

Maths Progression of Knowledge and Skills Document

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<u>Subject Area</u>	<u>Concept/Aspect</u>	<u>Nursery</u>	<u>Reception</u>	<u>Year 1</u>	<u>Year 2</u>
Number - Place Value	Numbers to 10	Skill - Count to five forwards and backwards, saying one number for each item in order - Link numerals and amounts, showing the right number of fingers or objects to match numerals up to five. - Recite numbers in order to 10 Core Knowledge -Numbers have an order that they follow. Each number is one more than the previous number. - The last number reached when counting tells you how many there are in total.	Skill - Count objects, actions and sounds, up to 10 forwards and backwards, beginning at zero, one or any given number and link numerals with its cardinal number value. - Explore odd and even numbers to 10 Core Knowledge -Numbers follow a sequence. Each number is one more than the previous number. The last number reached when counting tells you how many there are in total. -Taking objects from a group will leave a smaller amount. -When counting out amounts it is important to understand: You say the numbers in order as you count the objects. You count each object once and only once. The last number that you count is the total number of objects. No matter how the group of objects is displayed, there is always the same amount. It doesn't matter in what order you count the objects.	Skill - Sort objects into groups by characteristics. - Begin to count objects that have been sorted into groups from one to 10. - Count objects that have been sorted into groups from one to 10. - Identify and represent numbers using concrete objects and pictorial representations. - Find consecutive and non-consecutive missing numbers in sequences counting forwards. - Identify one more than a given number within 10. - Identify one less than a given number within 10. - Match one object with another. - Compare groups of objects using the language of equal to, more, more than, greater than, less, less than and fewer. - Use <, > and = signs to compare numbers within 10 - Compare numbers using the language: 'greatest, largest, smallest, more than, less than, least, most' and 'equal to'. Justify the order of numbers using their counting, sorting and grouping knowledge. - Order three groups of objects and use the language 'greatest and smallest'. - Order numbers within 10 using the language 'greatest, largest, smallest, more than, less than, least, most' and 'equal to'. Justify the order of numbers using their place value knowledge. - Use ordinal numbers to compare position	

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				- Use a number line to 10 to: Count to 10; See one more/one less; See greater than/less than statements; Order numbers Core Knowledge - The last number counted of a group is the total. - One object can be represented by another. - Zero comes before one. - One more is the number after. - One less is the number before. - Equal means the same in amount, size or number. More than means greater in amount or size. Less than means smaller in amount or size. Most means the biggest number or amount of something. Least means the smallest number or amount of something. - The less than sign (<) shows that the value to the left of it is lower than the value to the right of it. The greater than sign (>) shows that the value to the left of it is higher than the value to the right of it.	
Number - Place Value	Numbers to 20	Skill -Explore real-world addition and subtraction within their play, such as if they have two cars and a friend gives them one more, they will have three. - Explore the composition of numbers to five and compare numbers. - Explore the different ways that groups of three and four objects can be separated.	Skill - Find one more or one less than numbers to 10 -Explore addition and subtraction with numbers to 10, using concrete objects, pictorial representations and number lines. - Explore the composition of numbers to 10 and compare numbers - Recall number bonds to five and explore the different ways that	Skill -Find consecutive and non-consecutive missing numbers in sequences, counting forwards and backwards, including numbers 11 to 20. - Represent numbers 11 to 20 in different ways - Read and write numbers to 20 in numerals and words. - Partition number 11 to 19 into a 10 and ones.	Skill - consolidate finding consecutive and non-consecutive missing numbers in sequences, counting forwards and backwards, including numbers 11 to 20. - Consolidate partitioning number 11 to 19 into a 10 and ones

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		Core Knowledge - Taking away objects makes the group smaller. - Adding objects makes the group bigger. Taking away objects makes the group smaller. - Numbers to five can be made in different ways, but the total is the same each time. - Taking objects from a group will leave a smaller amount.	groups of six–10 objects can be represented. Examples include, three and four together make seven, and seven take away four leaves three. Core Knowledge - Small amounts can be added together to make a larger amount. -Numbers to 10 can be made in different ways, but the total is the same each time. - It is important to share resources and take turns in order to get on with others - Numbers to 10 can be made in different ways but the total is the same each time. - There are different ways of separating numbers into two groups but the total is still the same. - Combining two amounts together creates a larger amount.	- Identify one more and one less than a given number within 20 - Use vocabulary of comparison such as: greater than, less than and equal to compare groups of objects including those greater than 10. - Use <, > and = signs to compare numbers within 20 - Order up to three groups of objects within 20 - Order up to three abstract digits from 0 to 20. Core Knowledge - One more is one more one, not one more 10. -The less than sign (<) shows that the value to the left of it is lower than the value to the right of it. The greater than sign (>) shows that the value to the left of it is higher than the value to the right of it.	
Number - Place Value	Numbers beyond 20	Skill -Recite numbers, in order, past five -Identify and represent up to three objects, without counting, using concrete objects and pictorial representation. -Use and understand language of quantities, such as more and a lot Core Knowledge -Numbers have an order that they follow. Each number is one more than the previous number.	Skill -Recite numbers, in order, to 20 and beyond -Identify and represent up to five objects, without counting, using concrete objects and pictorial representation. - Use and understand language related to adding and subtracting, including 'more than, less than' and 'the same as'. Core Knowledge - Numbers have an order and a pattern that they follow.	Skill - Count to 50, beginning with 0 or 1, or from any given number. - Count forwards and backwards to and from 50 from any given number. - Represent numbers to 50 and partition a two digit number into 10s and ones. -Identify one more or less than a given number, using numbers to 50. - Use the language of equal to, more than, less than (fewer), most and least in various mathematical contexts. - Use <, > and = signs to compare numbers within 50. -Order numbers within 50 using the	Skill - Consolidate counting to 50, beginning with zero or one, or from any given number. -Consolidate represent numbers to 50 and partition a two digit number into 10s and ones - Consolidate using <, > and = signs to compare numbers within 50. - Read and write numbers to at least 100 in numerals and words. - Recognise the place value of each digit in a two-digit number (ones and tens). - Partition numbers in a variety of

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		-Three objects can be moved around but the total is always three.	- However a group of objects is displayed, the total is still the same. - The same as means that both quantities match. More than is a bigger amount. Less than is a smaller amount.	language 'largest, smallest, more than, less than, least, most' and 'equal to', and justify the order of numbers using their place value knowledge. - Count in multiples of two from 20 to 50. - Count in multiples of five from 20 to 50. - Count to 100, beginning with zero or one, or from any given number. - Identify and find the position of numbers on number lines (within 100), including beginning to explore estimation on number lines. - Group in 10s to identify how many 10s and ones are within numbers up to 100. - Use <, > and = signs and language to begin comparing numbers up to 100. - Compare numbers and amounts using <, > and = signs and language 'more than, less than' and 'equal to'. - Order sets of objects and numbers from smallest to largest and largest to smallest, using the language 'most, bigger, biggest, larger, largest, smaller, smallest' and 'least'. - Identify one more or less than a given number, using numbers to 100. Core Knowledge - Know that one 10 is equal to 10 ones. - When comparing three or more numbers, inequality symbols, such as < and >, should not be used.	ways, not just as 10s and ones. For example, 58 is made up of five 10s and eight ones or four 10s and 18 ones, or two 10s and 38 ones. - Explore how 10s and ones can be partitioned and recombined to make a total. - Use concrete, pictorial and abstract representations correctly in a place value chart. - Consolidate identifying and finding the position of numbers on number lines. - Estimate the position of numbers on number lines and the value of a given position on a number line. - Compare a variety of groups of objects using the language 'equal to, more, more than, greater than, less, less than, fewer' and the symbols <, > and =. - Use <, > and = signs to write number sentences. - Compare and order numbers from zero up to 100. - Consolidate counting in multiples of two. - Consolidate counting in multiples of five. - Consolidate count in multiples of 10. - Count in multiples of three. Core Knowledge - Place value refers to the amount a digit is worth due to its position in a number. For example, the digit 2 in 25 is worth 20 (two tens). - The less than sign (<) shows that the value to the left of it is lower than
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					the value to the right of it. The greater than sign (>) shows that the value to the left of it is higher than the value to the right of it
Number - Addition and Subtraction	Addition			Skill - Separate a whole number of items into two parts (groups). - Count the items in two parts or groups to make a whole. - Separate a whole number of items into two parts (groups) and count the items in two parts to demonstrate how many there are altogether. - Count the items in two parts to find how many there are altogether. - Create a number sentence using '+' and '='. - Add two numbers within 10 and recognise that addition is commutative. - Break numbers into different parts. - Partition numbers into parts systematically. - Explore number bonds to and within 10 through a variety of representations, including fingers. - Compare numbers bonds using the '=', '<' and '>' symbols - Use '+' and '=' accurately when solving simple additions within 10. - Add by counting on. - Find all number bonds of numbers within 10 - Count on from a given part to the whole to find the missing part. - Add by counting on.	Skill - Demonstrate knowledge of all number bonds to 10. - Identify multiples of 10 bonds to 100, recognising the link between single digit bonds and 10s bonds. - Consolidate adding numbers within 20 using knowledge of number bonds. - Consolidate using number bonds to 10 to find number bonds to 20. - Find number bonds to 100 with tens and ones. - Add three one digit numbers, using commutativity to increase efficiency.

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				-Consolidate exploring number bonds to 10 through a variety of representations, including fingers. - Use number bonds to 10 to find number bonds to 20. - Add numbers within 20 using knowledge of number bonds. Core Knowledge - Whole is all of something. Parts or groups are amounts which, when added together, makes up the whole of something. -Altogether is when everything, every item in a part or group, is added together. - A number can be partitioned into two or more parts. - '+' represents add or plus and '=' represents is equal to (equals). - Adding two numbers in a different order gives the same answer. - Know that they are adding to what they already have and should not include their start number when counting on. - Know that they are adding to what they already have and should not include their start number when counting on.	
Number - Addition and Subtraction	Subtraction			Skill -Use the language of subtraction in real life contexts. -Complete subtraction number sentences using the '-' symbol. -Break apart a number into two parts, using concrete and pictorial representations to support. -Count backwards to subtract, for	Skill -Consolidate using the strategy of partitioning to make ten to support subtraction crossing 10.

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				example, by 'putting the start number in our head and counting backwards'. -Find the difference by counting back, counting on or making both amounts to visually show how many more/less. -Recognise and use the subtraction symbol within 20, not crossing 10. -Use the strategy of partitioning to make ten to support subtraction crossing 10. -Subtract one digit and two digit numbers within 20, crossing 10. -Subtract within 20 using knowledge of number bonds. For example, $7 - 5 = 2$ can be used to work out that $17 - 5 = 12$. Core Knowledge -When nothing is taken away, the whole remains the same. -The '-' symbol represents taking away. When nothing is taken away, the whole remains the same.	
Number - Addition and Subtraction	Addition and Subtraction	Skill -Experiment with mathematical mark making when solving real-world addition and subtraction problems.	Skill - Understand and use language and concepts relating to addition and subtraction. Be aware of the symbols related to addition and subtraction.	Skill -Complete addition and subtraction using a number line. -Read, write and interpret simple mathematical statements involving addition (+), subtraction (−) and equals (=) signs. -Use concrete manipulatives and drawn images to complete inequality and 'equal to' statements, involving comparing a simple statement to an integer. -Compare two calculations, both addition and subtraction, using the symbols <, > and =.	Skill -Identify, using +, - and = symbols, number facts within 20. -Discuss and share strategies, including using the inverse to check addition and subtraction calculations. -Use <, > and = sign to compare number sentences. -Find missing values in number sentences with familiar numbers using structure and spotting patterns. -Use related number facts of 10s and ones' to solve addition and subtraction calculations.

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				-Explore addition and subtraction fact families for numbers within 20. -Use $<$, $>$ and $=$ signs to compare numbers within 20. Core Knowledge -Addition and subtraction are inverse operations. Addition is commutative but subtraction is not.	-Recognise the pattern of digits when add and subtract one. -Explore, on a 100 square, where the 10s digit changes when the ones digit stays the same. -Add and subtract 10s from a given number within 100.
Number - Addition and Subtraction	Problems (Addition and Subtraction)			Skill -Solve simple age-appropriate problems with addition and subtraction, using concrete objects, pictorial representations, and missing number problems.	Skill -Apply their increasing knowledge of mental and written methods to solve simple problems with addition and subtraction, using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
Number - Addition and Subtraction	Addition Methods				Skill -Add two digits and one digit including crossing 10. -Add two digit numbers not crossing 10, including column method. -Add two digit numbers crossing 10, using partitioning and exchange. Core Knowledge -10 ones is the same as one 10. -Add the ones first when using the column method.
Number - Addition and Subtraction	Subtraction Methods				Skill -Subtract one digit from two digits, including crossing ten. -Subtract a two digit number from a two digit number, without crossing ten.

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					-Subtract a two digit number from a two digit number crossing ten. Core Knowledge -10 ones is the same as one 10.
Number - Multiplication and Division	Times Tables			Skill -Revise counting in multiples of two, up to 50. -Revise counting in multiples of five, up to 50. -Count in multiples of 10.	Skill -Mentally calculate mathematical statements for multiplication within the two times tables. -Mentally calculate mathematical statements for multiplication within the five times tables. -Mentally calculate mathematical statements for multiplication within the 10 times tables. -Explore the relationship between the 5 and 10 times tables.
Number - Multiplication and Division	Multiplication	Skill -Explore sharing resources in their play with adult support.	Skill -Double quantities within 10 and explore how to share amounts evenly using concrete resources. Core Knowledge - Doubling is adding the same number to itself. -Doubling is adding the same number to itself. Sharing something evenly means that each group has the same amount. Only even numbers can be shared equally between two sets.	Skill - Begin to recognise equal and unequal groups and explain how they know. - Explore making equal groups and write statements, such as 'there are ___ groups of ___.' - Add equal groups to find a total, counting equal groups of two, five and 10, and explore this within 50. - Make arrays. - Double small quantities, using concrete objects and pictorial representations. Core Knowledge - Groups are equal if they contain the same number of objects. Groups are unequal if they do not contain the same number of objects. - In an array, a row is across and a column is down.	Skill - Recognise and make equal groups and write statements, such as 'there are ___ groups of ___.' - Redistribute from unequal to equal groups. - Consolidate adding equal groups to find a total, counting equal groups of two, five and 10, and explore this within 50. - Consolidate making arrays. - Make equal groups. - Add equal groups, connecting this to repeated addition. - Link repeated addition and multiplication together. - Use the multiplication symbol and work out the total from pictures. Interpret a multiplication word problem by drawing images to help solve it.

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				- Double is two groups of a number or amount. Doubling is adding the same number to itself.	- See, using arrays, that multiplication facts are commutative. - Consolidate doubling small quantities, using concrete objects and pictorial representations. - Consolidate making groups of an equal amount from a given total. Core Knowledge - In an array, a row is across and a column is down. - Know and recognise the multiplication symbol and that multiplication is repeated addition. - An array is an arrangement of objects, numbers or pictures in columns and rows. - Double is two groups of a number or amount. Doubling is adding the same number to itself.
Number - Multiplication and Division	Division	Skill - Explore sharing resources in their play with adult support.	Skill - Explore how to share amounts evenly using concrete resources. Core Knowledge - Sharing something evenly means that each group has the same amount. - Sharing something evenly means that each group has the same amount. Only even numbers can be shared equally between two sets.	Skill - Make groups of an equal amount from a given total. - Share concrete objects into equal groups, observe that sometime the number of objects cannot be shared equally.	Skill - Continue to make groups of an equal amount from a given total and consolidate sharing concrete objects into equal groups, observe that sometimes the number of objects cannot be shared equally. - Divide by sharing objects into equal groups with concrete objects then pictorial representations. - Divide by making equal groups, then count on to find the total number of groups. - Use grouping and sharing to be able to solve simple division problems. - Explore odd and even numbers and their structure using concrete manipulatives

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					- Use grouping or sharing to answer questions and use the two times table to support division by two. - Use grouping or sharing to answer questions and use the five times table to support division by five. - Use grouping and sharing, depending on the context of the problem, to divide by 10. Core Knowledge - Know and recognise the division symbol. - Division is the opposite of multiplication - Grouping and counting in 10s is more efficient than sharing into 10 equal groups.
Number - Fractions	Recognising, finding and making fractions			Skill - Make a half. - Make a whole. - Recognise, find and name a half as one of two equal parts of an object or shape. - Recognise, find and name a half as one of two equal parts of a quantity. - Recognise, find and name a quarter as one of four equal parts of an object or shape. - Recognise, find and name a quarter as one of four equal parts of a quantity. Core Knowledge - A half is one of two equal parts of a whole object or shape. - A half is one of two equal parts of a quantity.	Skill - Using a variety of examples, identify and describe the whole and parts of the whole when exploring fractions. - Recognise equal and unequal parts of real life objects and pictorial representations of a variety of shapes and quantities. - Explore halves in different contexts and use the $\frac{1}{2}$ notation alongside half or halves. - Find half of a set of objects or quantity. - Recognise a quarter, explore splitting wholes into quarters and see that a quarter is half of a half. - Find quarters of shapes, objects and quantities. - Recognise a third, explore splitting wholes into thirds.

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				- A quarter is one of four equal parts of a whole object or shape. - A quarter is one of four equal parts of a quantity.	- Find thirds of shapes, objects and quantities. - Recognise a unit fraction as one equal part of a whole. - Recognise $\frac{2}{3}$ and $\frac{3}{4}$ as non-unit fractions. See fractions where the whole is shaded and how these fractions are written. - Recognise, find, name and write the fractions $\frac{1}{4}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{4}$ and $\frac{1}{3}$ of a length, shape, set of objects or quantity. Core Knowledge -A whole is one object, shape or quantity and refers to the complete thing. Parts of the whole are small sections of the object, shape or quantity. - A whole is one object or one quantity. A fraction is part of an object, shape or quantity that has been split into equal parts or groups. - Halving is splitting a whole into two equal parts. The numerator of a fraction is the top number and shows how many parts of a whole there are. The denominator of a fraction is the bottom number and shows into how many equal parts the item or number is divided. - Halving is the same as dividing by two. - One quarter is equal to one part out of four equal parts. - One third is equal to one part out of three equal parts. - The numerator of a fraction is the top number and shows how many parts of a whole there are. Unit
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					fractions have a numerator of 1. The denominator of a fraction is the bottom number and shows into how many equal parts the item or number is divided. - The numerator and the denominator are the same when the fraction is equivalent to one whole. Non-unit fractions have a numerator greater than 1. - A fraction is part of an object, shape or quantity that has been split into equal parts or groups. The top number of a fraction shows the number of parts we are dealing with and the bottom number shows the number of equal parts into which something has been split. A quarter ($\frac{1}{4}$) is one of four equal parts of a whole object, shape or quantity. A half ($\frac{1}{2}$) is one of two equal parts. Two-quarters ($\frac{2}{4}$) is two of four equal parts. A third ($\frac{1}{3}$) is one of three equal parts
Number - Fractions	Equivalence				Skill - Explore the equivalence of two quarters and one half of the same whole and demonstrate that they are the same.
Number - Fractions	Counting and Calculating with fractions				Skill - Find three quarters of a quantity. - Count up in halves, thirds and quarters from any number up to 10. - Write simple fractions such as $\frac{1}{2}$ of 6 = 3. - Solve simple problems involving fractions.

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Measurement - Measuring and Calculating	Length and Height	Skill - Explore length, height, capacity, weight, time and money in their play. - Explore length, height, weight and capacity in their play and begin to use language associated with this with support, such as long, short, tall, heavy, light, full and empty. - Compare the length and height of everyday objects in their play and begin to use language associated with this with support, such as long, short and tall. Core Knowledge - Items can have different heights, lengths and weights. Containers hold different amounts.	Skill - Use language in their play, including heavy, light, heavier, lighter, long, short, longer, shorter, tall, taller, full and empty. - Compare and order the length and height of two to three objects and use and understand the language tall, taller, tallest, long, longer, longest, short, shorter and shortest. Core Knowledge - Items can be compared to see which is taller or shorter. - Items can be measured to show how long, tall or heavy they are. - Items can be measured to show how tall they are. - Items can be measured using non standard units to show how long or tall they are.	Skill - Compare, describe and solve practical problems for lengths and heights (long or short; longer or shorter; tall or short and double or half). - Measure and begin to record lengths and heights, using pictorial representations, numbers or words. - Measure and begin to record lengths and heights, using a ruler. Core Knowledge - Length is a measure of how long something is from end to end. Height is a measure of how high something is from head to foot or top to base.	Skill - Consolidate comparing, describing and solving practical problems for lengths and heights (long or short; longer or shorter; tall or short and double or half). - Consolidate measuring and recording lengths and heights, using pictorial representations, numbers or words. - Consolidate measuring and recording lengths and heights, using a ruler. - Measure both length and height to the nearest cm with a ruler and tape measure. - Measure larger objects using metres. - Compare lengths in the same unit of objects using comparison language (such as longer than, shorter than, taller than, longest, shortest and tallest) and symbols. - Order given lengths, as well as ordering objects by measuring each length using the language 'shorter, shortest, longer and longest' to describe the order. Core Knowledge - Measure from zero, rather than the end of the ruler or tape measure.
Measurement - Measuring and Calculating	Problems (Measurement)		Skill - Compare quantities and objects to solve problems.	Skill - Solve simple problems that involve all Y1 elements of measurement, using concrete objects, pictorial representations and number lines.	Skill - Solve one-step and two-step problems relating to lengths and heights. - Solve problems involving mass.

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			Core Knowledge - Items can be measured to show how long, tall or heavy they are. Capacity shows how much a container holds.		- Solve problems involving volume/capacity.
Measurement - Measuring and Calculating	Volume And Capacity	Skill - Compare the capacity of everyday objects in their play, and begin to use language associated with this, such as full and empty.	Skill - Compare and order the capacity of two to three items in sand and water play and use and understand the language full and empty. Core Knowledge -The capacity of an object is how much it can hold.	Skill - Compare the volume in a container by describing whether it is full, nearly full, empty or nearly empty. - Measure and begin to record capacities and volumes, using pictorial representations, numbers or words. - Compare capacity using non-standard units of measure including the vocabulary of more, less and equal to, and the symbols <, > and =. Core Knowledge - Capacity is how much a container can hold. Volume is the space that water takes up in a container.	Skill - Consolidate comparing the volume in a container by describing whether it is full, nearly full, empty or nearly empty. - Consolidate measuring and recording capacities and volumes, using pictorial representations, numbers or words. - Compare the volume of containers using <, > and =, including the use of language: quarter, half and three quarters full. - Measure and estimate the volume of containers using millilitres (ml). - Recognise the difference between measuring in millilitres and litres and when it is more efficient to use litres to measure liquid rather than millilitres. Core Knowledge - Capacity is how much a container can hold. Volume is the space that water takes up in a container. - Capacity and volume can be measured in litres (l) or millilitres (ml). There are 1000 ml in 1 l.
Measurement - Measuring and Calculating	Time	Skill - Be aware of when certain events take place.	Skill - Order and sequence familiar events, such as everyday routines.	Skill - Describe, sort and order events using sequencing language, such as before, after, next, first, today, yesterday,	Skill - Consolidate telling the time to the hour using an analogue clock.

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		- Begin to describe a sequence of real or fictional events, using words, such as 'first' and 'then'. - Be aware that timers and clocks are used to measure time. Core Knowledge -Events happen in an order and sometimes they have to wait for things to happen. Certain words, including 'later', show that they need to wait for an event to happen.	- Know the order of the days of the week - Use simple timers to measure periods of time. Core Knowledge - Events can be sequenced using everyday words, such as first, then, next, morning and afternoon. - There are seven days in the week. School days are Monday to Friday. Saturday and Sunday are the weekend.	tomorrow, morning, afternoon and evening. - Recognise and use language relating to dates, including days of the week, weeks, months and years and talk about events using today, yesterday and tomorrow. - Tell the time to the hour using an analogue clock. - Tell the time, to the half hour, using an analogue clock, understanding the language 'half past'. - Measure and begin to record time (hours, minutes and seconds), using pictorial representations, numbers or words. - Compare amounts of time using the language faster, slower, earlier and later. Core Knowledge - Events can be sequenced using these words: before, after, now, next, first, morning, afternoon and evening. - There are seven days in a week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday. There are twelve months in a year: January, February, March, April, May, June, July, August, September, October, November and December. The past refers to events that have already happened, the present refers to events that are happening now and the future refers to events that haven't happened yet. - The hour hand is the shorter hand on a clock, and the minute hand is the longer hand. On an analogue clock, the	-Consolidate telling the time, to the half hour using an analogue clock, understanding the language 'half past'. -Read and write times, using o'clock and half past, from analogue clocks. -Read and draw the times 'quarter to' and 'quarter past'. -Read and show analogue time to five minute intervals. -Consolidate measuring and recording time (hours, minutes and seconds), using pictorial representations, numbers or words. -Use clocks, bar models and the fact that there are 60 minutes in an hour to convert minutes to hours and minutes, and vice versa. -Identify the start and end time of an event and use the times to work out the duration. Core Knowledge -The hour hand is the shorter hand on a clock and the minute hand is the longer hand. On an analogue clock, the minute hand points to 12 when it is an o'clock time. -At half past the hour, the minute hand has travelled half way around the clock and is pointing at the six, while the hour hand is half way between the hours. -The hour hand moves along with the minute hand. Therefore, when the time is quarter past the hour, the hour hand will be just past the hour and when the time is quarter to, the hour hand will be just before the hour.
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Measurement - Measuring and Calculating	Weight and Mass	Skill -Explore length, height, weight and capacity in their play and begin to use language associated with this with support, such as long, short, tall, heavy, light, full and empty. -Compare the weight of everyday objects in their play and begin to use language associated with this, with support, such as heavy and light. Core Knowledge -Words including tall, taller, tallest, short, shorter and shortest help us describe the height of objects. -We use scales to weigh objects.	Skill -Use language in their play, including heavy, light, heavier, lighter, long, short, longer, shorter, tall, taller, full and empty -Compare and order the weight of two to three items and use and understand the language heavy, heavier, heaviest, light, lighter and lightest. Core Knowledge - Items can be measured to show how long, tall or heavy they are. - Items can be measured using non standard units to show how long or tall they are.	Skill -Hold and describe objects using vocabulary such as heavy, light, heavier than, lighter than, then use scales to check. Investigate to see if larger objects are always heavier than smaller objects. -Measure and begin to record masses or weights, using pictorial representations, numbers or words. -Use non-standard units and balance scales to weigh objects and compare whether they are heavier or lighter. Core Knowledge -Mass or weight is the measure of the amount of something and how heavy it is. -When using non-standard units of measure the units must stay the same.	Skill -Consolidate holding and describing objects using vocabulary, such as heavy, light, heavier than and lighter than, then use scales to check. Investigate to see if larger objects are always heavier than smaller objects. -Consolidate measuring and recording masses or weights, using pictorial representations, numbers or words. -Compare mass using < and > and order objects based on their masses. -Feel the mass of gram weights and use grams when reading weighing scales. -Feel the mass of a 1kg, weight and use kilograms when reading weighing scales. Core Knowledge -Mass, or weight, is the measure of the amount of something and how heavy it is.

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					-Mass can be measured in kilograms (kg) or grams (g). There are 1000g in 1kg.
Measurement - Measuring and Calculating	Money	Skill - Explore coins and money in their play.	Skill -Use money, including coins, in role play situations. Core Knowledge - There are different types of coins. Each coin is worth a different amount. -We use money including coins to buy things. -Money such as coins is used to buy items in shops. -A shop is a place where people go to buy things with money. -A supermarket is a type of shop that sells food, drink and other products.	Skill -Recognise and know the value of different denominations of coins, including 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2. -Recognise and know the value of different denominations of notes. -Begin to count in 1p, 2p, 5p and 10p coins.	Skill -Consolidate the recognition of different denominations of coins, including 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2 and know their value. -Consolidate the recognition of different denominations of notes and know their value. -Count in 1p, 2p, 5p and 10p coins. -Count in £1 and £2 coins and £5, £10 and £20 notes. -Count in pounds and pence -Select coins and notes to make an amount. -Find different combinations of coins that equal the same amounts of money. -Compare two different values, for example, in either pounds or pence. -Add money using different methods such as, count on, partitioning and regrouping. -Find the difference between two amounts of money including the use of the strategies of counting on and counting back. -Find change from a given amount converting £1 into 100p when necessary. -Solve simple problems in a practical context, involving addition and subtraction of money of the same unit and giving change.

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					Core Knowledge -Change is the money returned to someone when they have paid for an item with an amount that is greater than the price. 100p=£1
Measurement – Measuring and Calculating	Temperature				Skill -Read temperature on different thermometer scales. Core Knowledge -The temperature is higher when it is warmer. A thermometer measures temperature and temperature is measured in degrees Celsius or Centigrade (°C). 0°C is the freezing point of water and 100°C is the boiling point of water.
Geometry - Shape, Position and Direction	Shape	Skill - Explore shapes in the environment and use informal mathematical vocabulary to talk about the shape of everyday objects, such as round and tall. - Select appropriate shapes for building and construction activities and combine shapes to make new ones. Core Knowledge -Shapes have different properties. They can be straight, long, curvy or short. Shapes are all around us in the environment.	Skill - Use mathematical names for common 3-D shapes and use 3-D shapes in their play - Use mathematical names for common 2-D shapes and explore shapes in their play. Core Knowledge - 3-D shapes are solid shapes. They have a different number of faces and edges. The faces are made up of different 2-D shapes. - 2-D shapes are flat. They have a different number of sides and angles. 2-D shapes can be folded and cut into different 2-D shapes.	Skill -Recognise and name common 3-D shapes, including cuboids, cubes, cylinders, pyramids, cones and spheres, in different orientations and sizes, and relate them to everyday objects. -Sort and group 3-D shapes according to simple properties, including type, size and colour. -Recognise and name common 2-D shapes, including rectangles, squares, circles and triangles, in different orientations and sizes, and relate them to everyday objects. -Sort and group 2-D shapes according to simple properties, including type, size and colour.	Skill -Recognise and name 2-D and 3-D shapes in different orientations and proportions, and differentiate between them. -Count sides of 2-D shapes by marking each side as they count. -Identify and count vertices of 2-D shapes. -Draw 2-D shapes. -Explore shapes being halved along their vertical line of symmetry. -Recognise and sort 2-D shapes, including a circle, square, triangle, rectangle, pentagon, hexagon and octagon, using a range of different orientations.

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			They can also be put together to make other 2-D shapes. -Folding a 2-D shape in half makes a new shape.	Core Knowledge -Common 3-D shapes are: cuboids, cubes, cylinders, pyramids, cones and spheres. -Common 2-D shapes are: squares, rectangles, circles, triangles, pentagons, hexagons and octagons.	-Create patterns with 2-D shapes. -Identify and describe 2-D shapes of faces on 3-D shapes. -Identify edges on 3-D shapes. -Identify vertices on 3-D shapes. -Compare and sort 3-D shapes and everyday objects. Core Knowledge -Know that 2-D shapes are actually flat. -Know that a vertex is where two lines meet at a point and that more than one vertex are called vertices. The word vertex should be used in place of the word corner. -A shape has symmetry in a vertical line if a line can be drawn down the middle of it and the left side is a mirror image of the right. -A three-dimensional (3-D) shape has three measurements and can be held. These are common 3-D shapes: cuboids, cubes, spheres, cones, cylinders, pyramids, triangular-based pyramid, square-based pyramid and triangular prism. The flat surface of a 3-D shape is called a face. The faces of a cuboid can be rectangles and squares. The faces on a cube are squares. Two of the faces on a cylinder are circles. One of the faces on a pyramid may be a circle, square or rectangle. -An edge is where two faces meet or where a face and a curved surface meet. -A vertex is where two or more edges meet.
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					-3-D shapes can be sorted in different ways e.g. faces, shapes of faces, edges, vertices, if they roll, if they stack...
Geometry - Shape, Position and Direction	Pattern and Symmetry	Skill -Extend and create ABAB patterns using a variety of objects, and notice and correct an error in a repeating pattern. Identify patterns in the environment.	Skill -Continue, copy and create repeating patterns using a variety of objects.	Skill -Complete and make simple patterns with 2-D and 3-D shapes.	Skill -Create patterns with 2-D and 3-D shapes.
Geometry - Shape, Position and Direction	Position, Direction and Coordinates	Skill - Use and understand positional language. Core Knowledge - Positional language includes in, under, inside, behind, and on top.	Skill - Use and understand language that describes where objects are in relation to each other. Core Knowledge - Positional language includes under, over, next to, behind, in front, above and through.	Skill -Describe position and movement, including whole, half, quarter and three quarter turns. -Describe direction and movement, including forwards, backwards, left and right. -Describe position, including top, in between, bottom, above and below. Core Knowledge -Position and movement can be described using these words: top, middle, bottom, on top of, in front of, above, between, around, near, close, far, up, down and turn -Direction can be described using these words: forwards, backwards, left and right. -Position can be described using these words: top, in between, bottom, above and below.	Skill -Consolidate describing direction and movement including forwards, backwards, left and right. -Consolidate describing position, including top, in between, bottom, above and below. -Solve problems involving position. -Give and then write directions for routes, including recording routes on 2-D grids. -Describe turns using the language full, half, quarter, three quarter turns, clockwise and anticlockwise. -Describe and record directions involving movement and turns. -Describe and create patterns that involve direction and turns using the language clockwise, anticlockwise, quarter, half and three quarters. Core Knowledge -Direction can be described using these words: forwards, backwards, left and right. -Position can be described using

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					these words: top, in between, bottom, above and below.
Statistics	Construct, Read and Interpret		Skill - Record data in simple tables, pictograms or block charts. Core Knowledge - Data can be recorded in tables, pictograms and charts. - Everyone is different and special. There might be things that make them similar or different from others including the things they like to do.		Skill - Construct and use simple tally charts or simple tables. - Identify simple information from a block diagram and construct block diagrams. - Construct simple pictograms. - Interpret simple pictograms. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. - Construct more complex pictograms where part symbols are used. - Interpret more complex pictograms. Core Knowledge - Information, also known as data, can be recorded in tally charts and tables. Charts and tables make information easier for others to read and understand. A tally chart is a method of collecting information quickly and uses lines, called tally marks, to represent information. Tally marks are written in groups of five. A table is a way of recording data in rows and columns. - Information, also known as data, can be recorded in block diagrams. Block diagrams make information easier for others to read and understand. A block diagram uses blocks or rectangles to show different amounts.

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					-Information, also known as data, can be recorded in pictograms. These charts make information easier for others to read and understand. A pictogram uses pictures or symbols to show information.
Statistics	Problems (Statistics)				Skill -Ask and answer questions about totalling and comparing categorical data for simple block diagrams. Core Knowledge -The words most, least, fewer, altogether and total can be used in questions about data. Most means the group with the biggest number or amount. Least means the group with the smallest number or amount. Altogether, or the total, is the whole of something.