

Mathematics in the Early Years- Nursery

Term Topic	Area of Learning	Concepts		
		Reasoning	Application	Wider World
Nursery Autumn 1 Starting School	CL			-Learn key vocabulary and use this to make comparisons between children/ adults in the setting - tall, short, light, heavy, alike, same and different.
	PSED			-Learn the daily routine in nursery, showing an awareness of key points during the day, e.g. carpet time, lunch time, home time etc.
	PD		-Develop fine motor control to complete an activity, e.g. a puzzle or threading.	
	M		-Enjoy listening to and join in singing number songs and rhymes. -Recite some number names in sequence. -Use their fingers to represent counting. -Know that one finger represents one count. -Join in counting while singing a number rhyme. -Count a group of objects, saying numbers in sequence.	-Develop sorting skills by learning how to put items away in the correct trays at tidy up time.
	EAD	-Identify the construction areas inside and outside and use the resources appropriately and safely to build towers by stacking blocks or other constructions of their choice. -Use various construction materials for a purpose. Tell an adult or peer about their design.	-Learn the nursery rhyme, 'I Have Two Eyes to See With.'	
Nursery Autumn 2	CL			-Understand the question word, 'where'. 'Where' is used when referring to a place or location.

Night and Day	M	<ul style="list-style-type: none"> -Understand that objects can be sorted into groups. -Sort objects into groups according to colour. -Use knowledge of colour, shape, size and other properties to match and sort items in a variety of different ways. -Sort and match objects into different groups using their own and others' criteria, sharing their ideas with others. -Understand that the last number spoken in a counting sequence names the quantity for that set. -Understand that it does not matter what you count, how you count stays the same. 	<ul style="list-style-type: none"> -Count objects using 1:1 correspondence. -Know that each object receives one count. -Develop an understanding of cardinality. 	<ul style="list-style-type: none"> -Non-physical things such as sounds or actions can be counted. -Compare amounts and identify which group has more or fewer. -Compare amounts and identify which group has more or fewer or whether they are the same.
	EAD	<ul style="list-style-type: none"> -Experiment with combining natural materials. 		<ul style="list-style-type: none"> -Create closed shapes with continuous lines and begin to use these shapes to represent objects.
Nursery Spring 1	CL	<ul style="list-style-type: none"> -Learn to ask and answer 'what' questions. -Use longer sentences and link ideas in sentences using conjunctions 'and, because, but, that, if, so'. 		<ul style="list-style-type: none"> -Show an understanding of prepositions such as under, on top, behind by carrying out an action or selecting the correct picture.
	M	<ul style="list-style-type: none"> -Identify representations of numbers 1 and 2. -Subitising is when you identify the number of things in a set simply by quickly looking at them - not by counting them one by one. -Identify representations of number 3. -Subitise different arrangements of up to 3 dots. -Join in with singing 3 number songs (Three Little Kittens, Three Blind Mice) and represent the numbers on their fingers. -To identify representations of number 4. -Identify representations of number 5. -Sort different representations of numbers up to 5. -Order numbers and representations of numbers up to 5. -Match sets to numerals. 	<ul style="list-style-type: none"> -Subitise different arrangements of 2 (objects/ dots). -Count our 4 objects from a larger group. -Subitise arrangements of up to 4 objects/ dots. -Use their fingers to represent quantities which they can subitise. -Count forwards and backwards to 5. -Recognise numerals 1 – 5 and link amounts with the numerals. -Name quantities with number words, (e.g. "I can see 3."). 	<ul style="list-style-type: none"> -Recognise the circle shape and know that it has one side that goes all the way around. -Recognise the triangle shape and know that it has three sides and three corners. -Recognise rectangles and squares, know that they have 4 sides and 4 corners. -Know that people have 5 fingers one each hand and 5 toes on each foot. -Recognise pentagon shapes, know that they have 5 sides and 5 corners.
	UW			<ul style="list-style-type: none"> -Compare and contrast seeds, sorting them based on similarities and differences.

	EAD	<ul style="list-style-type: none"> -Use various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing etc, to design their own bridge. -Manipulate, explore, sort and experiment with patterns, shapes and design using natural resources to create transient art. 		
Nursery Spring 2 In the Garden	CL			<ul style="list-style-type: none"> -Learn the days of the week. -Use simple directional language such as up, down, left, right, forwards, backwards.
	M	<ul style="list-style-type: none"> -Find one more and one less than sequential numbers. -Combine objects of different sizes to help children to focus on the numerosity of the count. -Identify smaller numbers within a number. -See groups and combine them to find the total (part-whole). -Use objects, pictures and representations to calculate the number bonds to 5. -Determine how many items are needed to fill the remaining squares in a five frame. -Explore 2D and 3D shapes and sort them according to range of categories. -Use understanding of number to solve practical problems. -Identify when a group has been shared fairly. 	<ul style="list-style-type: none"> -Find the total of two groups using different representations of number (numicon, dots, objects). -Identify a five frame and use this resource to solve addition problems. 	<ul style="list-style-type: none"> -Make predictions about what the outcome will be in stories, rhymes and songs if one is added to, or if one is taken away. -Identify similarities between shapes. -Construct and create things that represent objects in their environment. Notice shape properties of the object that they want to represent, e.g. draw a ball as a circle, build a train from wooden rectangular blocks, or use a curved block for the elephant's trunk.
	UW			<ul style="list-style-type: none"> -Group materials based on their properties (sinking/ floating).
	EAD	<ul style="list-style-type: none"> -Select appropriate tools to shape and mould malleable materials. 	<ul style="list-style-type: none"> -Learn the Nursery Rhyme, '5 Little Peas in a Peapod Press'. -Learn the Nursery Rhyme, '5 Little Speckled Frogs.' 	<ul style="list-style-type: none"> -Barbara Hepworth made sculptures using abstract shapes. She was inspired by nature and the world around her. She made holes in her sculptures so people could see the inside and outside.
Nursery Summer 1	CL	<ul style="list-style-type: none"> -Understand 'how' questions. 		<ul style="list-style-type: none"> -Learn phrases and questions commonly used in shops, e.g. 'Can I help you? How much does this cost?' etc.
Food and Drink	PSED	<ul style="list-style-type: none"> -Select and use resources to achieve a goal, either their own or one that has been suggested to them. 	<ul style="list-style-type: none"> -Sort food in different ways. For example, healthy / unhealthy or processed / unprocessed. 	

	M	<ul style="list-style-type: none"> -Explore the concept of parts and a whole number. -Introduce the concept that numbers are made up of smaller numbers. -Solve practical problems in real life situations that involve sharing between two or more groups. 	<ul style="list-style-type: none"> -Use non-standard units to measure length. -Use non-standard units to compare weights. -Create their own spatial patterns showing some organisation or regularity, continuing patterns horizontally and vertically. -Continue simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC). -Use non-standard units to measure the capacity of a container. 	<ul style="list-style-type: none"> -Understand mathematical vocabulary associated with measuring and comparing length. -Understand mathematical vocabulary associated with measuring and comparing weight. -Understand mathematical vocabulary associated with measuring and comparing capacity.
	UW			<ul style="list-style-type: none"> -Compare and contrast animals first-hand or through videos and photographs.
	EAD	<ul style="list-style-type: none"> -Collect and classify fabrics and threads into colours and different textures. -Explore pattern making with colours using different media, e.g. paint, chalk and ICT. 		<ul style="list-style-type: none"> -Something is symmetrical if one side exactly mirrors the other.
Nursery Summer 2	CL	<ul style="list-style-type: none"> -Encourage children to think in advance about what they will do, what they need, and reflect afterwards on what they did. 		
Water	M	<ul style="list-style-type: none"> -Subitise different representations of numbers (5 frame, numicon, dice, part-part-whole, shapes etc). -Associate different representations with the amount (5 frames, numeral, fingers, dots, shape etc). -Explore number bonds to 5 using real objects in different contexts. -Solve practical problems involving finding how many more are needed to make 5. -Sort according to a range of criteria e.g., sort shells by size, colour, texture. -Consider what is the same about objects in a set and how they are different from other items. 	<ul style="list-style-type: none"> -Explore symbols to show amounts (dots, pictures, tallies etc). -Use symbols to record their mathematical understanding. -Match objects that are the same. 	<ul style="list-style-type: none"> -Tallies are used for counting and comparing the numbers. -Objects can be sorted in different ways.
	UW			<ul style="list-style-type: none"> -Explore collections of materials with similar and/ or different properties. -Know the vocabulary to talk about

				different times of day – morning, midday, evening.
	EAD	<p>-Paint in different scales e.g., using large rollers and paintbrushes to create lines, shapes, pictures and patterns outdoors or small paintbrushes to create detailed images indoors.</p> <p>-Design and make their own model using open ended resources to create constructions by balancing, stacking, adding or taking away items.</p>	<p>-Learn the Nursery Rhyme, '5 Little Fishes Swimming in the Sea'.</p> <p>-Learn the Nursery Rhyme, '1, 2, 3, 4, 5, Once I Caught a Fish Alive.'</p> <p>-Develop an understanding of dimensions (2D and 3D).</p>	-Notice and discuss patterns in the prints they have created through rubbing materials.