




Science in the Early Years- Nursery

Term Topic	Area of Learning	Concepts		
		 Nature Knowing about the natural world Nature	 Phenomenon Observing facts and events Phenomenon	 Real World Know about scientists and science in our everyday lives The Real World
Nursery Autumn 1 Starting School	CL	-Communicate their needs to a member of a staff. -Know the name of their school.		-Learn key vocabulary and use this to make comparisons between children/ adults in the setting - tall, short, light, heavy, alike, same and different.
	PSED	-Show increasing consideration of other people's needs.		
	PD	-Locate the nursery toilets and develop their independence in going to the toilet during the school day. -Carry their tray from the counter to their table in the lunch hall. Use a knife and fork with support (where necessary) to eat their lunch. -Your body and brain need water to stay healthy. -It is important to drink 5 cups of water a day so that you do not get dehydrated. -Identify and name the parts of the body. Be able to point to a named body part (head, shoulders, knees, toes, fingers, thumb, arm and leg). -There are five senses — seeing, hearing, smelling, tasting, and touching. These help you notice the world around you.		-Observe the effect of exercise on their body.
	UW	-Show care and concern for living things, including animals and humans.	-Explore the outdoor area with curiosity and show an interest in the natural world.	

		<ul style="list-style-type: none"> -Being physically active every day is important for healthy growth. -To identify similarities and differences between children in the class. -Understand that some people have disabilities. -A disability is a physical or mental problem that makes it difficult for a person to learn or do certain things. -Children to understand that while we are different in some ways, we are still the same in lots of other ways. 		
Nursery Autumn 2 Night and Day	CL		<ul style="list-style-type: none"> -Use new vocabulary to describe light and dark in the environment. -Understand the question word, 'where'. 'Where' is used when referring to a place or location. -Understand 'why' questions. For example, 'Why didn't Santa send the boy a trumpet?' 	<ul style="list-style-type: none"> -Understand the use of objects and identify which objects are used for a particular purpose.
	PSED	<ul style="list-style-type: none"> -Know about the importance of sleep. The body and brain need to rest. -Know what happens to your body when you feel tired, be able to recognise the sensation. -Learn vocabulary related to their emotions and feelings, e.g. sad, happy, worried etc. -Be able to identify the facial expression that matches an emotion. -A bedtime routine includes all of the things that you do just before you go to bed, such as take a bath, clean your teeth, put on pyjamas, and read a bedtime story. -A morning routine is a set of actions you perform in the morning, usually before going to school, such as having breakfast, cleaning your teeth, washing your face and getting dressed. 		<ul style="list-style-type: none"> -Develop an understanding of the safety implications related to playing with sparklers and fireworks.
	L	<ul style="list-style-type: none"> -Develop children's listening skills and awareness of sounds in the environment. 		<ul style="list-style-type: none"> -Listen attentively to information from non-fiction texts. -Identify photographs in non-fiction texts and talk about the images with adult support.

	UW	<ul style="list-style-type: none"> -Know that nocturnal animals are active during the night and sleep during the day. -Name some nocturnal animals that live in the UK, e.g. owls, foxes, hedgehogs, bats. 	<ul style="list-style-type: none"> -Darkness is the absence of light. -A shadow is a dark area on a bright surface. It is caused by something blocking a source of light. -Comment and ask questions about the natural world. -During the day the stars are still there, but you cannot see them because the sky is so bright. -The time when the sun appears is called sunrise, and the time when it disappears is called sunset. -The Sun is a natural light source. It produces light/ heat. 	<ul style="list-style-type: none"> -Explore battery operated equipment, learn how to turn something on and off (e.g. torches to create light). -Investigate the best material to blackout light. -Identify man-made light sources and why these are necessary.
Nursery Spring 1 Traditional Tales	CL	<ul style="list-style-type: none"> -Talk about the different sounds that we can make with our voices, e.g. trip, trap. 	<ul style="list-style-type: none"> -Learn to ask and answer 'what' questions. -'What' is used to ask for information. -Be able to answer 'what' questions related to objects and verbs, e.g. What are you playing with? (object), What are you doing with the ball? (verb). 	<ul style="list-style-type: none"> -Use longer sentences and link ideas in sentences using conjunctions 'and, because, but, that, if, so'. -Show an understanding of prepositions such as under, on top, behind by carrying out an action or selecting the correct picture.
	PSED	<ul style="list-style-type: none"> -Talk about their own feelings and emotions and recognise what caused the emotion (For example, feeling happy when playing with friends or excited to go to the park and angry if someone takes their toy etc). -Know the importance of washing their hands after coming inside from the garden. 		
	PD	<ul style="list-style-type: none"> -Learn what is included in a healthy balanced breakfast. -Be willing to try different textured food and express their preference of flavours. 		
	UW	<ul style="list-style-type: none"> -Real bears do not live in houses. Brown Bears and Black Bears live in forests. -A bear's diet consists of the food that they find in the forest, e.g. fish, fruit, honey, nuts, insects. -The five senses - seeing, hearing, smelling, tasting, and touching - help us to understand what is happening around us. 	<ul style="list-style-type: none"> -Identify what houses are made of in the local area. -Explore and talk about different forces they can feel. -Describe the movement of familiar things. -Explore the different characteristics of seeds. 	<ul style="list-style-type: none"> -Identify and talk about changes in materials, e.g. the change that happens when porridge is cooked. -Sort materials by their properties and explain how/ why they have sorted them in this way. -Sort a selection of toys into two groups, one for toys that move by pushing and

		<ul style="list-style-type: none"> -Identify the basic body parts (eyes, ears, nose, mouth, hands) and their functions. -Not everyone is able to use all five of their senses. If someone cannot see, they are blind; if someone cannot hear, they are deaf. -Plants and trees grow from seeds. 		<ul style="list-style-type: none"> -pulling, and one for those that do not move freely by pushing and pulling. -Compare and contrast seeds, sorting them based on similarities and differences.
Nursery Spring 2 In the Garden	CL	<ul style="list-style-type: none"> -Children to learn the names of common plants that are growing in their local environment. -Talk about common and unique features. -Learn adjectives to describe appearance. 	<ul style="list-style-type: none"> -‘Who’ questions refer to people. -Ask and answer ‘who’ questions. 	<ul style="list-style-type: none"> -Use simple directional language such as up, down, left, right, forwards, backwards.
	PSED	<ul style="list-style-type: none"> -Recognise how connecting with nature makes them feel. -Recognise the similarities and differences between themselves and others in more detailed ways. -Develop mindfulness techniques, learn to use your senses to identify what you hear or anything else you notice. -Observe and control your breath. Be able to take deep breaths, scrunch and release the breath. 	<ul style="list-style-type: none"> -Spending time outdoors in nature has a positive impact on physical and mental well-being. -Share their personal experiences of connecting with the natural world in enjoyable ways. For example, that being close to nature calms them, that they enjoy the peace, or that they like connecting with the wildlife around them etc. -Dress suitably for the weather. Know what to wear outside in different weather conditions (cold, wet, warm etc). 	
	PD	<ul style="list-style-type: none"> -Exercising helps you to stay fit and healthy. -Name some types of physical exercise, e.g. running, jumping, skipping etc. -Personal hygiene refers to maintaining the body’s cleanliness. This includes, having a bath frequently, washing hands, brushing teeth, trimming fingernails etc. -Learn how to clean different parts of the body. 	<ul style="list-style-type: none"> -In nature, you can exercise freely, which is good for your body and your mind because it helps you to feel relaxed. -Discuss the physical activity opportunities that types of weather present, such as squelching in mud; splashing in puddles; catching or listening to raindrops; swishing streamers in the wind; playing with light and shadows on sunny days. 	<ul style="list-style-type: none"> -Explore the local area following road safety rules.
	L			<ul style="list-style-type: none"> -Know that information can be relayed through books. -Stories and non-fiction books can include information. -Know that information can be retrieved from digital technology.
	UW	<ul style="list-style-type: none"> -Understand the key features of the life cycle of a plant. 	<ul style="list-style-type: none"> -Recognise the diversity of plants in the local environment and their basic needs. 	<ul style="list-style-type: none"> -Record changes in plants over time e.g. buds opening.

		<p>-Lifecycle of a bean: When a bean seed is planted and water is added, it begins to germinate. The root grows downwards to search for water and nutrients. The shoot grows upwards towards the sunlight and rain. Without these, the plant will die. The bean plant grows taller. The plant begins to grow flowers. Finally, the plant will grow new pods containing beans.</p> <p>-Ponds are watery habitats that provide good conditions for many types of living things.</p> <p>-Amphibians such as frogs, toads, and newts lay their eggs in water, where their larvae (tadpoles) develop and grow into adults.</p> <p>-Water birds such as ducks, herons, and geese nest near to the water's edge and get food from the pond itself.</p> <p>-Name the animals that frequent the nursery garden and local area.</p> <p>-Bird baths provide clean and continual water for birds to bathe in, cool off and drink from. They encourage more birds to come to the garden.</p> <p>-Birds have feathers, no fur and they lay eggs.</p>	<p>-Observe changes in plants during the spring.</p> <p>-Know what the weather in the UK in spring is generally like.</p> <p>-Identify the properties of materials that make them suitable or unsuitable for particular purposes.</p>	<p>-Investigate different materials to identify whether they sink or float in water.</p> <p>-Group materials based on their properties (sinking/ floating).</p> <p>-Explore and name everyday materials and describe their properties such as: hard/ soft; waterproof/ not waterproof; absorbent/ not absorbent.</p> <p>-Consider ways in which humans can help to sustain habitats and plant life.</p> <p>-Know the benefits of nature and some of the ways in which humans have harmed nature as well as the ways in which we can help nature to thrive.</p>
Nursery Summer 1 Food and Drink	CL	<p>-Adjectives include words that describe what something looks like and what it feels like to touch, taste, or smell.</p> <p>-Learn adjectives to describe the texture and taste of food.</p>	<p>-Understand 'how' questions.</p> <p>-Respond to 'how' questions giving answers in full sentences. For example, 'How does it smell? How is it different now that it is cooked?'</p>	
	PSED	<p>-Understand which parts of the body are private and know not to touch anyone's private parts.</p> <p>-Understand how their appearance will change as they grow and the differences between children and adults.</p> <p>-Develop an understanding that ageing as a natural process.</p> <p>-Recognise that all living things grow and change.</p>		
	PD	<p>-Recognise the importance of water and keeping hydrated. Drink water before, during, and after exercise is important.</p>		<p>-Identify what happens to their body during exercise.</p>

	<ul style="list-style-type: none"> -People need to eat lots of different fruit and vegetables to be healthy. We should eat at least five different types every day. -Describe the amount of different types of food needed to stay healthy using the terms lots, some, a little and not needed. -Understand that it is acceptable to make 'unhealthy' choices once in a while but we should not consume too much unhealthy food. 		<ul style="list-style-type: none"> -Sort food in different ways. For example, healthy / unhealthy or processed / unprocessed. -Follow a recipe using non-standard measures e.g. cups/ spoonsful.
L			<ul style="list-style-type: none"> -Labelling pictures give the readers a better understanding of what they are looking at. Labels help the reader know exactly what they are seeing. -Draw pictures and write labels using their developing phonemic awareness.
UW	<ul style="list-style-type: none"> -Learn the Lifecycle of a butterfly and use technical vocabulary to describe metamorphosis. -Caterpillars eat leaves from a variety of trees/ plants depending on their species. -There are a lot of species of butterflies in the world that come in different shapes, sizes, and colours. -Butterflies consume nectar, water and liquids from some fruit (banana, oranges and watermelon). -Animals that live in the savannah include, elephants, lions, cheetahs, giraffes, zebras, hippos and rhinos. -In Kenya there are many different landscapes from built up areas/ cities to communities that live in small tribes. -Understand where food comes from and how it can be grown / produced or farmed. -Understand why people choose to grow certain plants. Some plants can be eaten (fruit/ vegetables). -Know which animals or plants some foods come from (e.g. milk from cows and tomatoes from plants). -Understand the key features of the life cycle of a hen. 	<ul style="list-style-type: none"> -Identify pushing and pulling forces in real life situations, e.g. trains pulling carriages/ pushing a shopping trolley. -A force can increase/ decrease. Identify if a push/ pull is big or small. -Understand that forces can be changed and respond to questions relating to forces, e.g. 'How can you make the trolley move faster? Why is it harder to move on the carpet?' 	<ul style="list-style-type: none"> -Sort animals according to their features. -Compare and contrast animals first-hand or through videos and photographs. -Use their senses to explore and compare different textures, tastes and smells. -Identify the change in materials when they are mixed together and recognise how heat changes substances.

		<ul style="list-style-type: none"> -Chickens are raised mostly for their eggs and meat. -Like other female birds, hens lay eggs which can hatch into chicks. 		
Nursery Summer 2 Water	CL	<ul style="list-style-type: none"> -Look at photographs/ videos of marine life (rockpools) talk about the habitat and learn the names of the animals. 	<ul style="list-style-type: none"> -Develop vocabulary through using a talking tub. Examine the objects inside, investigating and discussing each object. 	<ul style="list-style-type: none"> -Participate in an activity that involves a sequence of steps (e.g., making an ice lolly). -Encourage children to think in advance about what they will do, what they need, and reflect afterwards on what they did. -Sequence the stages of the activity through ordering photographs.
	PSED	<ul style="list-style-type: none"> -Teeth are for biting and chewing food. -Humans are born without teeth. Babies start to grow milk teeth at 6 months of age. -Know how to look after their teeth e.g., brushing for 2 minutes twice a day, avoiding sugary foods/ drinks, drinking water etc. 	<ul style="list-style-type: none"> -Learn how to protect themselves from the sun (sunglasses, sun hat, drinking water etc) and know why it is important. 	
	UW	<ul style="list-style-type: none"> -Fish are covered in scales and they have gills that allow them to breathe in water. -Octopuses have eight long limbs called tentacles. -Some fish live in salt water e.g., the ocean. -Freshwater fish can be found in ponds, rivers and lakes. -Identify what needs to be in a fish tank/ pond to create an appropriate habitat for goldfish (gravel, ornaments, filter, shelter, plants). 	<ul style="list-style-type: none"> -Use all their senses in hands-on exploration of natural materials that come from the beach. -Know the vocabulary to talk about different times of day – morning, midday, evening. -Care for the fish at school, feeding and observing them. 	<ul style="list-style-type: none"> -Use their senses to investigate real fish. -Use a magnifying glass to observe carefully. -Explore collections of materials with similar and/ or different properties. -Observe changes in materials and describe them e.g., how sand changes when it becomes wet.