Progress in Maths by Year Group (EYFS-KS2)

		By the end of 2 year olds 22 – 36 months	By the end of nursery 30 – 50 months	By the end of reception 40 – 60 / ELG	By the end of Year 1	By the end of Year 2	By the end of Year 3	By the end of Year 4	By the end of Year 5	By the end of Year 6
Place Value	**Read and write numbers**		Read and write numbers to 5. Experiment with their own symbols and marks as well as numerals.	Read and write numbers to 10 and determine the value of each digit. Identify, represent and estimate numbers to 10 using different representation including tens and ones and place value charts.	Read and write numbers to 20, 50 and then 100 and determine the value of each digit. Identify, represent and estimate numbers to 20, 50 and 100 using different representation including tens and ones and place value charts.	Read and write numbers to 100 and determine the value of each digit. Identify, represent and estimate numbers to 100 using different representation including tens and ones and place value charts. Estimate and write numbers on a number line up to 100.	Read and write numbers to at least 1000 and determine the value of each digit. Identify, represent and estimate numbers up to 1000 using different representations. Estimate and write numbers on a number line up to 1000.	Read and write numbers to at least 10,000 and determine the value of each digit. Identify, represent and estimate numbers up to 10,000using different representations. Estimate and write numbers on a number line up to 10,000.	Read and write numbers to at least 1,000, 000 and determine the value of each digit. Identify, represent and estimate numbers up to 1,000,000 using different representations. Estimate and write numbers on a number line up to 1,000,000.	Read and write to at least 10,000, 000 and determine the value of each digit. Identify, represent and estimate numbers up to 10,000,000 using different representations. Estimate and write numbers on a number line up to 10,000,000.

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	Order and Compare numbers	I can count out objects up to three in my play. I can compare big and small objects. I can react to changes of amount in a group of up to 3 items. I can compare more and less in my play. I can say the first and second object in a sequence. I can compare amounts saying 'lots', 'more', 'same'.	In know the total stays the same, even If the objects have been moved around. I know the total stays the same even if the objects are different. I can match a quantity to another of the same quantity. I can compare groups of objects which are the same size. I can find missing numbers up to 5 using visual support. I can compare quantities using the language 'more than' and 'fewer than'.	I can compare collections of objects regardless of size. I can sequence from first to tenth. I can find missing numbers on a number line up to 10. I can find missing numbers mentally up to 10. I can order amounts in sequence using concrete objects up to 6. I can put amounts in sequence using pictorial objects up to 6. I can compare quantities up to 10 in different contexts. I can compare numbers using the vocabulary 'more than', 'less than', 'fewer', 'the same as', 'equal to'.	Compare objects. Introduce the < > and = symbol. Compare numbers up to 10. Order numbers up to 10. Compare numbers within 50. Order numbers up to 50. Compare numbers within 100. Order numbers up to 100.	Compare objects up to 100. Compare numbers up to 100. Order objects and numbers up to 100.	Order and compare numbers up to 1000.	Order and compare numbers up to 10,000.	Order and compare numbers beyond a 1000 up to 1,000,000.	Order and compare numbers to at least 10,000, 000.

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	Counting	To say some number names in my play. To develop counting-like behaviour. To take part in finger rhymes with numbers. To count in everyday contexts, sometimes skipping numbers.	I can answer how many up to 5 by saying the last number I counted. To count objects to 5 with some 1:1 correspondence. I can say one number for each item in order. I can write or draw to represent 5. I can count out objects up to 5 when shown the number. I can count unstructured arrangements of objects to 5. I can write or draw to represent 5. I can recite numbers past 5.	I can count objects, actions and sounds. I can verbally count accurately to 20 and beyond. I can write or draw to represent 10. I can write or draw to represent 20. I can say the next number up to 10. I can say the next number up to 20 and beyond. I can recognise errors in my own counting and other counting. I can count backwards from 10 to 0. I can count backwards from 20 to 0.	Count objects from 1 to 10. Count forwards from 0 to 10. Count backwards from 0 to 10. Count forwards and backwards within 50. Count forwards and backwards in ones up to 100.	Count objects up to 100. Count in 1's forwards and backwards from any given number up to 100.	Count in 10's from any number up to 1000. Count in 100's from any number up to 1000. Count in 50's	Count in 1000's from any number up to 10,000. Count in 25's.	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000
	Subitising	I can subitise up to two things.	I can subitise up to 3 objects. I can show finger numbers up to 5.	I can subitise to 5. I can subitise up to 10 using numicon.						

				I can subitise two groups of objects which are the same up to 5. I can subitise two groups of objects which are different up to 5.						
	Partitioning			I can explore the composition of numbers to 10.	Partition a one digit number. Partition a two digit number using manipulatives.	Partition a two digit number. Partition a two digit number in different ways	Partition numbers up to 1000. Partition numbers up to 1000 in different ways.	Partition numbers up to 10,000. Partition numbers up to 10,000 in different ways.	Partition numbers up to 1,000,000. Partition numbers up to 1,000,000 in different ways.	Partition any whole number to a required degree of accuracy within 10,000,000.
	More or less			I can find one more than a number up to 10. I can find one less than a number from 10.	Count one more up to 10. Count one less from 10. Find one more and one less than a given number up to 50. Find one more and one less than a given number up to 100.	Find one more and one less up to 100.	Find 1, 10 and a 100 more or less than a given number up to 1000.	Find 1, 10,100 and a 1000 more or less than a given number up to 10,000.	Find 10, 100, 1000 and 10,000 more than a given number up to 1,000,000.	
	Rounding						Round any number to the nearest ten Round any number to the nearest hundred	Round any number up to 10,000 to the nearest ten, hundred, thousand and tens thousands.	Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	Round any whole number to a required degree of accuracy within 10,000,000.

	Negative numbers							Count backwards though zero to include negative numbers	Count forwards and backwards with positive and negative whole numbers, including through zero	Use negative numbers in context, and calculate intervals across zero.
	Solve problems involving place value							Solve number problems and practical problems that involve all of the above	Solve number problems and practical problems that involve all of the above	Solve number problems and practical problems that involve all of the above
	Roman Numerals							Understand Roman numerals to 100	Read Roman numerals up to 1000 (M) and recognise years written in Roman numerals.	Solve problems that include reading Roman numerals up to 1000 (M).

	Mental methods			I can automatically recall number bonds for numbers up to 5. I can automatically recall number bonds for some of the numbers 6-10. I can automatically recall double facts to 10.	Add more by counting on within ten. Know number bonds within 10. Know number bonds to 10. Compare number bonds within ten.	Apply number bonds to 20 to find fact families. Using number bonds to 20 compare number sentences. Use related facts to find addition e.g. 3 + 7 = 10 so 30 + 70 = 100. Add three one-digit numbers. Add one more to a two digit number and look at the pattern into adding 2more, 3 more etc (not bridging through the tens barrier). Add ten to a two digit number. Add a multiple of ten to a two digit number. Add numbers within 20 using their knowledge of number bonds e.g. 5 + 8 = 5 + 5 + 3 =13	Add multiples of 100. Three-digit number add one digit number without exchange. Three-digit number add one digit number with exchange. Three-digit number add a multiple of ten without an exchange. Three digit number add a multiple of ten with an exchange. Add a multiple of hundred to a three digit number.	Add mentally ones, tens, hundreds and thousands on to numbers up to 10,000. Add multiples of tens and hundreds.	Add numbers mentally with increasingly large numbers.	Add numbers mentally with increasingly large numbers.

						Know all number bonds to 100. Add a one digit number to a two digit number by bridging through ten.				

	Method		I can combine two sets of objects together.	I can add together two sets of objects together. I can add two pieces of numicon together. I can add on a number line by jumping on in ones.	Write an addition number sentence using the addition symbol and equals symbol. Add together two one digit numbers within ten. Write addition fact families. Add two two digit numbers using numicon.	Add a two digit number to a two digit number using the partitioning method.	Add whole numbers up to 3 digits using the expanded column method.	Add whole numbers up to 4 digits using the compact column method.	Add whole numbers with more than 4 digits using the compact column method	Add using the compact column method with increasing large numbers
	Decimals/money					Find the total amount of money through adding.	Add money using the column method.	Add money using the column method. Make a whole. Add decimals within one. Adding decimals by crossing the whole. Add numbers with up to two decimal points using the column method	Add decimals within one. Adding decimals by crossing the whole. Add numbers with up to three decimal points using the compact column method	To add numbers with up to three decimal points.
	Checking calculations and ESTIMATION.					Check calculations using manipulatives.	Use rounding to check answers to calculations. Estimate an answer to a simple addition problem	Use rounding to check answers to calculations. Estimate an answer to a simple addition problem.	Use rounding to check answers to calculations. Estimate an answer to a simple addition problem.	Use the inverse operations to check answers to calculations. Use estimation to check answers to calculations and determine, in the

							Check calculations using manipulatives.	Use the inverse operations to check answers to calculations. Check calculations using manipulatives.	Use the inverse operations to check answers to calculations.	context of a problem, an appropriate degree of accuracy

Addition	EYFS-KS2 I									
	Solve problems			Solve one-step addition word problems using manipulatives.	Solve addition problems in context.	Solve addition problems in context.	Solve addition problems in context	Solve addition problems in context. Solve problems involving number up to two decimal places.	Solve addition problems in a range of contexts. Solve problems involving number up to three decimal places	Solve addition one steps and multi-step problems in contexts, deciding which operations to use and why

	Mental Methods			Count backwards.	Find fact families and link addition and subtraction with numbers up to 10. Count backwards. Find the difference by counting on.	Apply number bonds to 20 to find fact families. Using number bonds to 20 compare number sentences. Use related facts to find subtraction e.g. 8 - 3 = 5 so 80 + 30 = 50. Subtract one from a two digit number. Subtract ten from a two digit number. Subtract a multiple of ten from a two digit number. Subtract a 1 digit number from a two digit number by bridging through ten. Know all number bonds to 100.	Subtract multiples of 100 Subtract ones from a three digit number (without exchange) Subtract ones from a three digit number (with exchange e.g. 322 - 4) Subtract a multiple of ten from a three digit number (without exchange). Subtract a multiple of ten from a three digit number (with exchange). Subtract multiples of one hundred from a 3 digit number	Subtract mentally ones, tens, hundreds and thousands on to numbers up to 10,000. Subtract multiples of ten and undreds.	Subtract numbers mentally with increasingly large numbers	Subtract numbers mentally with increasingly large numbers

	Method	Take away objects from a group.	Take away objects from a group and count how many are left.	Cross out pictures of objects to take away an amount. Use numicon to find the difference.	Write a subtraction number sentence using the subtraction symbol and equals symbol. Find the difference between two one digit numbers using numicon. Find the difference between two numbers by jumping on a number line in ones.	Subtract a two digit number from a two digit number using a number line.	Subtract whole numbers up to three digits take away three digits using a number line.	Subtract whole numbers up to 4 digits using the compact column method.	Subtract whole numbers with more than 4 digits using the column method	To subtract with increasing large numbers using the column method.
	Decimals/Money					Find the difference between two amounts of money. Find the change from an amount of money	Subtract money using a number line.	Subtract money using the column method. Subtract decimal numbers up to 2 decimal places.	Subtract decimal numbers with up to three decimal places using the column method	To subtract numbers with up to three decimal points.
	Checking calculations and ESTIMATION					Use inverse to check work. Use manipulatives to check work.	Use rounding to check answers to calculations. Estimate an answer to a simple subtraction problem. Use inverse to check work. Use manipulatives to check work.		Use rounding to check answers to calculations. Estimate an answer to a simple subtraction problem. Use the inverse operations to	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

								check answers to calculations.	

Subtraction	EYFS-KS2 I									
	Solve problems			Solve practical addition and subtraction one-step problems with support.	Solve addition and subtraction one-step problems using manipulatives to support.	Solve addition and subtraction one-step problems. Solve addition and subtraction multi-step problems in contexts. Use act it, draw it, think it and do it. Use manipulatives.	Solve addition and subtraction multi-step problems in contexts. Use manipulatives including the bar model to support this.	Solve addition and subtraction multi-step problems in contexts. Using the bar model to support which method to use. Solve problems involving number up to two decimal places.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving number up to three decimal places	Solve subtraction multi-step problems in contexts, deciding which operations to use and why

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Multiplication	**Counting**			Count verbally in 10s. Count verbally in 5's. Count verbally in 2s.	Count in 10's. Count in 5's. Count in 2's,	Count in 3's Count in 10's. Count in 5's. Count in 2's,	Count in 3's Count in 4's. Count in 8's. Count in 6's.	Count in 6's. Count in 9's. Count in 7's. Count in 11's. Count in 12's.	Count in tenths, hundredths.	Count in tenths, hundredths.
	Recall of multiplication and division facts				Recall and use multiplication and division facts for all multiplication facts for 10 times tables.	Recall and use multiplication and division facts for all multiplication facts for 2,5 and 10 times tables.	Recall and use multiplication and division facts for all multiplication facts for 3,4,8 and 6 times tables.	Recall and use multiplication and division facts for all multiplication facts up to 12 x 12 Multiply and divide by 6, 9, 7, 11 and 12 – Children need to be taught these in year 4.	Recall and use multiplication and division facts for all multiplication facts up to 12 x 12	Recall and use multiplication and division facts for all multiplication facts up to 12 x 12
	Mental Methods			Double numbers up to 10.	Doubling numbers up to 20.	Odd and even numbers.	Compare multiplication questions. Use known multiplication facts to solve other multiplication problems.	Multiply by 1 and 0. Multiply three numbers together. Use known multiplication facts to solve other multiplication problems.	Multiply numbers based on known facts. Use knowledge of other multiples of 10,100 and 1000 to answer related questions e.g. 36 x 50.	Use known facts from one calculation to determine the answer for another.
	factors							Know what a factor is. Find factor pairs	Identify factors. Identify common factors	Identify common factors.
	multiples						Identify a multiple of the 2,5,10,3,4 and 8 times tables.	Identify a multiple of the 6,7,9,11,12 times tables.	Identify multiples	Identify common multiples.

	Prime								Identify prime numbers up to 100 and recall prime numbers up to 19.	Identify and recall prime numbers up to 100.
	Cubed and squared numbers						Know that a squared number is when a multiple is multiples by itself.	Identify squared numbers.	Identify square numbers. Identify cubed numbers	Explore the relationship between cubed and squared numbers.
	Multiply by 10,100 and 1000.						Multiply whole numbers by 10 and 100	Multiply whole numbers and decimal numbers up to 2dp by 10 and 100.	Multiply whole numbers and numbers with up to 2dp by 10, 100 and 1,000	Multiply whole numbers and numbers with up to 3dp by 10, 100 and 1,000
	Method			Repeated addition	Repeated addition using numicon. Multiply one digit by 2,5 and 10 using numicon.	Repeated addition. Use arrays to solve one digit by one digit.	Use the grid method to multiply 2 digits by 1 and a 3d by 1	Use the grid method to multiply 3 digits by 1	To multiply a four digit number by a one digit number using the formal method. To multiply a two digit number by a two digit number using a formal method. To multiply a three digit number by two digits	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the column method for multiplication.
	Decimals/Money					Multiply pence by a whole number e.g. 6p x 7 = 42p	Multiply amounts of money using the grid method.	Multiply amounts of money using the grid method	Multiply one-digit numbers with up to two decimal places by whole numbers	Multiply one-digit numbers with up to two decimal places by whole numbers
	Solving Problems				Solve one step word problems that involve multiplication.	Solve problems that involve multiplication.	Solve one step multiplication problems. Solve multi-step mixed problems including addition, subtraction and multiplication. Use bar models to support.		Solve mixed problems including addition, subtraction and multiplication including understanding the meaning of the equals sign	

						Solve multi-step problems that involve addition, subtraction and multiplication. Use manipulatives and bar models to support.				
	Checking calculations and estimation					Use estimation to check answers to calculations.	Use estimation to check answers to calculations. Use the inverse to check calculations.		Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	
Division	**Mental Methods**					Recognise odd and even numbers	Divide by 1 and 0	Divide by 1 and 0		
	Divide by 10,100 and 1000.					Divide multiples of ten by 10.	Divide whole numbers and numbers up to 1dp by 10,100 and 1000.	Divide whole numbers and numbers up to 2dp by 10,100 and 1000.	Divide whole numbers and numbers up to 2dp by 10,100 and 1000.	Divide whole numbers and numbers up to 3dp by 10,100 and 1000.
	Method	I can share toys with other children (not equally).	I can share toys with one other person (not equally). I can make small equal groups by dealing out one at a time in my play.	I can group objects into equal groups. I can halve numbers up to 10 by sharing.	To group amounts using numicon.	Make equal groups Divide number using numicon Divide number using arrays	To use a formal method (number line) to divide a three digit number by a one digit number To use a formal method to divide a three digit number by a one digit number with remainders	To use a formal method (number line) to divide a four digit number by a one digit number To use a formal method to divide a four digit number by a one digit number with remainders	To use a formal method to divide a four digit number by a one digit number To use a formal method to divide a four digit number by a one digit number with remainders where the remainder may need to be rounded up or down	Divide 4 digits by 1 digits using the short division method. 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

	Decimals/Money						Divide amounts of money using a formal method	Divide amounts of money using a formal method	Divide numbers with up to two decimal places by one digit whole numbers	Divide numbers with up to two decimal places by one digit whole numbers
	Solving Problems				Solve one step word problems in various contexts	Solve one step problems in various contexts Solve problems involving addition, subtraction, multiplication and division. Use manipulatives and bar modelling to support with this.	Solve one step problems in various contexts Solve problems involving addition, subtraction, multiplication and division and a combination of these. Use bar modelling.		Solve one step problems in various contexts. Solve problems involving addition, subtraction, multiplication and division and a combination of these.	
	Checking calculations and estimation.					Use inverse to check calculations.	Use estimation to check answers to calculations. Use inverse operations to check calculations.		Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	
	BIDMAS								Use their knowledge of the order of operations to carry out calculations involving the four operations	Use their knowledge of the order of operations to carry out calculations involving the four operations
Fractions	**Counting**				Count in halves up to 1 whole. Count in quarters up to a whole.	Count in halves up to 10. Count in quarters up to 10. Count in thirds up to 10.	Count forwards and backwards in tenths. Count in halves, quarters, thirds and fifths. Count forwards and backwards	Count forwards and backwards in a range of fractions. Count forwards and backwards beyond one whole using a number line and start to	Count up and down in a given fraction. Find missing fractions in a sequence.	Count up and down in a given fraction. Count forwards and backwards in fractions on a number line

							beyond one whole using a number line.	make connections between improper and mixed numbers.		finding the difference between two fractions to support them.
	Recognising fractions			Fill a container with half the amount of water. Fill a container with water, cubes etc so it is full.	Recognise a half as one of two equal parts of an object, shape or quantity. Recognise a quarter as one of four equal parts of an object, shape or quantity.	Understand a whole and explore making equal and unequal parts. Recognise a half of a length, shape, set of objects and quantity. Recognise a quarter of a length, shape, set of objects and quantity. Recognise a third of a length, shape, set of objects and quantity. Understand a unit fractions as one equal part of a whole. Understand non-unit fractions.	Understand unit and non-unit fractions and explain the similarities and differences. Explore what a tenth is using different representation. Make a whole using shapes and quantities.	Explore fractions in different representation e.g. fractions of shapes, quantities, fractions on a number line, counters etc.	Recognise fractions in different representations.	
	Simplify Fractions									Use highest common factor to simplify fractions

	Equivalent fractions					Equivalence of $\frac{1}{2}$ and 2/4.	Investigate and record equivalent fractions. Use models and images to find equivalent fractions. Find equivalent fractions by looking for patterns between the numerator and denominator.	Use strip diagrams and a fraction wall to investigate and record equivalent fractions. Find equivalent fractions through multiplying denominators	Identify, name and find equivalent fractions.	Consolidate finding equivalent fractions.
	Mixed numbers and improper fractions						Use a number line to represent fractions beyond one whole.	Understand fractions greater than 1 by splitting the fraction into wholes and parts. Use bar models to represent fractions greater than a whole.	Convert between improper fractions and mixed numbers	Consolidate converting between mixed numbers and improper fractions (Year 5)
	Compare and order fractions				Compare mass/weight, capacity and length using the terms half, half full, quarter, quarter full.	Compare mass/weight, capacity and length using the terms half, half full, quarter, quarter full, three quarters, three quarters full, a third full, etc.	Compare fractions with the same denominator. Order fractions with the same denominator.		Compare and order fractions less than one (denominators are multiples of the same number) Compare and order fractions more than one (denominators are multiples of the same number)	Compare and order fractions, including fractions less than 1. Compare and order fractions, including fractions more than 1

	Add and subtract fractions						Add fractions with the same denominator. Subtract fractions with the same denominator.	Add fractions with the same denominator. Add two or more fractions with the same denominator (recording answers greater than one as an improper fraction). Subtract fractions with the same denominator. Subtract from whole amounts	Add and Subtract fractions with the same denominator. Add fractions within one where the denominator is the multiple of the other. Add three or more fractions where the denominators are multiples of the others. Add proper fractions where the total is greater than one. Add mixed numbers where one or both the fractions are mixed. Subtract fractions with different denominators where one denominator is a multiple of the other. Subtract proper fractions from mixed numbers where one	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

									denominator is a multiple of the other.	
	Multiply fractions								Multiply fractions by a whole number. Multiply a mixed number by a whole number.	Multiply fractions by a whole number. Multiply fractions by fractions
	Dividing fractions									Divide proper fractions by whole numbers
	Fractions of amounts				Find a half (as one of two equal parts) of an object, shape or quantity. Find a quarter (as one of four equal parts) of an object, shape or quantity.	Find half of a length, shape, set of objects and quantity. Find a quarter of a length, shape, set of objects and quantity. Find a third of a length, shape, set of objects and quantity. Find three quarters of a length, shape, set of objects and quantity.	Find a unit fraction of a quantity. Find a non-unit fraction of a quantity.	Find fractions of a quantity.	Find fractions of an amounts, quantities, measures etc.	Find fractions of amounts. Understand the relationship between unit fractions and division to work backwards by multiplying a quantity that represents a unit fraction to find the whole quantity
	Solve problems				Solve problems that include mass/weight capacity and length using the terms half, half full, quarter, quarter full etc.	Solve one step problems that involve a fraction of a quantity.	Solve complex problems for fractions of a quantity.		Solve complex problems for fractions of a quantity and adding and subtracting fractions. Solve problems that involve	Solve problems that involve adding and subtracting fractions. Solve problems that involve addition, subtracting,

									addition, subtracting and multiplying fractions.	multiplying and dividing fractions
Decimals	**Recognising and representing decimals**						Recognise and represent tenths using a place value chart, number line and bead strings.	Recognise and represent tenths using a place value chart, number line and bead strings. Represent tenths on a number line. Recognise and represent hundredths using number lines, place value chart and bead strings.	Recognise and represent tenths, hundredths and thousandths using a place value chart, number line and bead strings.	Recognise and represent decimals with up to 3dp and decimals over a whole using a place value chart, number line and bead strings.
	Read and write decimals						Read and write tenths using a place value chart and a number line.	Read and write tenths using a place value chart and a number line. Read and write hundredths using manipulatives to support.	Read and write, decimals (up to 3 dp).	Read and write, decimals (up to 3 dp).
	Order and compare decimals						Order and compare decimals (up to 1 dp).	Order and compare decimals (up to 2 dp).	Order and compare decimals (up to 3 dp)	Order and compare decimals (up to 3 dp)
	Decimals as fractions						Understand the relationship between tenths and decimals using a range of manipulatives.	Understand the relationship between tenths and decimals. Write $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ as decimals.	Understand the relationship between decimals and fractions up to 2 dp. Represent numbers greater	Recall and find equivalences between decimals and fractions. Including in different contexts.

									than 1 (e.g. 1.23 as fractions and decimals).	
	Rounding						Round decimals to the nearest whole one	Round decimals to the nearest whole one and tenth.	Round decimals to the nearest tenth or hundredth	Round decimals to the nearest tenth or hundredth
	Add decimals						Make a whole using tenths. Add decimals within one (1dp). Adding decimals by crossing the whole (1dp).	Make a whole from any numbers of tenths and hundredths. Add decimals within one (2dp). Adding decimals by crossing the whole (up to 2dp). Add numbers with up to two decimal points using the column method	Add decimals within one. Find compliments which sum to make 1. Adding decimals by crossing the whole. Add numbers with up to three decimal points using the compact column method (with the same dp and with different dp). Add whole numbers and decimals.	To add numbers with up to three decimal points.
	Subtract decanals						Subtract decimals within one (1dp). Subtract decimals by crossing the whole (1dp).	Subtract a decimal from a whole number. Subtract decimal numbers up to 2 decimal places (with the same dp	Subtract decimals within one. Subtract decimal numbers with up to three decimal places using the	To subtract numbers with up to three decimal points.

								and with different dp).	column method (with the same dp and with different dp). Subtract whole numbers and decimals.	
	Multiply by 10,100 and 1000.						Multiply whole numbers by 10 and 100 (up to 1dp)	Multiply whole numbers and decimal numbers up to 2dp by 10 and 100.	Multiply whole numbers and numbers with up to 2dp by 10, 100 and 1,000	Multiply whole numbers and numbers with up to 3dp by 10, 100 and 1,000
	Divide by 10,100 and 1000.						Divide whole numbers and numbers up to 1dp by 10 and 100 (up to 1dp)	Divide whole numbers and numbers up to 2dp by 10,100 and 1000.	Divide whole numbers and numbers up to 2dp by 10,100 and 1000.	Divide whole numbers and numbers up to 3dp by 10,100 and 1000.
	Multiply									Multiply decimals by whole numbers.
	Divide									Divide decimals by whole numbers. Use division to solve problems where the answer has up to 2 decimal places.
Percentages	**Represent, recognise and read percentages.**								Recognise, read and represent percentages using a hundred frame.	Recognise, read and represent a range of percentages using different images.

	Equivalent fractions, decimals and percentages.								Represent percentages a fractions using the denominator 100 and make the connection to decimals and hundredths. Recognise and recall equivalences between fractions, decimals and percentages e.g. $\frac{1}{2}$, $\frac{1}{4}$, 1/5, 2/5 and 4/5.	Recall and use equivalences between fractions, decimals and percentages, including in different contexts. Convert fractions to equivalent percentages.
	Order and compare fractions, decimals and percentages.									Convert between fractions, decimals and percentages to order and compare them.
	Percentages of amounts									Use known equivalent fractions to find percentages of amounts 2.g. 50%, 25%, 10% and 1%. Find percentages of amounts. Use knowledge of percentages to find the missing whole or a missing percentage when

										the other values are given.
Algebra	**Missing numbers**				Solve missing number problems that involve number bonds to 10 and 20.	Solve missing number problems that involve the inverse. Solve missing number problems that involve number bonds to 100 with multiples of ten.	Solve missing number problems that involve the inverse.		Solve missing number problems e.g. missing angles in a triangle etc.	Solve missing number problems and begin to express such problems algebraically.
	Find a rule									Explore and understand one step function machines. Explore and understand two step function machines.
	Using a formula							Use a formulae for area.		Use simple algebraic inputs with one step and two step function machines. Substitute simple expressions to find a particular value. Use a formulae for area and volume.

										Use simple formulae to work out values.
	Equations									Use algebraic notation to form one step equations. Solve one step equations involving the four operations. Solve two step equations involving the four operations.
	Finding all possible variables									Use substitution to consider the different possible values a pair of variables can take. Find possible solutions to equations, which involve multiples of one or more unknown.
	Number sequences									Generate and describe number sequences finding the nth term.
Ratio and proportion	**Read, recognise and represent ratios.**									Use the language: Ratio, relationship, two values, related, for every one….there is …. Use objects and diagrams to

										compare rations and fractions.
	Calculating ratio									Use ratio to solve problems involving the relative sizes of two quantities (bar models should be encouraged).
	Scale factors									Enlarge shapes to make them 2 or 3 times as big. Calculate scale factors using multiplication and division facts.
	Solving problems									Solve a range of ratio and proportion problems.

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Measures	**Measuring and reading scales.**	Recognising big things and small things in meaningful contexts. Enjoys filling and emptying containers. Begins to understand the language of size. I can combine objects like stacking blocks and cups, putting objects inside others and taking them out again.	Children sue every day language to describe the size of something. Children use every day language to describe the weight of something. Children use every day language to describe the capacity of something.	Children use everyday language to talk about size, weight, capacity.	Use non-standard units, such as cubes, hands and straws to measure length and height. Measure length using a ruler. Use non-standard units, such as cubes, hands and straws to measure weight. Use non-standard units, such as different containers to measure capacity.	Measure length in cm Measure length in metres. Measure mass in grams (g). Measure mass in kilograms (kg). Measure liquid in ml (ml). Measure liquid in L (L). Measure temperature in Celsius.	Measure length using mm, cm and m. Read scales in L and ml. Measure the capacity of a liquid and record them as a mixed measurement. Read scales in kg and g. Measure the mass of objects and record them as a mixed measurement.	Measure, read, write and recognise length, capacity and mass.	Read, write and recognise all metric measures for length, mass and capacity.	Read, write and recognise all metric measures for length, mass and capacity.
	Compare and order	Compare sizes, weights etc using gesture and language.	Make comparisons between objects relating to size, length, weight and capacity.	Orders two or three items by weight or capacity. Orders two or three items by length or height.	Compare lengths and height. Compare mass using non-standard units of weight.	Compare lengths. Order lengths. Use balance scales to compare two amounts.	Compare and order different capacity. Compare and order different mass.	Compare and order metric units of measure with the same units of measure.	Compare and order metric units of measure with different units of measure.	

				Children use everyday language to compare length weight and capacity.	Compare capacity using non-standard units of weight.	Compare volume of containers.	Compare and order different lengths.			
	Convert between metric measures						Find equivalent lengths between m and cm. Find equivalent lengths between mm and cm.	Find equivalent lengths between m and cm. Find equivalent lengths between mm and cm. Find equivalent lengths between km and m. Convert between kilometres and metres. Use, read, write and convert between metric measures.	Use, read, write and convert between metres and kilometres, grams to kilograms and vice versa. Use, read, write and convert between millimetres and litres. Use, read, write and convert between different units of length.	Use, read, write and convert between metric measures.
	Calculate with metric measures					Use the four operations with lengths.	Solve problem solving questions involving addition and subtraction of lengths. Add and Subtract Mass. Add and Subtract Capacity	Calculate problems involving converting measurements.	Solve problems that involve all four methods with converting measures.	Calculate with metric measures.
	Convert between miles and km									Convert between miles and kilometers.

	Convert between imperial measures								Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	Use, read, write and convert between imperial measures.
	Perimeter						Measure the perimeter of shapes. Calculate the perimeter of a shape	Measure perimeter of a rectilinear shape using squares. Calculate the perimeter of a rectangle/square. Calculate the perimeter of composite rectilinear shapes.	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Calculate are area and perimeter of rectilinear shapes. Recognise that shapes with the same areas can have different perimeters and vice versa. Calculate the area of triangles. Calculate the area of parallelograms. Use simple formula to find the area of a shape.
	Area						To find the area of a shape by counting the squares. To Calculate the area of rectangles by multiplying the edges.	Find the area of a shape by counting the squares. Compare the area of shapes by counting the squares. Calculate the area of rectangles by multiplying the edges.	Calculate the area of rectilinear shapes (including compound shapes).	
	Volume								Compare and order different solids that are made of cubes.	Find the volume of a shape by counting the cubes.

									Estimate volume using cubes.	Calculate, estimate and compare the volume of cubes and cuboids.
	Money			Beginning to use everyday language related to money. Children use everyday language to talk about money.	Recognise and know the value of different coins. Recognise and know the value of different notes. Count coins in 2's, 5's and 10's.	Count in 1p's, 2p's, 5p's and 10ps. Count money in pounds. Count notes and coins using the word and to join them together e.g. five pounds and 30 pence. Make the same amount of money in different ways. Compare two different values. Find the total amount of money. Find the difference between two amounts. Find the change from an amount. Solve two-step problems involving money.	Understand the value of pounds and pence. Convert pounds to pence and vice versa. Add two amounts of money together. Subtract money using a number line. Find the change from an amount.	Understand the value of pounds and pence and use the decimal notation. Order and compare amounts of money. Estimate the amount of money by rounding the nearest pound. Solve problems involving all four operations with money.	Solve problems involving all four methods with money.	
	Time	Gets to know and enjoy daily routines, such as getting up time,	Uses everyday language related to time.	Uses everyday language related to time.	Use before and after to describe, sort and order events.	Tell and write the time at 0'clock and half past.	Understand how many days are in each month.	Know the relationship between hours,	Convert between units of time including years, moths, weeks,	Convert between a range of units of time.

		mealtimes and bedtime. Associates a sequence of actions with daily routines. Beginning to understand that things might happen 'now'. Understands some talk about immediate past and future e.g. before, later, soon. Anticipate specific time-based events such as mealtimes of home time.	Understands routines of the day. Understands periods of time such as play time, dinner time etc. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'.	Orders and sequences familiar events. Measures short periods in simple ways. Children use everyday language to talk about time.	Know there are 7 days in a week. Pick out special dates of the year e.g. birthday. Tell and write the times at o'clock. Tell and write the time at half past. Explore the difference between seconds, minutes and hours. Compare amounts of time using the language faster, slower, earlier and later.	Tell and write the time at quarter past and quarter to. Telling the time to 5 minutes. To know there are 24 hours in a day and 60 minutes in an hour. Find durations of time Compare durations of times.	Know how many hours are in a day. Tell the time to the nearest 5 minutes on an analogue clock. Tell the time to the nearest minute using an analogue clock. Use am and pm to describe the time of day. To tell the time on a 24 hour digital clock. Find the difference between two times using a number line. Compare the duration of times using analogue and digital clocks. Find start and end times to the nearest minute on an analogue and digital clock. Measure time in seconds.	minutes and seconds. Know the relationship between years, months, week and days. Tell the time to the nearest minute on an analogue clock Tell the time to the nearest minute using a digital clock. Convert between analogue and digital times. Find the difference between two times using a number line	days, hours, minutes and seconds. Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 hour and 24 hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes, hours and o clock; use vocabulary such as am/pm, morning, afternoon noon and night. Know the number of seconds in a minute and the number of days in each month, year and leap year. Find the difference between two times using a number line.	

									Solve problems involving converting between units of time. Read timetables to solve problems.	

EYFS-KS2 Maths

Geometry	**2D shape**	Attempts, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles. Notice patterns and arrange things in patterns. Beginning to categorise objects according to properties such as shape or size. Build with a range of resources.	Talk about and explore 2D and 3D shapes using informal and mathematical language e.g sides, corners, straight, flat, round. Shows an awareness of similarities of shapes in the environment. Shows an interest in shapes in the environment. Uses shapes appropriately for tasks. Combines shapes to make new ones Talk about and identify patterns in the environment. Extend and create ABAB patterns. Notice and correct an error in a repeating pattern.	Beginning to use mathematical names for solid 3D shapes and flat 2D shapes and mathematical terms to describe shapes. Selects a particular named shape. Selects, rotates and manipulates shapes in order to develop spatial reasoning skills. Composes and decomposes shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns.	Recognise and name 2D shapes. Sort 2d shapes based on their properties. Create patterns with 2D shapes.	Recognise 2D shapes. Count the edges on a 2D shape. Count the vertices on a 2D shape. Draw a 2D shape. Find lines of symmetry in a shape.	Recognise and describe 2d shapes. Draw 2d shapes.	Classify triangles. Compare the similarities and differences between the different types of triangles. Identify quadrilaterals. Describe the properties of quadrilaterals. Draw quadrilaterals using knowledge of properties. Find and identify lines of symmetry within 2D shapes. Complete symmetric patterns	Distinguish between regular and irregular polygons.	Draw 2D shapes accurately.

	3D shape				Recognise and name 3D shapes. Sort 3d shapes based on their properties. Create patterns with 3D shapes.	Sort 2D shapes. Recognise 3D shapes. Count the faces on a 3D shape. Count the edges on a 3D shape. Count the vertices on a 3D shape. Sort 3D shapes.	Recognise and describe 3d shapes. Construct 3D shapes using construction materials.	Recognise and describe 3d shapes. Construct 3D shapes using nets.	Describe the properties of 3D shapes. Identify 3D shapes from their nets.	Identify 3D shapes from their nets.
	Lines						Draw straight lines accurately in centimetres and millimetres. Identify horizontal and vertical lines in a range of contexts. Identify and find parallel and perpendicular lines.	Draw quadrilaterals accurately using straight lines.	Draw lines accurately to the nearest millimetre. Reason and solve problems about squares and rectangles on a grid using perpendicular and parallel lines.	Draw 2D shapes accurately.
	Angles						Recognise angles as measures of turn. Recognise right angles in shapes. Compare angles that are greater than and less	Identify obtuse and acute angles. Compare and order angles.	Know angles are measured in degrees. Estimate and compare acute, obtuse and reflex angles.	Measure accurately with a protractor. Calculate angles on a straight line. Calculate angles round a point.

							than a right angle.		Measure accurately with a protractor. Draw angles accurately using a protractor. Draw given angles in degrees. Calculate angles on a straight line. Calculate angles around a point. Calculate angles and lengths in squares and rectangles using a grid to identify right angles.	Recognise that vertically opposite angles share a vertex and are equal. Calculate angles in a triangle. Calculate angles in a quadrilateral. Reason and solve problems involving angles. Understand angles in polygons.
	Coordinates						Describe positions in the first quadrant.	Describe positions in the first quadrant. Plot positions in the first quadrant.	Find positions in the first quadrant. Reflect objects using lines that are parallel to the axes. Reflection with coordinates.	Plot coordinates in all four quadrants. Plot and draw shapes in all four quadrants. Develop understanding of finding the length of a line by using the coordinates of its end points.
	Translation	Can climb and squeeze themselves into different types of spaces.	Understands position through words alone without pointing.	Can describe their relative position such as behind or next to.	Describe turns using full, half, quarter and three quarter.	Describing movement using forwards, backwards, up,	Translate objects on a grid.	Translate shapes on a grid. Describe the movement of a	Translate shapes on a grid.	Translate a shape across four quadrants.

			Can describe a familiar route. Can discuss routes and locations using words like 'in front of' and 'behind'.	Children use everyday language to talk about position.	Describe position and direction using left, right, forward and backwards.	down, left and right. Describing turns using full turn, half turn, quarter turn, three quarter turn, clockwise and anticlockwise. Describing movements and turns.		shape and points on a coordinate grid using language e.g. left/right and up/down.	Translate shapes on a grid with coordinates.	Reflect shapes in the y and x axis.
Statistics	**Mean**									Find the mean of a set of a data
	Circles									Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	Pie charts									Read and interpret pie charts. Apply calculating percentages of amounts to interpret pie charts. To draw pie charts.
	Tables						Interpret information from tables to answer	Interpret information from tables to answer	Read and interpret tables.	To read and interpret a wide range of tables

							one step and two step problems that involve addition and subtraction.	one step and two step problems.	Read timetables e.g. bus timetables, week timetable. Read and interpret two way tables, which display two sets of data horizontally and vertically.	
	Bar charts, pictograms.				Read and interpret pictograms where the symbol represents 1.	Make tally charts. Read and interpret pictograms where the symbol represents 1,2,3 or 10 items. Draw pictograms. Read and interpret block diagrams. Read and interpret bar charts.	Read and interpret pictograms. Read and interpret bar charts with scales of 1,2,3 and 10. Draw bar charts.	Use bar charts, pictograms and tables to interpret and present data. Solve comparison, sum and difference problems using discrete data with a range of scales	Use bar charts, pictograms and tables to interpret and present data. Solve comparison, sum and difference problems using discrete data with a range of scales.	
	Line graphs							Read and interpret line graphs. Solve addition and subtraction problems using line graphs.	Read and interpret line graphs. Draw line graphs. Solve a range of problems using line graphs.	Read and interpret line graphs using knowledge scales to read information accurately (this includes graphs that show more than one set of data).

										To draw line graphs To solve problems involving line graphs (this includes graphs that show more than one set of data).