Deeping St James - Maths Progression Document
EYFS

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas.

This document demonstrates which statements from the 2020 Development Matters are prerequisite skills for Mathematics within the National Curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three- and Four-Year Olds and Reception to match the programme of study for Mathematics.

The most relevant statements for mathematics are taken from the following areas of learning:

- Communication and Language
- Mathematics

Mathematical Vocabulary			
Three and Four-Year-Olds	Communication and Language		• Use a wider range of vocabulary. • Understand 'why' questions, like: "why do you think the caterpillar is so fat?"
Reception	Communication and Language		• Learn new vocabulary. • Use new vocabulary throughout the day.
ELG	Communication and Language	Speaking	• Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.

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Number and Place Value			
Counting			
Three and Four-Year-Olds	Mathematics		• Recite numbers past 5. • Say one number name for each item in order: 1, 2, 3, 4, 5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
Reception	Mathematics		• Count objects, actions and sounds. • Count beyond ten.
ELG	Mathematics	Numerical Patterns	• Verbally count beyond 20, recognising the pattern of the counting system.
Identifying, Representing and Estimating Numbers			
Three and Four-Year-Olds	Mathematics		• Fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Number	• Subitise (recognising quantities without counting) up to 5.
Reading and Writing Numbers			
Three and Four-Year-Olds	Mathematics		• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Link the number symbol (numeral) with its cardinal number value.

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Compare and Order Numbers			
Three and Four-Year-Olds	Mathematics		• Compare quantities using language: 'more than', 'fewer than'.
Reception	Mathematics		• Compare numbers.
ELG	Mathematics	Numerical Patterns	• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
Understanding Place Value			
Reception	Mathematics		• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10.
ELG	Mathematics	Number	• Have a deep understanding of numbers to 10, including the composition of each number.
Solve Problems			
Three and Four-Year-Olds	Mathematics		• Solve real world mathematical problems with numbers up to 5.

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Number: Addition and Subtraction (see DSJ Calculation Policies)			
Mental Calculations			
Reception	Mathematics		• Automatically recall number bonds for numbers 0-5 and some to 10.
ELG	Mathematics	Number	• Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
Solve Problems			
Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Numerical Patterns	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.
Number: Multiplication and Division (see DSJ Calculation Policies)			
Solve Problems			
Reception	Mathematics		• Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Numerical Patterns	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.

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Measurement		
Describe, Measure, Compare and Solve (All Strands)		
Three and Four-Year-Olds	Mathematics	• Make comparisons between objects relating to size, length, weight and capacity.
Reception	Mathematics	• Compare length, weight and capacity.
Telling the Time		
Three and Four-Year-Olds	Mathematics	• Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then…'

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Geometry - Properties of Shapes		
Recognise 2D and 3D Shapes and their Properties		
Three and Four-Year-Olds	Mathematics	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'. • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc.
Reception	Mathematics	• Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
Compare and Classify Shapes		
Reception	Mathematics	• Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.
Geometry - Position and Direction		
Position, Direction and Movement		
Three and Four-Year-Olds	Mathematics	• Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'.
Reception	Understanding the World	• Draw information from a simple map.
Patterns		
Three and Four-Year-Olds	Mathematics	• Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern.
Reception	Mathematics	• Continue, copy and create repeating patterns.

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Statistics		
Record, Present and Interpret Data		
Three and Four-Year-Olds	Mathematics	• Experiment with their own symbols and marks, as well as numerals.

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Number: Number and Place Value

COUNTING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			• count backwards through zero to include negative numbers	• interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	• use negative numbers in context, and calculate intervals across zero
• count, read and write numbers to 100 in numerals; • count in multiples of twos, fives and tens	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	• count from 0 in multiples of 4, 8, 50 and 100;	• count in multiples of 6, 7, 9, 25 and 1 000	• count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
• given a number, identify one more and one less		• find 10 or 100 more or less than a given number	• find 1 000 more or less than a given number		

COMPARING NUMBERS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• use the language of: equal to, more than, less than (fewer), most, least	• compare and order numbers from 0 up to 100; use <, > and = signs. Use terminology largest to smallest links to most and least.	• compare and order numbers up to 1 000; use <, > and = signs. Use terminology ascending/descending making links to largest and smallest.	• order and compare numbers beyond 1 000; use <, > and = signs. Use terminology ascending/descending making links to previous vocab. *compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)*	• read, write, order and compare numbers to at least 1 000 000; use <, > and = signs and determine the value of each digit. Use terminology ascending/descending making links to previous vocab. *(appears also in Reading and Writing Numbers)*	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit; use <, > and = signs and determine the value of each digit. *(appears also in Reading and Writing Numbers)*

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Number: Number and Place Value

Year 1					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• identify and represent numbers using objects and pictorial representations including the number line	• identify, represent and estimate numbers using different representations, including the number line	• identify, represent and estimate numbers using different representations, including the number line	• identify, represent and estimate numbers using different representations, including the number line		
READING AND WRITING NUMBERS (including Roman Numerals)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• read and write numbers from 1 to 20 in numerals/figures and words.	• read and write numbers to at least 100 in numerals/figures and in words	• read and write numbers up to 1 000 in numerals/figures and in words		• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit *(appears also in Comparing Numbers)*	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit *(appears also in Understanding Place Value)*
		tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Simple introduction of the Roman numeral system which did not include place value or zeros. (copied from Measurement)	• 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. Ensure that pupils understand that as the numeral system included place value and zero it became more efficient.	• read Roman numerals to 1 000 (M) and recognise years written in Roman numerals. Ensure that pupils understand that as the numeral system included place value and zero it became more efficient.	

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Number: Number and Place Value

UNDERSTANDING PLACE VALUE					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• recognise the place value of each digit in a two-digit number (tens, ones). Introduce the term place holder for when zero is holding the ones place.	• recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Continue to develop understanding of a place holder in the tens and ones.	• recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Embed the understanding of place holders within larger numbers.	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. Revisit /consolidate place holders within these numbers. *(appears also in Reading and Writing Numbers and Comparing Numbers)*	• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Revisit /consolidate place holders within these numbers. *(appears also in Reading and Writing Numbers and Comparing Numbers)*
			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 (copied from Fractions)	*recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (copied from Fractions)*	*identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places (copied from Fractions)*

ROUNDING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• round any number to the nearest 10, 100 or 1 000. Understand significant digits when rounding linked to place value.	• round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000. Build on knowledge of significant digits when rounding.	• round any whole number to a required degree of accuracy. Embed understanding of significant digits for whole numbers.
			round decimals with one decimal place to the nearest whole number (copied from Fractions)	*round decimals with two decimal places to the nearest whole number and to one decimal place (copied from Fractions)*	*solve problems which require answers to be rounded to specified degrees of accuracy (copied from Fractions)*

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Number: Number and Place Value

PROBLEM SOLVING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• use place value and number facts to solve problems.	• solve number problems and practical problems involving these ideas.	• solve number and practical problems that involve all of the above and with increasingly large positive numbers.	• solve number problems and practical problems that involve all of the above.	• solve number and practical problems that involve all of the above.

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Number: Addition and Subtraction

Specific guidance can be found in the DSJ Calculation Policies for Addition & Subtraction

NUMBER BONDS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• represent and use number bonds (addition facts) and related subtraction facts within 20	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 10 (multiples of 10)				

MENTAL CALCULATION

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• add and subtract one-digit and two-digit numbers to 20, including zero	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ a two-digit number and ones ➢ a two-digit number and tens ➢ two two-digit numbers ➢ adding three one-digit numbers Make connections to place value – value digits represent.	• add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens ➢ a three-digit number and hundreds Make connections to place value – value digits represent/ place holders.		• add and subtract numbers mentally with increasingly large numbers Make connections to place value – value digits represent/ place holders.	• perform mental calculations, including with mixed operations and large numbers Make connections to place value – value digits represent/ place holders.
• read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs Vary placing of the equals sign. *(appears also in Written Methods)*	• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Vary placing of the equals sign to embed understanding of equals/ the same as/equivalent to.	• continue to reiterate that addition is a commutative calculation whereas subtraction is not. Use this knowledge to support mental calculations. Vary placing of equals sign.	• understand addition as commutative and understand subtraction is not. Use this knowledge to support fluency in mental calculations. Vary placing of equals sign.	• knowledge that addition is commutative and subtraction is not. Use this knowledge to support fluency in mental calculations with increasingly large numbers. Vary placing of equals sign.	• use their knowledge of the order of operations to carry out calculations involving the four operations - BODMAS

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Number: Addition and Subtraction

Specific guidance can be found in the DSJ Calculation Policies for Addition & Subtraction

WRITTEN METHODS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs *(appears also in Mental Calculation)*	• add two two-digit numbers using partitioned informal method alongside number lines	• add and subtract numbers with up to three digits, progressing from expanded/partitioned methods to using formal written methods of column addition and subtraction	• add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate to the calculation. *Includes adding/subtracting decimals in the context of measures.*	• add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction) where appropriate to the calculation. *Includes adding/subtracting decimals up to 2 d.p and in the context of measures.*	• add and subtract increasingly complex and large numbers using formal written methods (column addition and subtraction) where appropriate to the calculation. *Includes adding/subtracting decimals with increasing complexity within a variety of mathematical concepts.*
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Understand the term inverse and begin to use this vocabulary.	• estimate the answer to a calculation and use inverse operations to check answers. Use the term inverse with increasing confidence.	• estimate and use inverse operations to check answers to a calculation. Use the term inverse with confidence.	• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	• use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

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Number: Addition and Subtraction

Specific guidance can be found in the DSJ Calculation Policies for Addition & Subtraction

PROBLEM SOLVING					
Year 1	➢ Year 2	Year 3	Year 4	Year 5	Year 6
• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9; varying the position of the equals sign.	• solve problems with addition and subtraction: ➢ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ➢ applying their increasing knowledge of mental and written methods	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction (include two-step problems involving both operations).	• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)				• Solve problems involving addition, subtraction, multiplication and division

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Number: Multiplication and Division

Specific guidance can be found in the DSJ Calculation Policies for Multiplication & Division

MULTIPLICATION & DIVISION FACTS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
count in multiples of twos, fives and tens (copied from Number and Place Value)	*count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value)*	*count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)*	*count in multiples of 6, 7, 9, 25 and 1 000 (copied from Number and Place Value)*	*count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)*	
	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Focus on Bronze Badge Times Tables	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • Focus on Silver Badge Times Tables	• recall multiplication and division facts for multiplication tables up to 12 × 12 • Focus on Gold Badge Times Tables	• recall multiplication and division facts for multiplication tables up to 12 × 12; including application of these tables within higher place values and decimals. • Focus working towards Platinum Badge Times Tables	• recall multiplication and division facts for multiplication tables up to 12 × 12; including application of these tables within higher place values and decimals. • Focus working towards Platinum Badge Times Tables

MENTAL CALCULATION

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• 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 *(appears also in Written Methods)* • use place value to derive facts that are 10 times bigger.	• 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 • use place value to derive facts that are 10/100 times bigger.	• multiply and divide numbers mentally drawing upon known facts, including decimals • use place value to derive facts that are 10/100/1000 times bigger.	• perform mental calculations, including with mixed operations and large numbers
	• show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	• continue to reiterate that multiplication is a commutative calculation whereas division is not. Use this knowledge to support mental calculations.	• recognise and use factor pairs and commutativity in mental calculations *(appears also in Properties of Numbers)*	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	*associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$) (copied from Fractions)*

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Number: Multiplication and Division

Specific guidance can be found in the DSJ Calculation Policies for Multiplication & Division

WRITTEN CALCULATION					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs; vary the position of the equals sign.	• 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 *(appears also in Mental Methods)*	• multiply two-digit and three-digit numbers by a one-digit number using formal written layout	• multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
	• see above	• divisions to include experience of remainders and begin to understand this terminology.	• divide two-digit and three-digit numbers by a one-digit number using formal written layout; including remainders	• divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	• divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
					use written division methods in cases where the answer has up to two decimal places *(copied from Fractions (including decimals))*

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Number: Multiplication and Division

Specific guidance can be found in the DSJ Calculation Policies for Multiplication & Division

PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• recognise and use factor pairs and commutativity in mental calculations *(appears also in mental calculations)*	• identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19; link to knowledge of factors and known multiplication facts in order to establish if a number is prime or composite.	• identify common factors, common multiples and prime numbers; link to knowledge of factors and known multiplication facts in order to establish if a number is prime or composite. *use common factors to simplify fractions; use common multiples to express fractions in the same denomination* *(copied from Fractions)*
				• recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) *calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes (copied from Measures)*	• revisit and use square and cube numbers, using the notation for squared (^{2}) and cubed (^{3}) *calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3* *(copied from Measures)*

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Number: Multiplication and Division

Specific guidance can be found in the DSJ Calculation Policies for Multiplication & Division

ORDER OF OPERATIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					• use their knowledge of the order of operations to carry out calculations involving the four operations - BODMAS

INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• use related multiplication and division facts using the inverse for the 2-, 3-, 5- and 10-times tables; children can record related number sentences to demonstrate knowledge of related facts.	• use related multiplication and division facts using the inverse for the 2-, 3-, 4-, 5-, 8- and 10-times tables; children can record related number sentences to demonstrate knowledge of related facts. *estimate the answer to a calculation and use inverse operations to check answers. Use the term inverse with increasing confidence. (copied from Addition and Subtraction)*	• use related multiplication and division facts using the inverse for multiplication tables up to 12 x 12; children can record related number sentences to demonstrate knowledge of related facts. *estimate and use inverse operations to check answers to a calculation. Use the term inverse with confidence. (copied from Addition and Subtraction)*	• use related multiplication and division facts using the inverse for multiplication tables up to 12 x 12; children can record related number sentences to demonstrate knowledge of related facts. *use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (copied from Addition and Subtraction)*	• use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy • use related multiplication and division facts using the inverse for multiplication tables up to 12 x 12; children can record related number sentences to demonstrate knowledge of related facts.

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Number: Multiplication and Division

Specific guidance can be found in the DSJ Calculation Policies for Multiplication & Division

PROBLEM SOLVING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher • Children can show understanding through verbalising the problems – see DSJ calculations policy.	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems (e.g.** times bigger) and correspondence problems in which n objects are connected to m objects (e.g. 3 shirts, 4 shorts – how many different combinations?)	• solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one-digit (e.g. 34 x 6 = (30+4) x 6 = (30 x 6) + (4 x 6)), integer scaling problems (e.g.** times bigger) and harder correspondence problems such as n objects are connected to m objects (e.g. 6 main meals, 8 desserts – how many different combinations?)	• solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	• solve problems involving addition, subtraction, multiplication and division
				• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
				• solve problems involving multiplication and division, including scaling by simple fractions (e.g. 2/5 of 45 within a written problem) and problems involving simple rates	*solve problems involving similar shapes where the scale factor is known or can be found* *(copied from Ratio and Proportion)*

Deeping St James – Maths Progression Document
Algebra

EQUATIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and ***missing number problems*** *such as* *7 = □ - 9* *(copied from Addition and Subtraction)*	*recognise and use the inverse relationship between addition and subtraction and use this to check calculations and* ***missing number*** *problems.* *(copied from Addition and Subtraction)*	*solve problems, including* ***missing number*** *problems, using number facts, place value, and more complex addition and subtraction.* *(copied from Addition and Subtraction)* *solve problems, including* ***missing number*** *problems, involving multiplication and division, including integer scaling* *(copied from Multiplication and Division)*		*use the properties of rectangles to deduce related facts and find* ***missing lengths and angles*** *(copied from Geometry: Properties of Shapes)*	• express missing number problems algebraically
	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 *(copied from Addition and Subtraction)*				• find pairs of numbers that satisfy number sentences involving two unknowns
represent and use number bonds and related subtraction facts within 20 *(copied from Addition and Subtraction)*					• enumerate all possibilities of combinations of two variables

Deeping St James – Maths Progression Document
Algebra

FORMULAE					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. *(copied from NSG measurement)*	*Pupils calculate the perimeter of rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths. Missing measures questions such as these can be expressed algebraically, for example 4 + 2b = 20 for a rectangle of sides 2 cm and b cm and perimeter of 20cm* *(copied from NSG measurement)* *calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2)* *(copied from Measurement)*	• use simple formulae *recognise when it is possible to use **formulae** for area and volume of shapes* *(copied from Measurement)*
SEQUENCES					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening *(copied from Measurement)*	*compare and sequence intervals of time* *(copied from Measurement)* *order and arrange combinations of mathematical objects in patterns* *(copied from Geometry: position and direction)*				• generate and describe linear number sequences

Deeping St James – Maths Progression Document
Number: Fractions (including Decimals and Percentages)

UNDERSTANDING FRACTIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Understand that a fraction can describe part of a whole • Understand that a unit fraction represents one equal part of a whole	• Understand and use the terms numerator and denominator • Understand that a fraction can describe part of a set • Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be	• Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as 3 ÷ 4) • Understand that finding a fraction of an amount relates to division	• Understand that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as 3 ÷ 4)		

COUNTING IN FRACTIONAL STEPS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• count on and back in steps of $^1/_2$ and $^1/_4$	• count on and back in steps of $^1/_2$, $^1/_4$ and $^1/_3$ • count up and down in tenths	• count on and back in steps of unit fractions • count up and down in hundredths	• count on and back in mixed number steps such as $1\,^1/_2$	

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Number: Fractions (including Decimals and Percentages)

RECOGNISING FRACTIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• recognise, find and name a half as one of two equal parts of an object, shape or quantity	• recognise, find, name and write fractions $^1/_3$, $^1/_4$, $^2/_4$ and $^3/_4$ of a length, shape, set of objects or quantity	• recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	• recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents *(appears also in Equivalence)*	
		• 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 name a quarter as one of four equal parts of an object, shape or quantity		• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators			

COMPARING FRACTIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• compare and order unit fractions, and fractions with the same denominators – use <, >, = signs	• continued from Y3 (revisit and consolidate) compare and order unit fractions, and fractions with the same denominators – use <, >, = signs	• compare and order fractions whose denominators are all multiples of the same number – use <, >, =	• compare and order fractions, including fractions >1 — use <, >, = signs

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Number: Fractions (including Decimals and Percentages)

COMPARING DECIMALS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• compare numbers with the same number of decimal places up to two decimal places	• read, write, order and compare numbers with up to three decimal places	• identify the value of each digit in numbers given to three decimal places
ROUNDING INCLUDING DECIMALS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• round decimals with one decimal place to the nearest whole number	• round decimals with two decimal places to the nearest whole number and to one decimal place	• solve problems which require answers to be rounded to specified degrees of accuracy
EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$.	• recognise and show, using diagrams, equivalent fractions with small denominators	• recognise and show, using diagrams, families of common equivalent fractions	• identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination
			• recognise and write decimal equivalents of any number of tenths or hundredths	• read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$) • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	• associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)
			• recognise and write decimal equivalents to $^1/_4$; $^1/_2$; $^3/_4$	• recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction *(Appears also in percentages)*	• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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Number: Fractions (including Decimals and Percentages)

ADDITION AND SUBTRACTION OF FRACTIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• add and subtract fractions with the same denominator within one whole (e.g. $^5/_7 + {}^1/_7 = {}^6/_7$)	• add and subtract fractions with the same denominator	• add and subtract fractions with the same denominator and multiples of the same number • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + {}^4/_5 = {}^6/_5 = 1\,{}^1/_5$)	• add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

MULTIPLICATION AND DIVISION OF FRACTIONS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				• multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	• multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^1/_4 \times {}^1/_2 = {}^1/_8$) • multiply one-digit numbers with up to two decimal places by whole numbers
					• divide proper fractions by whole numbers (e.g. $^1/_3 \div 2 = {}^1/_6$)

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Number: Fractions (including Decimals and Percentages)

MULTIPLICATION AND DIVISION OF DECIMALS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					• multiply one-digit numbers with up to two decimal places by whole numbers
			• 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	• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 *(copied from multiplication and division)*	• multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
					• identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
					• associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)
					• use written division methods in cases where the answer has up to two decimal places

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Number: Fractions (including Decimals and Percentages)

PERCENTAGES					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				• recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction *(Appears also in equivalence)*	• find simple percentages of amounts
PROBLEM SOLVING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• solve problems that involve all of the above	• 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	• solve problems involving fractions • solve problems involving numbers up to three decimal places	• solve problems involving fractions • solve problems which require answers to be rounded to specified degrees of accuracy
			• solve simple measure and money problems involving fractions and decimals to two decimal places.	• solve problems which require knowing percentage and decimal equivalents of $^1/_2$, $^1/_4$, $^1/_5$, $^2/_5$, $^4/_5$ and those with a denominator of a multiple of 10 or 25.	• solve problems involving the calculation of percentages (for example, of measures, such as 15% of 360) and the use of percentages for comparison

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Ratio and Proportion

Ratio and Proportion Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		*solve problems, including positive integer scaling problems (e.g.** times bigger)* *(Copied from Multiplication & Division)*	*solve problems involving multiplying and adding, integer scaling problems (e.g.** times bigger)* *(Copied from Multiplication & Division)*		• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
				recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction *(Copied from Fractions (including Decimals & Percentages)*	• solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
				solve problems involving multiplication and division, including scaling by simple fractions (e.g. 2/5 of 45 within a written problem) and problems involving simple rates *(Copied from Multiplication & Division)*	• solve problems involving similar shapes where the scale factor is known or can be found
					• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

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Geometry: Properties of Shape

<table>
<tr><th colspan="6">IDENTIFYING SHAPES AND THIER PROPERTIES</th></tr>
<tr><th>Year 1</th><th>Year 2</th><th>Year 3</th><th>Year 4</th><th>Year 5</th><th>Year 6</th></tr>
<tr>
<td rowspan="2">• recognise and name common 2-D and 3-D shapes, including:
➢ 2-D shapes [e.g. rectangles (including squares), circles and triangles]
➢ 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].</td>
<td>• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</td>
<td rowspan="2">• revisit and consolidate identifying and describing the properties of 2-D and 3-D shapes; identifying 2-D shapes on the surface of 3-D
• recognise 3-D shapes in different orientations and describe them
(appears also in drawing and constructing)
• recognise angles as a property of shape
(appears also in Angles)</td>
<td rowspan="2">• identify lines of symmetry in 2-D shapes presented in different orientations</td>
<td rowspan="2">• identify 3-D shapes, including cubes and other cuboids, from 2-D representations</td>
<td>• recognise, describe and build simple 3-D shapes, including making nets
(appears also in Drawing and Constructing)</td>
</tr>
<tr>
<td>• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
• identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</td>
<td>• illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</td>
</tr>
<tr><th colspan="6">DRAWING AND CONSTRUCTING</th></tr>
<tr><th>Year 1</th><th>Year 2</th><th>Year 3</th><th>Year 4</th><th>Year 5</th><th>Year 6</th></tr>
<tr>
<td></td>
<td></td>
<td>• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</td>
<td>• complete a simple symmetric figure with respect to a specific line of symmetry</td>
<td>• draw given angles, and measure them in degrees (°)</td>
<td>• draw 2-D shapes using given dimensions and angles
• recognise, describe and build simple 3-D shapes, including making nets
(appears also in Identifying Shapes and Their Properties)</td>
</tr>
</table>

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Geometry: Properties of Shape

COMPARING AND CLASSIFYING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• compare and sort common 2-D and 3-D shapes and everyday objects	• compare and sort common 2-D and 3-D shapes using various diagrams (e.g. Venn & Carroll) • understand terminology regular and irregular polygons for 2-D shapes and polyhedron, not a polyhedron for 3-D shapes.	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • consolidate knowledge from Year 3 criteria.	• use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • consolidate knowledge from lower KS2.	• compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

ANGLES					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• recognise angles as a property of shape or a description of a turn		• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
		• 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; begin to introduce vocabulary acute and obtuse.	• identify acute and obtuse angles and compare and order angles up to two right angles by size • know that two right angles make a straight line = 180 °	• identify: ➢ angles at a point and one whole turn (total 360°) ➢ angles at a point on a straight line and ½ a turn (total 180°) ➢ other multiples of 90°	• recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
		• identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

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Geometry: Position and Direction

POSITION, DIRECTION AND MOVEMENT					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• describe position, direction and movement, including half, quarter and three-quarter turns.	• use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	• recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn *(Appears also in angle Geo PofS)* • recap and consolidate terminology clockwise and anti-clockwise	• 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	• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	• describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
			• plot specified points and draw sides to complete a given polygon		

PATTERN					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• order and arrange combinations of mathematical objects in patterns and sequences				

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Measurement

MEASUREMENT – LENGTH/HEIGHT

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Measure and begin to record lengths and heights, *using non-standard and then manageable standard units (m and cm) within children's range of counting competence*	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit using rulers	• Measure, add and subtract lengths (m/cm/mm)	• Estimate and calculate lengths	• Use, read and write standard units of length to a suitable degree of accuracy • Use all four operations to solve problems involving length using decimal notation including scaling	• Use, read and write standard units of length using decimal notation to three decimal places • Solve problems involving the calculation and conversion of length, using decimal notation up to three decimal places where appropriate
• Compare and describe lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	• Compare and order lengths and record the results using >, < and =	• Compare lengths (m/cm/mm)	• Compare lengths	• Understand and use approximate equivalences between metric and common imperial units such as inches	

MEASUREMENT – PERIMETER

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• Understand that perimeter is a measure of distance around the boundary of a shape • measure the **perimeter** of simple 2-D shapes	• measure and calculate the **perimeter** of a rectilinear figure (including squares) in centimetres and metres	• measure and calculate the **perimeter** of composite rectilinear shapes in centimetres and metres	• recognise that shapes with the same areas can have different **perimeters** and vice versa

MEASUREMENT – AREA

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• understand that area is a measure of surface within a given boundary • find the area of rectilinear shapes by counting squares	• calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes *(link to squared/cubed numbers x & ÷)*	• calculate the area of parallelograms and triangles • recognise when it is possible to use formulae for area and volume of shapes

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Measurement

MEASUREMENT – MASS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Measure and begin to record mass/weight, *using non-standard and then manageable standard units (kg and g) within children's range of counting competence*	• Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales	• Measure, add and subtract mass (kg/g)	• Estimate and calculate mass	• Use, read and write standard units of mass to a suitable degree of accuracy • Use all four operations to solve problems involving mass using decimal notation including scaling	• Use, read and write standard units of mass using decimal notation to three decimal places • Solve problems involving the calculation and conversion of mass, using decimal notation up to three decimal places where appropriate
• Compare and describe mass/weight (for example, heavy/light, heavier than, lighter than)	• Compare and order mass and record the results using >, < and =	• Compare mass (kg/g)	• Compare mass	• Understand and use approximate equivalences between metric and common imperial units such as pounds	

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Measurement

MEASUREMENT – CAPACITY/VOLUME					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Measure and begin to record capacity and volume, *using non-standard and then manageable standard units (litres and ml) within children's range of counting competence*	• Choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) to the nearest appropriate unit using measuring vessels	• Measure, add and subtract volume/capacity (l/ml)	• Estimate and calculate volume/capacity	• estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water) • Use all four operations to solve problems involving capacity and volume using decimal notation including scaling	• Use, read and write standard units of mass using decimal notation to three decimal places • Solve problems involving the calculation and conversion of mass, using decimal notation up to three decimal places where appropriate • Calculate and estimate volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3. • recognise when it is possible to use formulae for area and volume of shapes
• Compare and describe capacity and volume (for example, full/empty, more than, less than, half, full, quarter)	• Compare and order volume/capacity and record the results using >, < and =	• Compare volume/capacity (l/ml)	• Compare volume/capacity	• Understand and use approximate equivalences between metric and common imperial units such as pints	• Compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.

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Measurement

MEASUREMENT - TEMPERATURE					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• Choose and use appropriate standard units to estimate and measure temperature to the nearest degree (°C) using thermometers	• Continue to estimate and measure temperature to the nearest degree (°C) using thermometers	• Compare and order temperatures including those below 0°C	• Continue to compare and order temperatures including those below 0°C	• Calculate differences in temperature, including those that involve a positive and negative temperature

MEASUREMENT – CONVERSION (not including time)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• convert between different units of measure (e.g. kilometre to metre)	• convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	• use, read, write and convert between standard units, converting measurements of length, mass and volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
				• understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	• convert between miles and kilometres
					• solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate *(appears also in Measuring and Calculating)*

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Measurement

MEASUREMENT – TELLING THE TIME					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. *(knowledge of fractions (halves) required before teaching time)* • recognise and use language relating to dates, including days of the week, weeks, months and years	• tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. *(knowledge of fractions (halves & quarters) and counting in 5s up to 60 required before teaching time)*	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks *(knowledge of fractions (halves & quarters) and counting in 5s up to 60 required before teaching time)* • estimate and read time with increasing accuracy to the nearest minute	• read, write and convert time between analogue and digital 12 and 24-hour clocks	• continue to read, write and covert time between analogue and digital 12 and 24-hour clocks	• use, read and write standard units of time

MEASUREMENT – TIME (COMPARING & ESTIMATING)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• compare, describe and solve practical problems for time (e.g. quicker, slower, earlier, later) • sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	• compare and sequence intervals of time	• 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 • compare durations of events, for example to calculate the time taken by particular events or tasks	• estimate and compare different measures, including time		

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Measurement

MEASUREMENT – TIME (CONVERTING)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• measure and begin to record time (hours, minutes, seconds)	• know the number of minutes in an hour and the number of hours in a day.	• know the number of seconds in a minute and the number of days in each month, year and leap year	• convert between different units of time (e.g. 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	• convert between units of time in a problem-solving context • solve problems involving converting between units of time	use, read, write and standard units of time
MEASUREMENT – MONEY					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• recognise and know the value of different denominations of coins and notes	• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	• continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence • Recognise that ten 10p coins are equivalent to £1 and that each coin is $\frac{1}{10}$ of £1 • add and subtract amounts of money to give change, using both £ and p in practical contexts	• write amounts of money using decimal notation • Recognise that one hundred 1p coins are equivalent to £1 and that each coin is $\frac{1}{100}$ of £1 • estimate, compare and calculate with money in pounds and pence	• use all four operations to solve problems involving money using decimal notation including scaling	• solve problems involving the calculation and conversion of money, using decimalisation

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Measurement

MEASUREMENT – SOLVING PROBLEMS (all areas)					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Solve practical problems for: ➢ lengths and heights ➢ mass/weight ➢ capacity and volume ➢ time	• Solve simple problems in a practical context involving addition and subtraction of money and measures (including time)	• Solve problems involving money and measures and simple problems involving passage of time	• Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures	• Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling • Solve problems involving converting between units of time	• Solve problems involving the calculation and conversion of units of measure (including money and time), using decimal notation up to three decimal places where appropriate

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Statistics

INTERPRETING, CONSTRUCTING AND PRESENTING DATA					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• interpret and construct simple pictograms, tally charts, block diagrams and simple tables	• interpret and present data using bar charts, pictograms and tables (tables to include both tallies and whole numbers)	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	• complete, read and interpret information in tables, including timetables • Build on knowledge of difference between discrete and continuous data.	• interpret and construct pie charts and line graphs and use these to solve problems • Embed knowledge of discrete and continuous data.
	• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity				
	• ask and answer questions about totalling and comparing categorical data				

SOLVING PROBLEMS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts, pictograms and tables. (Include variety of vertical and horizontal representations)	• solve comparison, sum and difference problems using information presented in scaled bar charts, pictograms, tables and other graphs (including line graphs). (Include variety of vertical and horizontal representations)	• solve comparison, sum and difference problems using information presented in a line graph • revisit solving comparison, sum and difference problems using statistical representations from Y4.	• calculate and interpret the mean as an average • revisit solving comparison, sum and difference problems using statistical representations from Y4 & Y5.