, scalene, equilateral triangles ➔ Name, describe and draw quadrilaterals including squares, rectangles, rhombus, parallelogram and trapezium. ➔ Find and identify lines of symmetry in 2D shapes of different sizes and orientations ➔ Accurately complete symmetric figures of shapes and patterns	Multiplication and division	