



F2 Maths Overview (With reference to Early Learning Goals and Westdale's Learning Progression.)

TERM/LEARNING OBJECTIVES:	ACTIVITIES/SONGS:	ASSESSMENT:
<p>Autumn Term : Number counting to 5</p> <p>I KNOW</p> <ul style="list-style-type: none"> - Children count forwards and backwards to at least 5 - I can start counting from any number between 0-5 to at least 5. - I count things of different sizes – this helps children to focus on the numerosity of the count - I count things that can't be seen, such as sounds, actions, words - I count things that cannot be moved, such as pictures on a screen, birds at the bird table, faces on a shape - I know the last number counted is the total number of objects. - I can say a total without recounting. - I can subitise up to 5 objects without counting. - I can match a numeral to a group of objects. - I understand the conservation of number – that rearranging a group of objects does not affect the total number of objects. <p>Autumn term: Number Place Value</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I can compare two groups by direct comparison and recognise when two groups are equal/ not equal. - I begin to order groups of objects using the vocabulary more and fewer. <p>Autumn term : Number Addition and subtraction</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I can sort groups of objects by criteria recognising what is the same and what is different. - I can find 1 more and 1 less than numbers to 5. <p>Autumn term: SSM Measures Time</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I can order important times of day - I can use positional language to describe when events happen. <p>Autumn term: SSM Position and direction</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I understand spatial vocabulary. E.g- position: 'in', 'on', 'under', direction: 'up', 'down', 'across'. <p>Autumn term: SSM Shape and space</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I recognise objects and shapes in from different viewpoints. - I choose shapes for my constructions based on attributes. <p>Autumn term: SSM Pattern</p> <p>KNOW:</p> <ul style="list-style-type: none"> - I can continue an AB pattern. - I can copy an AB pattern. - I can make an AB pattern. - Spot errors in AB patterns. 	<p>At Westdale when we introduce a new concept, we provide pupils with the opportunity to build competency by providing opportunities for children to experience concrete, pictorial and abstract mathematics. Teacher lead activities / continuous provision activities suggestions.</p> <p>Counting</p> <ul style="list-style-type: none"> • counting backwards, for example number rhymes • starting from different numbers. • counting things of different sizes – this helps children to focus on the numerosity of the count • counting things that can't be seen, such as sounds, actions, words • counting things that cannot be moved, such as pictures on a screen, birds at the bird table, faces on a shape • playing dice games to collect a number of things • playing track games and counting along the track. • using dot cards, dominoes and dice as part of a game, including irregularly arranged dots (e.g. stuck on) • playing hidden objects games where objects are revealed for a few seconds, for example, small toys hidden under a bowl – shuffle them, lift the bowl briefly and ask how many there were • 'all at once fingers' – show me four fingers. • using numeral dice in games; matching numerals with varied groups of things • using 'tidy-up labels' on containers and checking that nothing is missing • reading number books • putting the right number of snacks on a tray for the number of children shown on a card. • labelling groups with the correct numeral. Do children spot the error if a group is mislabelled? For example, 'The label on the pot says 4 and we have 5 – what do we need to do?' A child may say, 'We need to take one out because we have one too many.' • ensuring children focus on the numerosity of the group by having items in the collection of different kinds and sizes <p>Place value</p> <ul style="list-style-type: none"> • correcting a puppet who may say that there are more or fewer objects now, as they have been moved around, e.g. spread out or pushed together • contexts such as sharing things out (grouping them in different ways) and then the puppet complaining that it is not fair as they have less • encourage the children to make different patterns with a given number of things. ensuring that when providing groups to compare, there are some that have an equal amount • asking children to convert two unequal groups into two that have the same number, e.g. 'There are 6 apples in one bag and 2 in another bag; can we make the bags equal for the two hungry horses?' • compare numbers that are far apart, near to, and next to each other. <p>Addition and subtraction</p> <ul style="list-style-type: none"> • explain unfair sharing - 'This one has more because it has 5 and that one only has 3' • making predictions about what the outcome will be in stories, rhymes and songs if one is added to, or if one is taken away. <p>Time</p> <ul style="list-style-type: none"> • un-muddling visual timetables • making picture sequences for cooking instructions • describing sequences by re-telling stories • discussing 'o'clock' times at registration, lunchtime, snack time, tidy-up time, etc. • making their own timetable for a day – selecting activities and ordering them. <p>Position and Movement</p> <ul style="list-style-type: none"> • riding trikes around interesting routes • construction activities • printing and making pictures and patterns with shapes • posting boxes • jigsaws • making a complete circuit with a train track • directing a simple robot or remote-controlled toy vehicle along a route • tangrams: 'Can you make a person with the shapes?' • with toys in a line: 'Can you say what the teddy on the other side is seeing?' • Shape and space • hunting for hidden objects, with some prompts, e.g. 'Look behind the bicycle store, take three steps from the front of the art cupboard...' 	<p>Criteria:</p> <p>Counting numbers to 5</p> <p>ELG</p> <p>Pupils count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.</p> <p>What to look for:-</p> <ul style="list-style-type: none"> - consistently recite the correct sequence of numbers. - collect up to 5 from a large pile. - subitise (instantly recognise) a group that contains up to four, then five, in a range of ways, e.g. fingers, dice, random arrangement? - select a numeral to represent a quantity in a range of fonts, e.g. , , ? - correct a puppet who thinks the amount has changed when their collection has been rearranged? <p>Place value numbers to 5</p> <p>ELG</p> <p>Pupils count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.</p> <ul style="list-style-type: none"> - state which group of objects has more? Can they do this with a large or small visual difference? - compare two numbers and say which is the larger? <p>Number addition and subtraction to 5</p> <p>ELG</p> <p>Pupils say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.</p> <ul style="list-style-type: none"> - predict how many there will be if you add or take away one? <p>Measures Time</p> <p>ELG</p> <p>Pupils use everyday language to talk about time.</p> <ul style="list-style-type: none"> - accurately use the relative terms 'yesterday' and 'tomorrow'? - order a short sequence of events? <p>Geometry position and direction.</p> <p>ELG</p> <p>Pupils use everyday language to talk about position and direction.</p> <ul style="list-style-type: none"> - select and rotate shapes to fit into a given space? - use positional vocabulary, including relative terms, to describe where things are in small-world play? - show intentionality in selecting shapes for a purpose, such as cylinders to roll? - make a range of constructions, including enclosures, and talk about the decisions they have made? - see shapes in different orientations and recognise that they are still that shape? <p>Shape and space</p> <p>ELG</p> <p>Pupils explore characteristics of everyday objects and shapes and use mathematical language to describe them.</p> <ul style="list-style-type: none"> - select and rotate shapes to fit into a given space? - show intentionality in selecting shapes for a purpose, such as cylinders to roll? - make a range of constructions, including enclosures, and talk



	<ul style="list-style-type: none"> developing and talking about small-world scenarios, e.g. doll's house, miniature village, play park acting out their own versions of well-known stories where characters negotiate routes and obstacles, for example, 'We're Going on a Bear Hunt' directing each other as robots. <p>Pattern</p> <ul style="list-style-type: none"> building towers or trains of different-coloured cubes (continuing patterns horizontally and vertically) extending patterns using a wide range of identical objects in different colours, e.g. beads; small plastic toys such as bears, dinosaurs, vehicles. Try to avoid interlocking cubes or bead-threading so children can focus on the pattern rather than their coordination skills accessing a range of patterns to copy. For example, using the plastic bears: big, small, big, small, big... footwear: shoe, welly, shoe, welly..., triangles ... actions and sounds: jump, twirl, jump, twirl, jump... or clap, stamp, clap, stamp... collecting things in the outdoors environment: stick leaf, stick, leaf, stick, leaf... challenging the child to change one element of the pattern they have created, e.g. 'Can you change the red bear to a blue bear? What is the pattern now?' ensuring that there are numerous opportunities to create patterns – e.g. in the outdoors, using natural materials such as sticks, leaves, stones, pine cones; in craft activities, using stamping, sticking, printing; with musical instruments, using sounds such as drums, shakers, triangles, etc. working collaboratively with a friend to take turns to create a pattern, e.g. one claps, one stamps, or one gets the red bear, one gets the yellow bear etc. challenging a friend to continue or copy their pattern. 	<p>about the decisions they have made?</p> <ul style="list-style-type: none"> See objects in different orientations and recognise that they are still that object. <p>Pattern ELG Pupils recognise, create and describe patterns.</p> <ul style="list-style-type: none"> continue, copy and create an AB pattern. identify the pattern rule (unit of repeat) in an AB pattern. <p>Methods: Ongoing daily maths assessment. A pupil really understands a mathematical concept, idea or technique if he or she can:</p> <ul style="list-style-type: none"> describe it in his or her own words represent it in a variety of ways (e.g. using concrete materials, pictures and symbols) explain it to someone else make up his or her own examples (and non-examples) see connections between it and other facts or ideas recognise it in new situations and contexts make use of it in various ways, including in new situations. <p>If a pupil is working at greater depth they may also be able to:-</p> <ul style="list-style-type: none"> solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination Independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics. <p>Teacher will also use assessment tasks and quizzes/ tests.</p> <p>Evidence: Guided maths tasks, maths observations, continuous provision observations, pupil reasoning, maths assessments, piccollage and teacher notes.</p>
<p>Spring : Number addition and subtraction- numbers to 5 I KNOW:</p> <ul style="list-style-type: none"> I can perceptually subitise to find the total number of objects in a group. I can say what 1 more/ less than a given amount using equipment if needed. I can use models to recognise the part whole relationship between numbers. I explore the conservation of number within a part whole relationship. I can solve everyday problems involving addition and subtraction. <p>Spring : Number Place value - numbers to 10 I KNOW:</p> <ul style="list-style-type: none"> Children count forwards and backwards to at least 10 I can start counting from any number between 0-10 to at least 10. I count things of different sizes – this helps children to focus on the numerosity of the count I count things that can't be seen, such as sounds, actions, words I count things that cannot be moved, such as pictures on a screen, birds at the bird table, faces on a shape I know the last number counted is the total number of objects. I can say a total without recounting. I start to conceptually subitise up to 10 objects without counting. I can match a numeral to a group of objects. I understand the conservation of number – that rearranging a group of objects does not affect the total number of objects. I can compare two groups by direct comparison and recognise when two groups are equal/ not equal. I begin to order groups of objects using the vocabulary more and fewer. 	<p>At Westdale when we introduce a new concept, we provide pupils with the opportunity to build competency by providing opportunities for children to experience concrete, pictorial and abstract mathematics. Teacher lead activities / continuous provision activities suggestions.</p> <p>Place value</p> <ul style="list-style-type: none"> using numeral dice in games; matching numerals with varied groups of things using 'tidy-up labels' on containers and checking that nothing is missing reading number books putting the right number of snacks on a tray for the number of children shown on a card. correcting a puppet who may say that there are more or fewer objects now, as they have been moved around, e.g. spread out or pushed together contexts such as sharing things out (grouping them in different ways) and then the puppet complaining that it is not fair as they have less encourage the children to make different patterns with a given number of things. explain unfair sharing - 'This one has more because it has 5 and that one only has 3' compare numbers that are far apart, near to, and next to each other. <p>Addition and subtraction</p> <ul style="list-style-type: none"> Numicon towers: layering up Numicon pieces of the same total putting things into two containers in different ways making a number with two different kinds of things. For example, make a fruit skewer with five pieces of fruit, using bowls of bananas/strawberries to choose from; then ask the children to describe how they have made theirs. They should compare it with a partner's: 'What is the same about your skewers? What is different?' Bunny Ears: using your fingers like bunny ears. 'With two hands, show me five fingers. Can you do it in a different way?' Or, 'Show five fingers altogether with a friend' 	<p>Criteria:</p> <p>Number addition and subtraction ELG Pupils say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.</p> <ul style="list-style-type: none"> predict how many there will be if you add or take away one? subitise small groups within a larger number? make a reasonable guess at a hidden number? in context, state two groups that make a larger amount? For example, how might the (six) bean bags land? You could have three with stripes up and three with spots up. <p>Number and place Value to 10 ELG Pupils count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.</p> <ul style="list-style-type: none"> state which group of objects has more? Can they do this with a large or small visual difference? compare two numbers and say which is the larger? select a numeral to represent a quantity in a range of fonts, e.g. , , ? correct a puppet who thinks the amount has changed when their collection has been rearranged?



<p>- I can compare quantities and give reasons as to why a group has more.</p> <p>Spring : Number addition and subtraction- numbers to 10</p> <p>I KNOW:</p> <ul style="list-style-type: none"> - I can perceptually subitise to find the total number of objects in a group. - I can say what 1 more/ less than a given amount using equipment if needed. - I can use models to recognise the part whole relationship between numbers. - I explore the conservation of number within a part whole relationship. (including number bonds for 10) - I can solve everyday problems involving addition and subtraction. <p>-</p> <p>Spring : SSM Properties of shape</p> <p>I KNOW:</p> <ul style="list-style-type: none"> - I explore 2d/3d shapes through everyday objects. Developing spatial awareness and experiencing shapes from different viewpoints. - I start to know shape names and can select a named shape. - I look for similarities and difference between shapes. - I sort shape by different criteria. - I understand the same shapes can be sorted in more than 1 way. <p>Spring : SSM Measures</p> <p>I KNOW:</p> <ul style="list-style-type: none"> - I recognise attributes- objects can be sorted by attributes such as colour size and shape. - I compare amounts of continuous quantities. - I show awareness of comparison in estimating and predicting. - I compare indirectly- a group of objects can be sorted in different ways- largest to smallest, thinnest to fattest etc <p>Spring : SSM Pattern</p> <p>I KNOW:</p> <ul style="list-style-type: none"> - Identify the unit of repeat. - Continue a ABC pattern. - Continue a pattern which ends mid unit. - Making their own AAB, ABBC patterns. - Spots an error in a ABB pattern. 	<ul style="list-style-type: none"> • Spill the Beans: using double-sided counters or beans, where one side is coloured, throw the collection and note how many of each type can be seen and how many altogether • using six bean bags with different fabric on each side, throw the collection and note how many of each type can be seen. • role play, e.g. in a toy shop, ten toys need arranging onto the three shelves. How will you organise them? • having more than two places to sort things into in any given context, e.g. arranging characters in small-world play in different locations • games such as ‘Posh Ducks’ (Griffiths, R., Back, J.& Gifford, S. (2016) Making Numbers: Using manipulatives to teach arithmetic OUP): using a set number of ducks, for example ten in three different locations (nest, water, decking), roll the dice and make one group match the amount shown without adding or taking any away. • playing hiding games with a number of objects in a box, under a cloth, in a tent, in a cave, etc. • utilising classroom routines such as tidy-up time to identify how many are still missing from a pot with a number label. <p>Shape</p> <ul style="list-style-type: none"> • stories as a prompt for creating representations, e.g. building a house for the three bears • making pictures with found materials as well as structured shapes and blocks. • making an insect hotel - selecting tube-like shapes from a collection of varied materials, some not fit for purpose <p>Measures</p> <ul style="list-style-type: none"> • ensuring adults model language which highlights the specific attribute that is the focus of attention • dough modelling can provide a good opportunity to discuss the length of snakes, or the weight of different-sized lumps. • water and sand-play, which can provide lots of opportunities to highlight capacity. Developing and talking about small-world scenarios, e.g. doll's house, miniature village, play park • encouraging children to compare different attributes in everyday situations: ‘I wonder who has the longest snake?’ ‘I wonder whose pot will hold the most water?’ ‘I wonder which ball is the heaviest?’ • cutting a piece of ribbon as long as a child’s arm and encouraging them to find things in the environment that are longer, shorter or the same length • focusing on asking for specific things according to their attributes. For example: ‘Please can you pass me a ... that is ... than this one?’ • when comparing directly, finding the odd one out, by providing a varied range of container shapes all containing the same amount of liquid except for one. ‘Which one do you think is the odd one out? Why? How will we check? Were we right?’ • posing see-saw problems, relating to weight: ‘What can we do to make this side of the see-saw go down?’ • using a simple spring balance to compare the weight of cargo for a toy boat • setting up a ‘balancing station’ with interesting things to weigh and to balance, indoors and outdoors • comparing different parcels, ensuring some of the smaller parcels are heavy, and some of the larger parcels are light. • making a bed for a teddy using blocks • selecting a box or container to store a specific item • dressing dolls, and selecting different-sized clothes • finding things that will fit inside a matchbox. • making ‘Russian doll’- type sets of nesting boxes from a collection • finding ways of seeing if the cupboard or carpet will fit in the role-play area without moving it • finding which of three pairs of shoes is heaviest for packing in a rucksack • packing a shopping bag, making sure the lightest items do not get squashed by heavier things. <p>Pattern</p> <ul style="list-style-type: none"> • presenting patterns with deliberate errors, including extra, missing and swapped items, e.g. red cube, blue cube, red cube, blue cube, red cube, red cube, blue cube – identifying there is an extra item and fixing it by removing the extra red cube, putting in an extra blue cube, or swapping the final cubes • asking the children to make a pattern with a deliberate mistake and challenging a friend to spot it. • highlighting within a pattern what the unit of repeat is and asking the children to describe it. At this point for pattern novices (children who aren't as experienced as others), it would be good to do this with physical objects so that the unit of repeat can be moved to show how it repeats. Patterns that are printed, stamped or stuck down, and therefore cannot be corrected, are more appropriate for more confident pattern makers. • building towers or trains of different coloured cubes (continuing patterns horizontally and vertically) • extending patterns using a wide range of identical objects in different colours, e.g. beads; small plastic toys such as bears, dinosaurs, and vehicles. • providing a range of patterns- physical and on cards - that children can continue 	<ul style="list-style-type: none"> - state which group of objects has more? Can they do this with a large or small visual difference? <p>SSM Shape and space</p> <p>ELG</p> <p>Pupils explore characteristics of everyday objects and shapes and use mathematical language to describe them.</p> <ul style="list-style-type: none"> - select and rotate shapes to fit into a given space? - use positional vocabulary, including relative terms, to describe where things are in small-world play? - show intentionality in selecting shapes for a purpose, such as cylinders to roll? - make a range of constructions, including enclosures, and talk about the decisions they have made? <p>SSM measures</p> <p>ELG</p> <p>Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.</p> <ul style="list-style-type: none"> - find something that is longer, shorter, heavier, lighter (etc.) than a reference item? - find an appropriate container for a specific item? <p>SSM Pattern</p> <p>ELG</p> <ul style="list-style-type: none"> - continue, copy and create an AB pattern? - identify the pattern rule (unit of repeat) in an AB pattern? - continue, copy and create ABB, ABBC (etc.) patterns? - identify the pattern rule (unit of repeat) in an ABB, ABBC (etc.) patterns? - spot an error and ‘correct’ a pattern? - explain whether a circular pattern is continuous or not? <p>Methods:</p> <p>Ongoing daily maths assessment. A pupil really understands a mathematical concept, idea or technique if he or she can:</p> <ul style="list-style-type: none"> • describe it in his or her own words • represent it in a variety of ways (e.g. using concrete materials, pictures and symbols) • explain it to someone else • make up his or her own examples (and non-examples) • see connections between it and other facts or ideas • recognise it in new situations and contexts • make use of it in various ways, including in new situations. <p>If a pupil is working at greater depth they may also be able to:-</p> <ul style="list-style-type: none"> • solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination • Independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics. <p>Teacher will also use assessment tasks and quizzes/ tests.</p> <p>Evidence:</p> <p>Guided maths tasks, maths observations, continuous provision observations, pupil reasoning, maths assessments, piccollage and teacher notes.</p>
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	<ul style="list-style-type: none"> ensure that the patterns offered have different structures and end after a complete or a partial unit. utilising a range of items in the environment to create patterns such as interlocking cubes and toys, e.g. links, elephants, camels exploring and creating patterns on peg boards, with fruit (e.g. fruit kebabs) musical instruments, movements and dance sequences. presenting patterns with deliberate errors, e.g.: once children have fixed the pattern, encouraging them to check the 'fix' by tracking the pattern asking the children to make a pattern with a deliberate mistake and challenging a friend to spot it. 	
<p>Summer : Number Place value to 20 I KNOW:</p> <ul style="list-style-type: none"> I say one more/ less than a given value. I know anything can be counted including movements and sounds. I know objects can be counted in any order but the total will still be the same. I perceptually subitise up to 6 objects. I conceptually subitise to find totals of number of objects. I understands that each number includes every number before it. I understand number conservation that size, arrangement colour etc does not affect the number of objects there are. I can unitising putting small numbers of objects into groups to count. <p>Summer Number addition and subtraction I KNOW:</p> <ul style="list-style-type: none"> I use equipment and markings to add and subtract single digit numbers. I can counts on and back to add / subtract single digit numbers. <p>Summer : Number multiplication and division I KNOW:</p> <ul style="list-style-type: none"> I recognise when two groups contain the same amount- even when 1 has small objects and the other large. I can unitise groups of objects to create doubles. I can share groups of objects into two groups and recognises when this is fair/ unfair. I can share objects into more than 2 groups. I can solve problems, including doubling, halving and sharing. I can cut everyday objects in half and recognises that both parts must be the same size to be a half. (eg shares playdough / cut bread in half/ cut play food) I recognise when two piece are not the same so are not shared fairly. I recognise when two piece are put together it makes the whole again. (eg two halves of a cut a play toy make a whole) I can share groups of objects into two groups and recognises when this is fair/ unfair. <p>Summer : SSM Measures I KNOW:</p> <ul style="list-style-type: none"> I Recognise the relationship between the size and number of units. I begin to use units to compare things- Children recognise when two objects/ groups are the same. <p>Summer : SSM Measures money I KNOW:</p> <ul style="list-style-type: none"> I can recognise and sort coins. I can compare amounts of some coins. I begin to use units to compare things- Children recognise when two objects/ groups are the same price. <p>Summer : SSM Pattern I KNOW:</p> <ul style="list-style-type: none"> I can symbolise the unit structure. I use generalise structures- use the same rule to create a pattern using different equipment. I make a pattern that repeats around a circle. I make patterns around a border with a fixed number of spaces. <p>Summer : SSM Shape and space I KNOW:</p> <ul style="list-style-type: none"> I show an awareness of properties of shapes through exploring the properties of shapes and select shapes for a purpose based on their properties. (eg- these shapes are good for stacking because they don't roll.) I can describe the properties of shapes. I can construct 2d and 3d shapes using different equipment and materials. 	<p>At Westdale when we introduce a new concept, we provide pupils with the opportunity to build competency by providing opportunities for children to experience concrete, pictorial and abstract mathematics. Teacher lead activities / continuous provision activities suggestions.</p> <p>Place value</p> <ul style="list-style-type: none"> using numeral dice in games; matching numerals with varied groups of things using 'tidy-up labels' on containers and checking that nothing is missing reading number books putting the right number of snacks on a tray for the number of children shown on a card. correcting a puppet who may say that there are more or fewer objects now, as they have been moved around, e.g. spread out or pushed together contexts such as sharing things out (grouping them in different ways) and then the puppet complaining that it is not fair as they have less encourage the children to make different patterns with a given number of things. explain unfair sharing - 'This one has more because it has 5 and that one only has 3' compare numbers that are far apart, near to, and next to each other. <p>Addition and subtraction</p> <ul style="list-style-type: none"> Numicon towers: layering up Numicon pieces of the same total putting things into two containers in different ways making a number with two different kinds of things. For example, make a fruit skewer with five pieces of fruit, using bowls of bananas/strawberries to choose from; then ask the children to describe how they have made theirs. They should compare it with a partner's: 'What is the same about your skewers? What is different?' Bunny Ears: using your fingers like bunny ears. 'With two hands, show me five fingers. Can you do it in a different way?' Or, 'Show five fingers altogether with a friend' Spill the Beans: using double-sided counters or beans, where one side is coloured, throw the collection and note how many of each type can be seen and how many altogether using six bean bags with different fabric on each side, throw the collection and note how many of each type can be seen. role play, e.g. in a toy shop, ten toys need arranging onto the three shelves. How will you organise them? having more than two places to sort things into in any given context, e.g. arranging characters in small-world play in different locations games such as 'Posh Ducks' (Griffiths, R., Back, J.& Gifford, S. (2016) Making Numbers: Using manipulatives to teach arithmetic OUP): using a set number of ducks, for example ten in three different locations (nest, water, decking), roll the dice and make one group match the amount shown without adding or taking any away. playing hiding games with a number of objects in a box, under a cloth, in a tent, in a cave, etc. utilising classroom routines such as tidy-up time to identify how many are still missing from a pot with a number label. <p>Measures</p> <ul style="list-style-type: none"> setting up an Estimation Station and guessing how many things are in the jar each day making biscuits from a given amount of dough - choosing cutters to see who will make the most biscuits choosing from a selection of spoons, ladles, etc, to see who can fill their pot the quickest with rice. How do you know who will be quickest? setting up a 'filling station' with lots of different-sized containers to fill with beads, then comparing capacities using large bricks to measure the height of individuals using metre sticks to see if an elephant or dinosaur would fit in the room measuring the growth of a beanstalk or sunflower with interlocking centimetre cubes comparing the capacity of different bottles by filling lots of glasses. <p>Pattern</p> <ul style="list-style-type: none"> including the following phrasing in discussion and dialogue: 'This is a red blue pattern; this/that; I call it an A (one of these) then a B (one of those).' 	<p>Criteria: Number Place value Pupils count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.</p> <ul style="list-style-type: none"> state which group of objects has more? Can they do this with a large or small visual difference? compare two numbers and say which is the larger? select a numeral to represent a quantity in a range of fonts, e.g. , , ? correct a puppet who thinks the amount has changed when their collection has been rearranged? state which group of objects has more? Can they do this with a large or small visual difference? subitise small groups within a larger number? make a reasonable guess at a hidden number? in context, state two groups that make a larger amount? For example, how might the (six) bean bags land? You could have three with stripes up and three with spots up. <p>Number addition and subtraction ELG Pupils say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.</p> <ul style="list-style-type: none"> predict how many there will be if you add or take away one? subitise small groups within a larger number? make a reasonable guess at a hidden number? in context, state two groups that make a larger amount? For example, how might the (six) bean bags land? You could have three with stripes up and three with spots up. <p>Number Multiplication and division ELG Pupils solve problems, including doubling, halving and sharing.</p> <ul style="list-style-type: none"> Recognises when two groups contain the same amount- even when 1 has small objects and the other large. Makes two equal groups to represent a double. Shares groups of objects into two groups and recognises when this is fair/ unfair. Shares objects into more than 2 groups. Cuts everyday objects in half and recognises that both parts must be the same size to be a half. (eg shares playdough / cut bread in half/ cut play food) Recognises when two piece are not the same so are not shared fairly. Recognises when two piece are put together it makes the whole again. (eg two halves of a cut a play toy make a whole)

<p>- I develop an awareness of the relationships between shapes. Children explore combining and partitioning shapes to create new shapes.</p>	<ul style="list-style-type: none"> • constructing patterns with actions and developing symbols to show that pattern and to provide 'instructions' for someone else to follow the pattern • inviting friends to copy the pattern from the symbols. • providing a range of experiences where children can create a pattern using a coding structure • ensuring children can follow the patterns they have coded. • making circular patterns such as necklaces, circles of linking elephants or camels • using pre-given circles to create a border, such as on or around a paper plate • exploring which patterns work, which don't, and why • offering a unit of the pattern and ask the child if they can include it in their pattern • making patterns around rectangular or other shaped frames. • creating borders around defined spaces in the learning environment, i.e. a garden for the teddy bears, an outdoor reading area, etc. • encouraging children to predict if the pattern could 'keep going', voting on this and discussing their thoughts and reasons with a partner. • exploring patterns in stories, songs and rhymes • where possible, representing these diagrammatically to support pattern-spotting, and predicting what will happen next, and why • inviting children to spot patterns in the home environment, or to bring in examples from home • looking at fabric patterns from different cultural traditions: discussing the patterns in terms of what stays the same and what is different • designing wrapping paper for a specific event that involves creating a pattern which the children can describe. <p>Shape</p> <ul style="list-style-type: none"> • covering objects in foil and invite children to justify their guesses about what is inside • making arrangements with a selection of different rectangles, including squares. • choosing 2D shapes to construct a 3D model, e.g. using triangles and rectangles to make a tent • making decorations by folding and cutting • making 3D shapes using interlocking shapes. 	<ul style="list-style-type: none"> - Shares groups of objects into two groups and recognises when this is fair/ unfair. <p>SSM measures ELG Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.</p> <ul style="list-style-type: none"> - find something that is longer, shorter, heavier, lighter (etc.) than a reference item? - find an appropriate container for a specific item? - describe the location of something using positional language? - accurately use the relative terms 'yesterday' and 'tomorrow'? - order a short sequence of events? <p>SSM Pattern ELG</p> <ul style="list-style-type: none"> - continue, copy and create an AB pattern? - identify the pattern rule (unit of repeat) in an AB pattern? - continue, copy and create ABB, ABBC (etc.) patterns? - identify the pattern rule (unit of repeat) in an ABB, ABBC (etc.) patterns? - spot an error and 'correct' a pattern? - explain whether a circular pattern is continuous or not? <p>SSM Shape and space ELG Pupils explore characteristics of everyday objects and shapes and use mathematical language to describe them.</p> <ul style="list-style-type: none"> - show intentionality in selecting shapes for a purpose, such as cylinders to roll? - make a range of constructions, including enclosures, and talk about the decisions they have made? - see shapes in different orientations and recognise that they are still that shape? - recognise a range of triangles and say how they know what they are? <p>Methods: Ongoing daily maths assessment. A pupil really understands a mathematical concept, idea or technique if he or she can:</p> <ul style="list-style-type: none"> • describe it in his or her own words • represent it in a variety of ways (e.g. using concrete materials, pictures and symbols) • explain it to someone else • make up his or her own examples (and non-examples) • see connections between it and other facts or ideas • recognise it in new situations and contexts • make use of it in various ways, including in new situations. <p>If a pupil is working at greater depth they may also be able to:-</p> <ul style="list-style-type: none"> • solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination • Independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics. <p>Teacher will also use assessment tasks and quizzes/ tests.</p> <p>Evidence: Guided maths tasks, maths observations, continuous provision observations, pupil reasoning, maths assessments, piccollage and teacher notes.</p>
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