

Science: Knowledge and Skills Progression Map

Early Y	ears		
By the end of EYFS, children will:	EYFS Vocabulary:		
Nursery	Nursery		
 Use all their senses in hands-on exploration of natural materials. 	Me and My Community		
 Explore collections of materials with similar and/or different properties. 	Grow, babies, change, people, appearance, living things, environment, rubbish,		
 Talk about what they see, using a wide vocabulary. 	care, harmful		
Explore how things work.	Once Upon a Time		
 Plant seeds and care for growing plants. 	record, materials, body parts, pets, scientific observations, because, next, then, day		
 Understand the key features of the life cycle of a plant and an animal, 	and night		
 Begin to understand the need to respect and care for the natural 	Starry Night		
environment and all living things.	sunlight, sky, dark, domestic animals, wild animals, nocturnal, explore, feature,		
 Explore and talk about different forces they can feel. 	observe		
• Talk about the differences between materials and changes they notice.	Dangerous Dinosaurs		
 Make healthy choices about food, drink, activity and toothbrushing, 	prehistoric, carnivore, herbivore, plants, dinosaurs, parks, gardens, local		
 Understand simple questions about 'who', 'what' and 'where' (but generally 	environment, habitats, trees,		
not 'why').	Sunshine and Sunflowers		
Reception	weather, patterns, summer, winter, year, parts, plant, roots, stem, leaves, flowers,		
Explore the natural world around them.	petals, description		
Describe what they see, hear and feel whilst outside.	Big Wide World		
• Recognize some environment that are different to the one in which they live.	natural world, butterflies, life cycle, eggs, chrysalis, cocoon, emerges, hatch, grow,		
• Understand the effect of changing seasons on the natural world around them.	seeds, air, sunlight, warmth, water, soil, senses, hearing, sight, tough, taste, smell,		
Manage their own needs- personal hygiene.	world, nectar, flowers, insects, special features.		
Know and talk about the different factors that support their overall health	Reception		
and wellbeing: healthy eating, toothbrushing, having a good sleep routine.	Lets Explore		
Learn new vocabulary	Earth, animal, environment, planet		
ELG	Marvellous Machines		
Understanding the World	Battery, electric, machine, robot		
Explore the natural world around them, making observation and drawing	Long Ago		
pictures of animals and plants.	Adult, baby, change, grow		
	Ready, Steady Grow		

 them and contrasting environments drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Manage their own basic hygiene and personal needs, including dressing, going 	Air, animal, calf, cow, drink, eat, exercise, farm, food, grow, healthy, lamb, sheep, plant, seed, sunlight, warmth, water <u>Animal Safari</u> Bird, camouflage, carnivore, egg, feathers, habitat, herbivore, mammal, omnivore, reptile, scales <u>On the Beach</u> Beach, carnivore, crab, fish, fin, gills, habitat, herbivore, carnivore, omnivore, tail, starfish
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Nursery	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Me and my Community	Once Upon a Time	Starry Night	Dangerous Dinosaurs	Sunshine and Sunflowers	Big Wide World
	Change happens to	Explore and create	Begin to observe and	Talk about some of	Begin to observe and	Explore and talk abou
Development	everyone and we	using a wide range of	talk about living things	the things that they	talk about living things	the ways that the
Matters links:	change as we grow.	materials and	in the local	have observed using	in the local	weather, plants and
		components, including	environment.	simple scientific	environment.	animals of places can
	People change as they	upcycled materials,		vocabulary		be different through
	grow and have changed	construction kits,	During the day there is		Parks and gardens	pictures and stories.
	since they were babies,	textiles and	sunlight. At night	Living things including	contain lots of	
	both in their	ingredients.	there is no sunlight so	dinosaurs lived	different plants and	The weather, plants
	appearance and what		the sky is dark.	millions of years ago.	animals.	and animals differ in
	they are able to do.					different places
			Begin to talk about		We can use our	around the world.
	We should care for the		and name the body		senses; hearing, sight,	
	environment. For		parts of common		touch, taste and smell	Show care for living
	example, rubbish needs		animals, including		help us to find out	things and the
	to be put in the bin.		pets.		about the world	environment.
					around us.	
	Say how they have		Bats are animals that			We should care for th
	changed over time.		are awake during the		There are many	environment. For
			night and sleep during		animals including	example, rubbish
	Show care for living		the day.		snails, spiders,	needs to be put in the
	things and the				butterflies and	bin.
	environment.		Make simple		woodlice that live in	
			comparisons between		gardens.	
			objects and materials,			
			such as bigger and		Care for growing seeds	
			smaller, and softer		and plants and	
			and harder.		describe observable	
					features of different	
			Soft materials bend		types of plants and	
			easily. They are not		trees.	
			hard or rough to			
			touch.		Plants need air,	
					sunlight, warmth,	
			Name a variety of		water and soil to	
			domestic and wild		grow.	
			animals.			

			Some animals including owls, foxes and bats are awake at night and sleep during the day.			
Substantive Knowledge:	-People change as they grow and have changed since they were babies, both in their appearance and what they are able to do. -Begin to understand the need to respect and care for the natural environment and all living things.	-Materials can feel soft, smooth, rough, squashy thick and thin. -Objects can be grouped according to how they feel. -Soft materials bend easily. -They are not hard or rough to touch. -Hard materials are difficult to bend break and cut. -Smooth materials have no lumps, bumps or holes.	-Understand day and night. -Some animals are awake at night and sleep during the day they are called nocturnal animals. -Shadows are made when a solid object blocks light.	-Living things including dinosaurs lived millions of years ago. -Some dinosaurs ate plants and some dinosaurs ate other dinosaurs.	 -Understand key features of the life cycle of a plant and animals. Begin to understand the need to respect and care for the natural environment and all living things. -Living things live in different habitats. -The weather, plants and animals in the local environment, change throughout the year. -Understand parts of a plant. -Plants need air, sunlight, warmth, water and soil to grow. -We can use our senses; hearing, sight, touch, taste and smell help us to find out about the world around us. 	-Living things are different in different places around the world. -Animals have special features that help them live in their environment. -We should care for the environment.
Disciplinary Knowledge: Skill	-Recognise and discuss how they have changed from when they were babies.	-With support, observe, record and talk about materials and living things.	-Begin to observe and talk about living things in the local environment.	-With support, use simple equipment, such as timers, rulers and containers, to	-Begin to observe and describe about living things and habitats in the local environment.	-Identify common features for different groups of animals, including wild and

to care for living things and the environment.	world around them				
and the environment		animals.	height, capacity and	patterns of weather in	-Show care for living
and the environment.	and give simple	-Identify body parts	time.	summer and winter.	things and the
	descriptions, following	and common features	-Talk about some of	-Explore the natural	environment.
	observation, of	for different groups of	the things that they	world around them	
	changes.	animals.	have observed using	and give simple	
	-Compare and group	-Make a shadow	simple scientific	descriptions.	
	objects and materials	bigger or smaller using	vocabulary.	-Care for growing	
	-Identify that	toys, play equipment	-Represent scientific	seeds and plants	
	materials have	and a light source.	observations by mark	-Name and describe	
	different properties.		making, drawing or	basic features of	
	-With support,		creating simple charts	plants and trees.	
	observe, record and		and tables. Offer	-With support	
	talk about materials		explanations for why	represent scientific	
	and living things.		things happen.	observations by mark	
	-Represent scientific			making, drawing or	
	observations by mark			creating simple charts	
	making, drawing or			and tables.	
	creating simple charts			-Describe some ways	
	and tables.			that plants or animals	
	-Offer explanations for			should be cared for in	
	why things happen			order for them to	
	-Make simple			survive.	
	comparisons between				
	objects and materials.				
	-Describe, predict and				
	sort things that float				
	and sink.				
		changes. -Compare and group objects and materials -Identify that materials have different properties. -With support, observe, record and talk about materials and living things. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make simple comparisons between objects and materials. -Describe, predict and sort things that float	 changes. -Compare and group objects and materials -Identify that materials have different properties. -With support, observe, record and talk about materials and living things. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make simple comparisons between objects and materials. -Describe, predict and sort things that float 	changes. -Compare and group objects and materials -Identify that materials have different properties. -With support, observe, record and talk about materials and living things. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make a shadow bigger or smaller using toys, play equipment and a light source. -With support, observe, record and talk about materials and tables. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make a shadow bigger or smaller using toys, play equipment and a light source. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make a shadow bigger or smaller using toys, play equipment and a light source. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make simple comparisons between objects and materials. -Describe, predict and sort things that float	changes. -Compare and group objects and materials -Identify that materials have different properties. -With support, observe, record and talk about materials and living things. -Represent scientific observations by mark making, drawing or creating simple charts and living things. -Represent scientific observations by mark making, drawing or creating simple charts and living things. -Represent scientific observations by mark making, drawing or creating simple charts and living things. -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen -Make simple comparisons between objects and materials. -Offer explanations for why things happen -Make simple comparisons between objects and materials. -Describe, predict and sort things that floatanimals. -Make a shadow bigger or smaller using toys, play equipment and a light source.have observed using simple scientific observations by mark making, drawing or creating simple charts and tables. -Describe some ways that plants or animals should be cared for in order for them to surviveCare for growing seeds and plants -Name and describe basic features of plants and trees. -Describe some ways that plants or animals should be cared for in order for them to survive.

ACADEMY

Reception	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
	Let's Explore	Marvellous Machines	Long Ago	Ready, Steady Grow	Animal Safari	On the Beach	
Development	Explore the natural	Explore the natural	Understand some	Explore the natural	Explore the natural	Explore the natural	
Matters links:	world around them,	world around them,	important processes	world around them,	world around them,	world around them,	
	making observations	making observations	and changes in the	making observations	making observations	making observations	
	and drawing pictures of	and drawing pictures	natural world around	and drawing pictures	and drawing pictures	and drawing pictures	
	animals and plants.	of animals and plants.	them, including the 🥄	of animals and plants.	of animals and plants.	of animals and plants	
			seasons and changing				
	Know some similarities	Develop scientific	states of matter.	Understand some	Know some	Know some similaritie	
	and differences	knowledge through		important processes	similarities and	and differences	
	between the natural	play activities, sharing	Discuss simple	and changes in the	differences between	between the natural	
	world around them and	stories and non-fiction	changes as they have	natural world around	the natural world	world around them	
	contrasting	books and discussion.	grown from being a	them, including the	around them and	and contrasting	
	environments, drawing		baby.	seasons and changing	contrasting	environments, drawin	
	on their experiences	Make observations		states of matter.	environments,	on their experiences	
	and what has been read	about the world	Sort and group		drawing on their	and what has been	
	in class.	around them.	materials and	Develop scientific	experiences and what	read in class.	
			resources and talk	knowledge through	has been read in class.		
	Understand some	Sort and group	about how they are	play activities, sharing		Develop scientific	
	important processes and	materials and	similar or different.	stories and non-fiction	Understand some	knowledge through	
	changes in the natural	resources and talk		books and discussion.	important processes	play activities, sharing	
	world around them,	about how they are	Use technology to	Make observations	and changes in the	stories and non-fiction	
	including the seasons	similar or different.	record their work and	about the world	natural world around	books and discussion.	
	and changing states of		ideas.	around them.	them, including the		
	matter.	Use technology to			seasons and changing	Sort and group	
		record their work and		Use technology to	states of matter.	materials and	
	Develop scientific	ideas.		record their work and		resources and talk	
	knowledge through play			ideas.	Develop scientific	about how they are	
	activities, sharing stories				knowledge through	similar or different.	
	and non-fiction books				play activities, sharing		
	and discussion.				stories and non-fiction	Use technology to	
	Cort and group materials				books and discussion.	record their work and	
	Sort and group materials and resources and talk					ideas.	
	about how they are				Know ways to care for		
	similar or different.				their local		
					environment.		

					Make observations about the world around them. Use technology to record their work and ideas.	
Substantive differe Knowledge: -Differ	rials have ent textures. rent animals live in ent places.	-Some materials are magnetic. -Some metals are magnetic. Other materials are non- magnetic, such as wood, dough and glass. -Machines need power to make them move or work. Some machines use batteries to make them work. Batteries power some devices, such as torches and toys. A battery is a store of electric power.	-People grow from being babies to adults. -As people grow older, they look different and can do different things. -Soft materials bend easily. -Hard materials are difficult to bend, break and cut.	-We use our sense to explore the world. -Plants need water, sunlight, air and warmth to grow. -Seeds need water, air and warmth to begin to grow. -Some plants produce seeds so that they can grow new plants. -Animal babies are known by different names than adult animals.	-Some animals are pets and are kept in peoples' homes. -Pets need food, water, sleep, exercise and play to keep them happy and healthy. -To know the names of different animal parts and know where they are on the animals body. -Understand there are different animal groups and why they belong to that group. -Not all animal babies have the same features as their parents when they are born. -Animals eat different kinds of food, including other animals, plants or both animals and plants. -Different types of animals grow to different lengths and heights.	-Some animals including sea birds, crabs and starfish live at the sea shore. -Molluscs such as snails, clams and muscles have shells to protect them. -Crabs have five pairs of legs. The first pair legs has pincers. -Animals live in different habitats. -Rock pools are habitats for many animals, such as starfish, crabs, anemones, mussels, barnacles and periwinkles. -Animals eat different kinds of food, including other animals, plants or both animals and plants. -Birds are animals that have beaks and feathers and lay eggs. -There are lots of different animals. Some animals

						including fish, whales, sharks and dolphins live in the seas and oceans. -Fish use gills to breathe. They use their tails to swim and have fins to keep them upright. -Some objects float and others sink.
Disciplinary Knowledge: Skill	-Make a shadow bigger or smaller using toys/play equipment and a light source. -With support, observe, record and talk about materials and living things. -Observe and describe living things and their habitats within the local environment.	 -Represent scientific observations by mark making, drawing or creating simple charts and tables. -Offer explanations for why things happen, making use of vocabulary, such as, because, then and next. -Use age-appropriate software to create images and record sounds and videos. -Identify that materials have different properties and explore and sort magnetic materials through play and exploration. Play with and explore battery-powered toys and models. Ask a relevant 	-Use age-appropriate software to create images and record sounds and videos. -Represent different parts of the human body from observations, imaginations or memory with attention to some detail. -Recognise and discuss how they have changed from when they were babies. -Name and sort everyday items into groups of the same material.	-Observe and describe living things and their habitats within the local environment. -Develop storylines in their pretend play and use conversation and discussion to help solve problems, organize thinking and activities and explain how things work and why they might happen. -With support, observe, record and talk about materials and living things. -Care for growing seeds and plants and describe observable features of different types of plants and trees. -Begin to talk about ways to care for a plant or animal.	-Begin to talk about ways to care for a plant or animal. -Describe some ways that plants or animals should be cared for in order for them to survive. -Begin to notice and talk about the different places around the world, including oceans and seas. -Make a shadow bigger or smaller using toys/play equipment and a light source. -Identify common features for different groups of animals, including wild and domestic animals. -Begin to talk about and name the body parts of common animals, including	-Say how two places in the immediate environment are the same or different. -Extend their vocabulary by exploring and using a wide range of new words. -Name a variety of domestic and wild animals. -Talk about some of the things that they have observed using simple scientific vocabulary. -With support, observe, record and talk about materials and living things. -Use natural materials to create art. -Identify common features for different groups of animals, including wild and

	scientific question to	I	-Name and describe	pats	domestic animals.
	find out more, explain		basic features of	pets. -With support,	-Match animals to the
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	how things work and		plants and trees.	observe, record and	foods that they eat.
	why they might		-Represent scientific	talk about materials	-Talk about some of
	happen.		observations by mark	and living things.	the things that they
			making, drawing or	-Match animals to	have observed using
			creating simple charts	their young.	simple scientific
			and tables.	-Match animals to the	vocabulary.
			-Offer explanations for	foods that they eat.	-Represent scientific
			why things happen,	-Talk about some of	observations by mark
			making use of	the things that they	making, drawing or
			vocabulary.	have observed using	creating simple charts
			-Name a variety of	simple scientific	and tables.
			domestic and wild	vocabulary.	-Offer explanations for
			animals.		why things happen,
			-Match animals to		making use of
			their young.		vocabulary.
			, c		-Describe, predict and
					sort things that float
					and sink and talk
					about the forces that
					they can feel.
					-Talk about and play
					with objects that float
					and sink and describe
					different forces that
					they can feel.
					they call leel.
				Trotters Farm.	Beach experience.
Experiences:				inotters runn.	beach experience.
Experiences.					
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ACADEMY

Key St	age 1
By the end of KS1, children will:	KS1 Vocabulary:
KS1 Working Scientifically During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	Absorbent, bendy, brick, ceramic, clay, concrete, cotton, fabric, glass, hard, human- made, leather, material, metal, metal alloy, natural, oil, opaque, paper, plastic, property, rough, rubber, sand, shiny, silk, smooth, soft, stone, stretchy, synthetic fabric, transparent, water, waterproof, wood, wool.
 asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. 	Abdomen, animal, ankle, arm, calf, chest, chin, ear, elbow, eye, finger, foot, forearm, forehead, hair, hand, head, hearing, human, knee, leg, limb, mammal, mouth, neck, nose, pelvis, sense, shoulder, sight, skin, smell, taste, thigh, toe, tongue, touch, unique, upper arm, wrist. Anemometer, animal, autumn, Beaufort Scale, blossom, breeze, bud, cloud, dark, daytime, deciduous, dormant, Earth, evergreen, fog, fruit, gale, grow, hail, hibernate, hurricane, leaf, light, meteorologist, migrate, night time, Northern
 Year 1 Plants identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. identify and describe the basic structure of a variety of common flowering plants, including trees. 	Hemisphere, precipitation, rain, rainfall, rain gauge, rays, season, seasonal change, sleet, snow, spring, storm, summer, sun, sun cream, sunglasses, sunrise, sunset, thermometer, weather, weather forecast, wind, windsock, winter. Bark, blade, blossom, branch, bud, bulb, deciduous, evergreen, flower, fruit, garden, garden plant, hedgerow, leaf, margin, meadow, petal, plant, root, season, seed, shelter, soil, stalk, stem, tree, trunk, vein, wild plant, woodland.
 Animals, including humans identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores 	Amphibian, animal, antenna, beak, bird, body covering, camouflage, carnivore, claw, ear, eye, feather, fin, fish, fur, gill, group, hearing, herbivore, human, hunt, invertebrate, limb, mammal, mouth, nose, offspring, omnivore, pet, reptile, scale, sense, shell, sight, skin, smell, tail, teeth, tongue, touch, wild animal, wing, Scientific terms
 describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	compare, describe, equipment, investigation, observe, question, record, results, venn diagram, bar chart, data, degrees Celsius, describe, equipment, investigation, measurement, millimeter, observe, prediction, table, temperature, unit, volume, research, block graph, instructions, test.
 Everyday materials distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties. Seasonal changes 	Adult, aerobic exercise, air, balancing exercise, balanced diet, birth, bone, carbohydrates, coordination, dairy and alternatives, embryo, energy, exercise, fat, food, food group, fruit and vegetables, germ, growth, healthy, heart, human, hydrate, hygiene, juvenile, life cycle, love, lungs, mammal, muscle, nutrient, nutrition, offspring, oils and spreads, omnivore, proteins, reproduction, sense, shelter, space, strengthening exercise, stretching exercise, sugar, survive, sweat, began diet, vegetarian diet, vitamin, water.
observe changes across the four seasons observe and describe weather associated with the seasons and how day	Adaptation, air, amphibian, animal, bird, camouflage, carnivore, excretion, fish, food, food chain, growth, habitat, herbivore, identify, invertebrate, living, mammal,

- observe changes across the four seasons ٠
- observe and describe weather associated with the seasons and how day ٠

	animine and the line action offerning and incomplete
length varies.	mimicry, movement, non-living, nutrient, offspring, omnivore, plant, predator,
Year 2	prey, quill, reproduction, reptile, respiration, sensitivity, shelter, soil, space,
	•
 Living things and their habitats explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. Plants observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy Animals, including humans notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	 temperature, thorn, warning colouration, water, woodland. absorbency, absorbent, bend, bendy, cardboard, clay, fabric, glass, hard, humanmade, material, metal, natural, natural resource, object, opaque, paper, plastic, pollution, property, recycle, rock, rough, rubbish, shape, smooth, soft, squash, strength, stretch, stretchy, strong, sustainability, texture, t5ransparent, twist, waterproof, wood. air, bark, basal plate, branch, bulb, deciduous, embryo, evergreen, flower, flower bud, fruit, germinate/germination, habitat, leaf, nutrient, plant, root, scales, season, seed, seed coat, shade, soil, stem, sunlight, survive, temperature, tree, trunk, tunic, warmth, water. Adult, air, amphibian, arachnid, bird, birth, carnivore, consumer, crustacean, egg, embryo, fish, food, food chain, grow/growth, habitat, hatch/hatching, herbivore, hibernation, insect, interdependent, invertebrate, larva, life cycle, mammal, metamorphosis, microhabitat, migration, mollusk, myriapod, offspring, omnivore, producer, pupa, pupation, reproduce/reproduction, reptile, season, shelter, space, survive, water, worm.
changed by squashing, bending, twisting and stretching.	
Prior learning links:	
Understanding the World:	

ELG: Explore the natural world around them, making observations and drawing pictures of animals.

ELG: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.

ELG: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Personal, Social and Emotional Development:

ELG: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
	Every	day Materials	Animals, inc	luding humans	Plant Parts	Animals		
	Distinguish between	an object and the material	Identify and name a var	iety of common animals	Identify and name a	Identify and name a		
National	from which it is made	2.	including, fish, amphibi	ans, reptiles, birds and	variety of common	variety of common		
Curriculum links:			mammals.		wild and garden	animals including, fish,		
	Identify and name a v	variety of everyday			plants, including	amphibians, reptiles,		
	materials, including v	vood, plastic, glass, metal,	Identify, name, draw ar	d label the basic parts of	deciduous and	birds and mammals.		
	water and rock.		the human body and sa	y which part of the body	evergreen trees.			
			is associated with each			Identify and name a		
	Describe the simple g	physical properties of a			Identify and describe	variety of common		
	variety of everyday m		Describe and compare	he structure of a variety	the basic structure of	animals that are		
			of common animals (fis		a variety of common	carnivores, herbivores		
	Compare and group t	ogether a variety of	birds, mammals, includ		, flowering plants,	and omnivores.		
		n the basis of their simple		01 /	including trees.			
	properties.				0.110			
	b. ch cco.							
Working	Children at Sea	iton Academy are taught to ι			-	eaching of Science.		
Scientifically:	-Asking simple questions and recognizing that they can be answered in different ways.							
	-Observing closely, using simple equipment.							
	-Performing simple tests.							
	-Identifying and classifying.							
				s to suggest answers to qu				
		-Gatl	nering and recording data	to help in answering quest	ions.			
	-A material is what ar	n object is made from.	-Humans are living thin	gs and they are	-Plants are important	-Animals are living		

-Everyday materials include, wood, plastic, glass,	mammals.	because they provide	things.
metal, water, rock, brick, paper and fabric.	-Animals are living things.	food, shelter and	-Carnivores eat other
-Describe the properties of materials.	-The basic body parts are the head, arms, legs,	materials for animals,	animals, herbivores
-Materials with different properties have	nose, eyes, ears, mouth, hands and feet.	including humans.	eat plants and
different uses.		-Changes happen to	omnivores eat other
-Know what the best material for the job is a why.		• • • • •	animals and plants.
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		_	
		round.	
-Identify and name what an object is made from.	-Draw and label the main parts of the human	-Identify, compare,	-Identify, compare,
-Observe materials closely, using simple	body and say which body part is associated with	group and sort a	group and sort a
equipment.	which sense.	variety of common	variety of common
-Sort and group objects based on the material	-Gather and record simple data by labelling the	wild and garden	animals, including fish
from which they are made from.	parts of a human body.	plants, including	amphibians, reptiles,
-Identify and describe the simple physical	-Compare living things based on their features.	delicious and	birds, mammals and
properties of some everyday materials.	-Use their observations to suggest an answer to	evergreen trees,	invertebrates, based
-Group objects based on their physical properties	a question.	based on observable	on observable
using a Venn diagram.	-Perform simple tests to answer questions and	features.	features.
-Follow instructions to perform simple tests and	talk about what they have found out.	-Observe the local	-Label and describe
begin to talk about what they might do or what		environment	the basic structures of
might happen.		throughout the year	a variety of common
	 metal, water, rock, brick, paper and fabric. -Describe the properties of materials. -Materials with different properties have different uses. -Know what the best material for the job is a why. -Identify and name what an object is made from. Observe materials closely, using simple equipment. -Sort and group objects based on the material from which they are made from. -Identify and describe the simple physical properties of some everyday materials. -Group objects based on their physical properties using a Venn diagram. -Follow instructions to perform simple tests and begin to talk about what they might do or what 	 metal, water, rock, brick, paper and fabric. -Describe the properties of materials. -Materials with different properties have different uses. -Know what the best material for the job is a why. -Know what the best material for the job is a why. -Know what the best material for the job is a why. -Identify and name what an object is made from. -Observe materials closely, using simple equipment. -Sort and group objects based on the material from which they are made from. -Observe materials closely, using simple equipment. -Sort and group objects based on the material from which they are made from. -Identify and describe the simple physical properties of some everyday materials. -Group objects based on their physical properties using a Venn diagram. -Follow what they might do or what 	 -Animals are living things. -Describe the properties of materials. -Materials with different properties have different uses. -Know what the best material for the job is a why. -Name the five senses: sight, hear, smell, taste, touch, and know which body part is associated with each sense. -Fish, amphibians, reptiles, birds, mammals and invertebrates are groups of animals. -Describe the basic needs of a plant. -Describe the basic needs of a plant. -Darw and label the main parts of the human body and say which body part is associated with equipment. -Observe materials closely, using simple equipment. -Sort and group objects based on the material from which they are made from. -dentify and name what an object is made from. -dentify and dateribe the simple physical properties of some everyday materials. -Draw and label the main parts of the human body and say which body part is associated with which sense. -Gather and record simple data by labelling the parts of a human body. -Omare living things based on their physical properties of some everyday materials. -Forlow instructions to perform simple tests and begin to talk about what they might do or what

	-Observe the suitability of materials over time and record their observations.		and ask and answer questions about living things and seasonal change. -Describe and observe how plants and animals change over time. -Label and describe the basic structure of a variety of common plants. -Ask simple scientific questions about the growth of a bean. -Perform simple tests to answer questions and talk about what they have found out.	animals, including: fish, amphibians, reptiles, birds and mammals. -Gather and record simple data in a Carroll diagram. - Observe living things, grouping and sorting them based on the foods they eat. -Ask simple scientific questions. -Describe how to care for animals, including pets. -Use simple equipment to measure and make observations. -Perform simple tests to answer questions and talk about what they have found out.
Experiences:				Whinlatter trip
Key Vocabulary:	Absorbent, bendy, brick, ceramic, clay, concrete, cotton, fabric, glass, hard, human-made, leather, material, metal, metal alloy, natural, oil, opaque, paper, plastic, property, rough, rubber, sand, shiny, silk, smooth, soft, stone, stretchy, synthetic fabric, transparent, water, waterproof, wood, wool.	Amphibian, animal, antenna, beak, bird, body covering, camouflage, carnivore, claw, ear, eye, feather, fin, fish, fur, gill, group, hearing, herbivore, human, hunt, invertebrate, limb, mammal, mouth, nose, offspring, omnivore, pet, reptile, scale, sense, shell, sight, skin, smell, tail, teeth, tongue, touch, wild animal, wing. Abdomen, animal, ankle, arm, calf, chest, chin, ear, elbow, eye, finger, foot, forearm, forehead,	Bark, blade, blossom, branch, bud, bulb, deciduous, evergreen, flower, fruit, garden, garden plant, hedgerow, leaf, margin, meadow, petal, plant, root, season, seed, shelter, soil, stalk, stem, tree,	Amphibian, animal, antenna, beak, bird, body covering, camouflage, carnivore, claw, ear, eye, feather, fin, fish, fur, gill, group, hearing, herbivore, human, hunt, invertebrate, limb, mammal, mouth,

Scientific Key	limb, mam shoulder, s	head, hearing, human, knee, leg, mal, mouth, neck, nose, pelvis, sense, ight, skin, smell, taste, thigh, toe, uch, unique, upper arm, wrist.	trunk, vein, wild plant, woodland.	nose, offspring, omnivore, pet, reptile, scale, sense, shell, sight, skin, smell, tail, teeth, tongue, touch, wild animal, wing.
Vocabulary	investigation, measurement, millimeter, observe, prediction, ta			· · · ·
,		nal Changes	,	
National Curriculum Links:	Observe changes across the four seasons. Observe and describe weather associated with the seasons and			
Substantive Knowledge:	 -The four seasons are spring, summer, autumn and winter. -Certain events and weather patterns happen in different seasoner of the seasoner. -Habitats for living things can change during the seasons. -Deciduous trees change across the four seasons. -Evergreen trees keep their leaves all year round. 			
Disciplinary Knowledge:	 Observe changes across the four seasons. Observe and describe how the day length varies across the year Describe ways to stay safe in some familiar situations. Observe the local environment throughout the year and ask ar Ask simple scientific questions. Use simple equipment to measure and make observations. Perform simple tests to answer questions and talk about what Gather and record simple data in a range of ways. 	d answer questions about living things	and seasonal changes.	
Key Vocabulary:	Anemometer, animal, autumn, Beaufort Scale, blossom, breeze hail, hibernate, hurricane, leaf, light, meteorologist, migrate, ni seasonal change, sleet, snow, spring, storm, summer, sun, sun o windsock, winter.	ght time, Northern Hemisphere, precip	itation, rain, rainfall, rain	gauge, rays, season,

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Human Survival	Habitats	Uses of Materials	Plant Survival	Animal Survival	
	Find out about and	Describe how animals	Identify and compare	Find out and describe	Describe how animals	obtain their food from
National	describe the basic needs	obtain their food from	the suitability of	how plants need water,	plants and other anim	als, using the idea of a
Curriculum links:	of animals, including	plants and other	everyday materials,	light and a suitable	simple food chain, and	d identify and name
	humans, for survival	animals, using the	including wood,	temperature to grow	different food sources	5.
	(water, food and air).	idea of a simple food	metal, plastic, glass,	and stay healthy.		
		chain, and identify	brick, rock, paper and		Find out about and de	escribe the basic needs of
	Describe the importance	and name different	cardboard for	Identify and name a	animals, including hur	mans, for survival (water,
	for humans of exercise,	food sources.	particular uses.	variety of plants and	food and air).	
	eating the right amounts			animals in their		
	of different types of	Explore and compare	Find out how the	habitats, including	Identify and name a v	ariety of plants and
	food, and hygiene.	the difference	shapes of solid objects	microhabitats.	animals in their habita	ats, including
		between things that	made from some		microhabitats.	
		are loving, dead and	materials can be	Identify that most living		
		things that have never	changed by squashing,	things live in habitats to	Notice that animals, in	ncluding humans, have
		been alive.	bending, twisting and	which they are suited	offspring which grow	into adults.
			stretching.	and describe how		
		Find out about and		different habitats		
		describe the basic		provide for the basic		
		needs of animals,		needs of different kinds		
		including humans, for		of animals and plants,		
		survival (water, food		and how they depend		
		and air).		on each other.		
				Observe and describe		
		Find out and describe		Observe and describe		
		how plants need		how seeds and bulbs		
		water, light and a		grow into mature		
		suitable temperature		plants.		
		to grow and stay				
		healthy.				
		Identify and name a				
		variety of plants and				
		animals in their				
		habitats, including				
		microhabitats.				

		Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.			
Working Scientifically:	Children at Seaton	-Asking simple que -Using th	estions and recognizing th -Observing closely, us -Performing -Identifying a eir observation and idea	nat they can be answered i ing simple equipment. simple tests.	estions.
	-Humans grow from	-A habitat is a place	-Materials found in	-Many plants grow	-A habitat is a place where plants and animals
Substantive	baby to toddler to child	where plants and	the environment can	from seeds or bulbs.	live.
Knowledge:	to teenager to adult to	animals live.	be natural and	-Plants have roots,	-A micro-habitat is a very small habitat.
into medge.	elderly.	-A micro-habitat is a	human-made.	stems, leaves, flowers	-Local habitats include: parks, woodlands and
	-Humans need water,	very small habitat.	-Some objects and	and fruit.	gardens.
'I know'	food, air and shelter to survive. -A healthy lifestyle includes: exercise, a balanced diet, good quality sleep and personal hygiene. -A prediction is a best guess at what might happen in an investigation.	 -A habitat provides food, water, shelter and space. -Living things are those that are alive. -Dead things are those that were once living but are no longer. -Somethings have never been alive. -The seven life 	materials can be changed by squashing, bending, twisting, stretching, heating, cooling, mixing and being left to decay. -A prediction is a best guess at what might happen in an investigation. -Results from an	 -A bulb contains a tiny plant and all the food needed to grow. -A seed is a small object made by a plant that can grow into a new plant. -Seeds need water and warmth to start growing (germinate). -As the plant grows 	 Habitats beyond the locality include: beaches, rainforests, deserts, oceans and mountains. A habitat provides food, water, shelter and space. Invertebrates are animals without a backbone. Invertebrates include: worms, molluscs, crustaceans, insects, arachnids and myriapods. An animal's habitat must provide food, water, air and shelter for the animal to survive. Animals eat food that is found in their habitat. Herbivores eat plants.

	used to answer a	breathing, using their	question.	-Questions can help us	-Food chains show how living things depend on
	question.	senses, feeding,	-A materials physical	to find out about the	one another for food.
	-The risks of an	getting rid of waste,	properties make it	world.	-Plants always start a food chain because they
	unhealthy lifestyle.	having offspring and	suitable for practical	-A prediction is a best	are producers.
	-Germs can cause illness	growing.	purposes.	guess at what might	-Humans can damage or destroy habitats.
	in humans.	-An animal's habitat	-Objects can be made	happen in an	-Humans can help habitats.
	-Germs enter the body	must provide water,	from one or more	investigation.	-Animals are born or hatch from eggs.
	through the eyes, nose	food, air and shelter	materials or different	-Results from an	-Young grow or change until they become
	or mouth.	for the animal to	materials with similar	investigation can be	adults that can reproduce.
	-Washing hands with	survive.	properties.	used to answer a	-A life cycle can be drawn as a circular diagram.
	clean running water	-Food chains show	-Questions can help	question.	-Ask and answer scientific questions about the
	helps humans avoid	how living things	us to find out about		world around them.
	getting ill and spreading	depend on one	the world.		-Many animals behave differently in different
	germs to others.	another for food.	-Results from an		seasons in the UK.
		-Plants always start a	investigation can be		
		food chain because	used to answer a		
		they are producers.	question.		
	-Describe the stages of	-Describe a range of	-Describe the	-Describe how plants	-Describe a range of local habitats and habitats
Disciplinary	human development.	local habitats and	properties of natural	need water, lights and	beyond their locality and what all habitats
Knowledge:	-Use a range of methods	habitats beyond their	and human-made	suitable temperature to	provide for the things that live there.
	(tables, charts, diagrams	locality and what all	materials and where	grow and stay healthy.	-Identify and name a variety of plants and
	and Venn diagrams) to	habitats provide for	they are found in the	-Observe living things	animals in a range of habitats and
	gather and record	the things that live	environment.	and changes over time	microhabitats.
	simple data with some	there.	-Observe objects,	sorting and grouping	-Describe what animals, including humans need
	accuracy.	-Compare and group	materials and changes	them based on their	to survive.
	-Describe what humans	things that are living,	over time, sorting and	features and explaining	-Interpret and construct simple food chains to
	need to survive.	dead or have never	grouping them based	their reasoning.	describe how living things depend on each
	-Describe the	been alive.	on their features and	-Begin to notice	other as a source of food.
	importance of exercise,	-Identify and name a	explaining their	patterns and	-Use a range of methods (tables, charts,
	a balanced diet, good	variety of plants and	reasoning.	relationships in their	diagrams and Venn diagrams) to gather and
	quality sleep and	animals in a range of	-Describe how some	data and explain what	record simple data with some accuracy.
	personal hygiene.	habitats and	objects and materials	they have done and	-Describe the basic life cycles of some familiar
	-Use simple equipment	microhabitats.	can be changed and	found out using simple	animals.
	to measure and make	-Use a range of	how these changes	scientific language.	-Begin to notice patterns and relationships in
	observations.	methods (tables,	can be desirable or	-Identify and name a	their data and explain what they have done and
	-Follow a set of	charts, diagrams and	undesirable.	variety of plants in a	found out using simple scientific language.
	instructions to perform	Venn diagrams) to	-Use a range of	range of habitats and	
	a range of simple tests,	gather and record	methods (tables,	microhabitats.	
	making simple	simple data with some	charts, diagrams and	-Observe and describe	

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	predictions for what	accuracy.	Venn diagrams) to	how seeds and bulbs	
	might happen and	-Describe what	gather and record	change over time as	
	suggesting ways to	animals, including	simple data with some	they grow into mature	
	answer their questions.	humans need to	accuracy.	plants.	
	-Begin to notice patterns	survive.	-Follow a set of	-Ask and answer	
	and relationships in	-Interpret and	instructions to	scientific questions.	
	their data and explain	construct simple food	perform a range of	-Follow a set of	
	what they have done	chains to describe	simple tests, making	instructions to perform	
	and found out using	how living things	simple predictions for	a range of simple tests,	
	simple scientific	depend on each other	what might happen	making simple	
	language.	as a source of food.	and suggesting ways	predictions for what	
	-Observe living-things	-Observe living-things	to answer their	might happen and	
	and changes over time,	and changes over	questions.	suggesting ways to	
	sorting and grouping	time, sorting and	-Begin to notice	answer their questions.	
	them based on their	grouping them based	patterns and	-Use a range of	
	features and explaining	on their features and	relationships in their	methods (tables,	
	their reasoning.	explaining their	data and explain what	charts, diagrams and	
		reasoning.	they have done and	Venn diagrams) to	
		-Follow a set of	found out using	gather and record	
		instructions to	simple scientific	simple data with some	
		perform a range of	language.	accuracy.	
		simple tests, making	-Compare the		
		simple predictions for	suitability of a range		
		what might happen	of everyday materials		
		and suggesting ways	for particular uses.		
		to answer their	-Ask and answer		
		questions.	scientific questions.		
			-Use simple		
			equipment to		
			measure and make		
			observations.		
		Forest School			Butterfly life cycle observation
xperiences:					
	Adult, aerobic exercise,	Adaptation, air,	Absorbency,	Air, bark, basal plate,	Adult, air, amphibian, arachnid, bird, birth,
ey Vocabulary:	air, balancing exercise,	amphibian, animal,	absorbent, bend,	branch, bulb,	carnivore, consumer, crustacean, egg, embryc
-	balanced diet, birth,	bird, camouflage,	bendy, cardboard,	deciduous, embryo,	fish, food, food chain, grow/growth, habitat,

	bone, carbohydrates,	carnivore, excretion,	clay, fabric, glass,	evergreen, flower,	hatch/hatching, herbivore, hibernation, insect
	coordination, dairy and	fish, food, food chain,	hard, human-made,	flower bud, fruit,	interdependent, invertebrate, larva, life cycle,
	alternatives, embryo,	growth, habitat,	material, metal,	germinate/germination,	mammal, metamorphosis, microhabitat,
	energy, exercise, fat,	herbivore, identify,	natural, natural	habitat, leaf, nutrient,	migration, mollusk, myriapod, offspring,
	food, food group, fruit	invertebrate, living,	resource, object,	plant, root, scales,	omnivore, producer, pupa, pupation,
	and vegetables, germ,	mammal, mimicry,	opaque, paper,	season, seed, seed	reproduce/reproduction, reptile, season,
	growth, healthy, heart,	movement, non-living,	plastic, pollution,	coat, shade, soil, stem,	shelter, space, survive, water, worm.
	human, hydrate,	nutrient, offspring,	property, recycle,	sunlight, survive,	
	hygiene, juvenile, life	omnivore, plant,	rock, rough, rubbish,	temperature, tree,	
	cycle, love, lungs,	predator, prey, quill,	shape, smooth, soft,	trunk, tunic, warmth,	
	mammal, muscle,	reproduction, reptile,	squash, strength,	water.	
	nutrient, nutrition,	respiration,	stretch, stretchy,		
	offspring, oils and	sensitivity, shelter,	strong, sustainability,		
	spreads, omnivore,	soil, space,	texture, t5ransparent,		
	proteins, reproduction,	temperature, thorn,	twist, waterproof,		
	sense, shelter, space,	warning colouration,	wood.		
	strengthening exercise,	water, woodland.			
	stretching exercise,				
	sugar, survive, sweat,				
	began diet, vegetarian				
	diet, vitamin, water.				
entific	compare, conclusion, dat	a, investigation, method,	observe, prediction, ques	stion, record, research, resu	ilts, block graph, describe, diagram, equipment
abulary:					

ACADEMY