



Spring Vale Primary School – Mathematics Medium Term Plan

Year 4 – Autumn Term

Unit:	National Curriculum:	Small Steps:
Number: Place Value	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• 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 a four-digit number (thousands, hundreds, tens, and ones)• order and compare numbers beyond 1000• identify, represent and estimate numbers using different representations• round any number to the nearest 10, 100 or 1000• solve number and practical problems that involve all of the above and with increasingly large positive numbers• read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	<ul style="list-style-type: none">• Represent numbers to 1,000• Partition numbers to 1,000• Number line to 1,000• Thousands• Represent numbers to 10,000• Partition numbers to 10,000• Flexible partitioning of numbers to 10,000• Find 1, 10, 100, 1000 more or less• Number line to 10,000• Estimate on a number line to 10,000• Compare numbers to 10,000• Order numbers to 10,000• Roman numerals• Round to the nearest 10• Round to the nearest 100• Round to the nearest 1000• Round to the nearest 10, 100 or 1000
Number: Addition and Subtraction	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Add and subtract 1s, 10s, 100s and 1000s• Add up to two 4-digit numbers – no exchange• Add two 4-digit numbers – one exchange• Add two 4-digit numbers – more than one exchange• Subtract two 4-digit numbers – no exchange

	<ul style="list-style-type: none"> • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 	<ul style="list-style-type: none"> • Subtract two 4-digit numbers – one exchange • Subtract two 4-digit numbers – more than one exchange • Efficient subtraction • Estimate answers • Checking strategies
Number: Multiplication and Division	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. 	<ul style="list-style-type: none"> • Multiples of 3 • Multiply and divide by 6 • 6 times-table and division facts • Multiply and divide by 9 • 9 times-table and division facts • The 3, 6 and 9 times-tables • Multiply and divide by 7 • 7 times-table and division facts • 11 times-table and division facts • 12 times-table and division facts • Multiply by 1 and 0 • Divide a number by 1 and itself • Multiply three numbers
Measurement: Area	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • find the area of rectilinear shapes by counting squares 	<ul style="list-style-type: none"> • What is area? • Count squares • Make shapes • Compare areas



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Year 4 – Spring Term

Unit:	National Curriculum:	Small Steps:
Number: Multiplication and Division	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• recall multiplication and division facts for multiplication tables up to 12×12• use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers• recognise and use factor pairs and commutativity in mental calculations• multiply two-digit and three-digit numbers by a one-digit number using formal written layout• solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	<ul style="list-style-type: none">• Factor pairs• Use factor pairs• Multiply by 10• Multiply by 100• Divide by 10• Divide by 100• Related facts – multiplication and division• Informal written methods for multiplication• Multiply a 2-digit number by a 1-digit number• Multiply a 3-digit number by a 1-digit number• Divide a 2-digit number by a 1 digit number• Divide a 2-digit number by a 1 digit number (remainders)• Divide a 3-digit number by a 1-digit number• Correspondence problems• Efficient multiplication
Measurement: Length and Perimeter	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• 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• estimate, compare and calculate different measures, including money in pounds and pence	<ul style="list-style-type: none">• Measure in kilometres and metres• Equivalent lengths (kilometres and metres)• Perimeter on a grid• Perimeter of a rectangle• Perimeter of rectilinear shapes• Find missing lengths in rectilinear shapes• Calculate the perimeter of rectilinear shapes

		<ul style="list-style-type: none"> • Perimeter of regular polygons • Perimeter of polygons
Number: Fractions	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • recognise and show, using diagrams, families of common equivalent fractions • 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 • add and subtract fractions with the same denominator • solve simple measure and money problems involving fractions and decimals to two decimal places. 	<ul style="list-style-type: none"> • Understand the whole • Count beyond 1 • Partition a mixed number • Number lines with mixed numbers • Compare and order mixed numbers • Understand improper fractions • Convert mixed numbers to improper fractions • Convert improper fractions to mixed numbers • Equivalent fractions on a number line • Equivalent fraction families • Add two or more fractions • Add fractions and mixed numbers • Subtract two fractions • Subtract from whole amounts • Subtract from mixed numbers
Number: Decimals	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 units, 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. 	<ul style="list-style-type: none"> • Tenths as fractions • Tenths as decimals • Tenths on a place value chart • Tenths on a number line • Divide a 1-digit number by 10 • Divide a 2-digit number by 10 • Hundredths as fractions • Hundredths as decimals • Hundredths on a place value chart • Divide a 1- or 2-digit number by 100

Number: Decimals	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• 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 units, 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.	<ul style="list-style-type: none">• Make a whole with tenths• Make a whole with hundredths• Partition decimals



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Year 4 – Summer Term

Unit:	National Curriculum:	Small Steps:
Number: Decimals (continued)	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• 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 units, 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.	<ul style="list-style-type: none">• Flexibly partition decimals• Compare decimals• Order decimals• Round to the nearest whole number• Halves and quarters as decimals
Measurement: Money	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• estimate, compare and calculate different measures, including money in pounds and pence	<ul style="list-style-type: none">• Write money using decimals• Convert between pounds and pence• Compare amounts of money• Estimate with money• Calculate with money• Solve problems with money
Measurement: Time	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">• read, write and convert time between analogue and digital 12 and 24-hour clocks	<ul style="list-style-type: none">• Years, months, weeks and days• Hours, minutes and seconds• Convert between analogue and digital times• Convert to the 24-hour clock

	<ul style="list-style-type: none"> • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 	<ul style="list-style-type: none"> • Convert from the 24 hour clock
Geometry: Shape	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Understand angles as turns • Identify angles • Compare and order angles • Triangles • Quadrilaterals • Polygons • Lines of symmetry • Complete a symmetric figure
Statistics	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Interpret charts • Comparison, sum and difference • Interpret line graphs • Draw line graphs
Geometry: Position and Direction	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Describe position using coordinates • Plot coordinates • Draw 2-D shapes on a grid • Translate on a grid • Describe translation on a grid