

Science: Knowledge and Skills Progression Map

Early Years

By the end of EYFS, children will:

Nursery

- Use all their senses in hands-on exploration of natural materials.
- Explore collections of materials with similar and/or different properties.
- Talk about what they see, using a wide vocabulary.
- Explore how things work.
- Plant seeds and care for growing plants.
- Understand the key features of the life cycle of a plant and an animal,
- Begin to understand the need to respect and care for the natural environment and all living things.
- Explore and talk about different forces they can feel.
- Talk about the differences between materials and changes they notice.
- Make healthy choices about food, drink, activity and toothbrushing,
- Understand simple questions about 'who', 'what' and 'where' (but generally not 'why').

Reception

- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.
- Recognize some environment that are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.
- Manage their own needs- personal hygiene.
- Know and talk about the different factors that support their overall health and wellbeing: healthy eating, toothbrushing, having a good sleep routine.
- Learn new vocabulary

ELG

Understanding the World

• Explore the natural world around them, making observation and drawing pictures of animals and plants.

EYFS Vocabulary:

Nursery

Me and My Community

Grow, babies, change, people, appearance, living things, environment, rubbish, care, harmful

Once Upon a Time

record, materials, body parts, pets, scientific observations, because, next, then, day and night

Starry Night

sunlight, sky, dark, domestic animals, wild animals, nocturnal, explore, feature, observe

Dangerous Dinosaurs

prehistoric, carnivore, herbivore, plants, dinosaurs, parks, gardens, local environment, habitats, trees,

Sunshine and Sunflowers

weather, patterns, summer, winter, year, parts, plant, roots, stem, leaves, flowers, petals, description

Big Wide World

natural world, butterflies, life cycle, eggs, chrysalis, cocoon, emerges, hatch, grow, seeds, air, sunlight, warmth, water, soil, senses, hearing, sight, tough, taste, smell, world, nectar, flowers, insects, special features.

Reception

Lets Explore

Earth, animal, environment, planet

Marvellous Machines

Battery, electric, machine, robot

Long Ago

Adult, baby, change, grow

Ready, Steady Grow

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

PSED

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

Communication and Language

 Listen attentively and response to what they hear with relevant questions, comments and actions when being read to and during whole class discussion and small group interactions. Air, animal, calf, cow, drink, eat, exercise, farm, food, grow, healthy, lamb, sheep, plant, seed, sunlight, warmth, water

Animal Safari

Bird, camouflage, carnivore, egg, feathers, habitat, herbivore, mammal, omnivore, reptile, scales

On the Beach

Beach, carnivore, crab, fish, fin, gills, habitat, herbivore, carnivore, omnivore, tail, starfish



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
Development Matters links:	Change happens to everyone and we change as we grow. People change as they grow and have changed since they were babies, both in their appearance and what they are able to do. We should care for the environment. For example, rubbish needs to be put in the bin. Say how they have changed over time. Show care for living things and the environment.	Explore and create using a wide range of materials and components, including upcycled materials, construction kits, textiles and ingredients.	Begin to observe and talk about living things in the local environment. During the day there is sunlight. At night there is no sunlight so the sky is dark. Begin to talk about and name the body parts of common animals, including pets. Bats are animals that are awake during the night and sleep during the day. Make simple comparisons between objects and materials, such as bigger and smaller, and softer and harder. Soft materials bend easily. They are not hard or rough to touch. Name a variety of domestic and wild	Talk about some of the things that they have observed using simple scientific vocabulary Living things including dinosaurs lived millions of years ago.	Begin to observe and talk about living things in the local environment. Parks and gardens contain lots of different plants and animals. We can use our senses; hearing, sight, touch, taste and smell help us to find out about the world around us. There are many animals including snails, spiders, butterflies and woodlice that live in gardens. Care for growing seeds and plants and describe observable features of different types of plants and trees. Plants need air, sunlight, warmth, water and soil to grow.	Explore and talk about the ways that the weather, plants and animals of places can be different through pictures and stories. The weather, plants and animals differ in different places around the world. Show care for living things and the environment. We should care for the environment. For example, rubbish needs to be put in the bin.

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

	-Show and describe how	-Explore the natural	-Name a variety of	measure length,	-Begin to describe	domestic animals.
	to care for living things	world around them	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.				
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xperience:						

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 Matters links:	Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Sort and group materials and resources and talk about how they are similar or different.	Explore the natural world around them, making observations and drawing pictures of animals and plants. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Make observations about the world around them. Sort and group materials and resources and talk about how they are similar or different. Use technology to record their work and ideas.	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Discuss simple changes as they have grown from being a baby. Sort and group materials and resources and talk about how they are similar or different. Use technology to record their work and ideas.	Explore the natural world around them, making observations and drawing pictures of animals and plants. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Make observations about the world around them. Use technology to record their work and ideas.	Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Know ways to care for their local environment.	Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Sort and group materials and resources and talk about how they are similar or different. Use technology to record their work and ideas.

					Make observations about the world around them. Use technology to record their work and ideas.	
Substantive Knowledge:	-Materials have different texturesDifferent animals live in different places.	-Some materials are magneticSome metals are magnetic. Other materials are nonmagnetic, such as wood, dough and glassMachines 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 adultsAs people grow older, they look different and can do different thingsSoft materials bend easilyHard materials are difficult to bend, break and cut.	-We use our sense to explore the worldPlants need water, sunlight, air and warmth to growSeeds need water, air and warmth to begin to growSome plants produce seeds so that they can grow new plantsAnimal babies are known by different names than adult animals.	-Some animals are pets and are kept in peoples' homesPets need food, water, sleep, exercise and play to keep them happy and healthyTo know the names of different animal parts and know where they are on the animals bodyUnderstand there are different animal groups and why they belong to that groupNot all animal babies have the same features as their parents when they are bornAnimals eat different kinds of food, including other animals, plants or both animals and plantsDifferent types of animals grow to different lengths and heights.	-Some animals including sea birds, crabs and starfish live at the sea shoreMolluscs such as snails, clams and muscles have shells to protect themCrabs have five pairs of legs. The first pair legs has pincersAnimals live in different habitatsRock pools are habitats for many animals, such as starfish, crabs, anemones, mussels, barnacles and periwinklesAnimals eat different kinds of food, including other animals, plants or both animals and plantsBirds are animals that have beaks and feathers and lay eggsThere are lots of different animals. Some animals

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

	scientific question to find out more, explain how things work and why they might happen.	-Name and describe basic features of plants and treesRepresent scientific observations by mark making, drawing or creating simple charts and tablesOffer explanations for why things happen, making use of vocabularyName a variety of domestic and wild animalsMatch animals to their young.	petsWith support, observe, record and talk about materials and living thingsMatch animals to their youngMatch animals to the foods that they eatTalk about some of the things that they have observed using simple scientific vocabulary.	domestic animalsMatch animals to the foods that they eatTalk about some of the things that they have observed using simple scientific vocabularyRepresent scientific observations by mark making, drawing or creating simple charts and tablesOffer explanations for why things happen, making use of vocabularyDescribe, predict and sort things that float and sink and talk about the forces that they can feelTalk about and play with objects that float and sink and describe different forces that they can feel.
Experiences:			Trotters Farm.	Beach experience.

ACADEMY

Key Stage 1

By the end of KS1, children will:

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:

- 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.

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.

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
- 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.

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

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

KS1 Vocabulary:

Year 1

Every day materials

Absorbent, bendy, brick, clay, concrete, cotton, fabric, glass, hard, human-made, leather, material, metal, natural, paper, plastic, property, rough, rubber, sand, shiny, smooth, soft, stone, stretchy, transparent, water, waterproof, wood, wool.

Animals, including humans

Animal, ankle, arm, chest, chin, ear, elbow, eye, finger, foot, forearm, forehead, hair, hand, head, hearing, human, knee, leg, limb, mammal, mouth, neck, nose, sense, shoulder, sight, skin, smell, taste, thigh, toe, tongue, touch, unique, upper arm, wrist.

Seasonal changes

Autumn, Beaufort Scale, blossom, breeze, bud, cloud, dark, daytime, deciduous, Earth, evergreen, fog, fruit, gale, grow, hail, hibernate, hurricane, leaf, rain, rainfall, rain gauge, rays, season, seasonal change, sleet, snow, spring, storm, summer, sun, sun cream, sunglasses, thermometer, weather, weather forecast, wind, windsock, winter

Plants

Bark, blossom, branch, bud, bulb, deciduous, evergreen, flower, fruit, garden, garden plant, leaf, petal, plant, root, season, seed, shelter, soil, stalk, stem, tree, trunk, wild plant, woodland.

Animals

Amphibian, animal, antenna, beak, bird, camouflage, carnivore, claw, ear, eye, feather, fin, fish, fur, gill, group, hearing, herbivore, human, hunt, mammal, mouth, nose, offspring, omnivore, pet, reptile, scale, sense, shell, sight, skin, smell, tail, teeth, tongue, touch, wing.

Scientific terms

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.

length varies.

Year 2

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.

Uses of everyday materials

- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Year 2

Animals, including humans

Adult, air, exercise, balanced diet, birth, bone, carbohydrates, coordination, dairy and alternatives, energy, fat, food, food group, fruit and vegetables, germ, growth, healthy, heart, human, hydrate, hygiene, life cycle, love, lungs, mammal, muscle, nutrient, nutrition, offspring, omnivore, proteins, reproduction, sense, shelter, space, sugar, survive, sweat, vegetarian diet, vitamin, water.

Animals

Adaptation, air, amphibian, animal, bird, camouflage, carnivore, fish, food, food chain, growth, habitat, herbivore, identify, invertebrate, living, mammal, movement, non-living, nutrient, offspring, omnivore, plant, predator, prey, reproduction, reptile, respiration, sensitivity, shelter, soil, space, temperature, woodland

Uses of everyday materials

Absorbent, bend, bendy, cardboard, clay, fabric, glass, hard, human-made, material, metal, natural, object, paper, plastic, pollution, property, recycle, rock, rough, rubbish, shape, smooth, soft, squash, strength, stretchy, strong, texture, transparent, twist, waterproof, wood.

Plants

Air, bark, branch, bulb, deciduous, evergreen, flower, flower bud, fruit, germinate/germination, habitat, leaf, nutrient, plant, root, season, seed, shade, soil, stem, sunlight, survive, temperature, tree, trunk, warmth, water.

Living things and their habitats

Adult, air, amphibian, bird, birth, carnivore, egg, fish, food, food chain, grow/growth, habitat, hatch/hatching, herbivore, hibernation, insect, invertebrate, life cycle, mammal, microhabitat, offspring, omnivore, reproduce/reproduction, reptile, season, shelter, survive, water, worm.

Scientific terms

compare, conclusion, data, investigation, method, observe, prediction, question, record, research, results, block graph, describe, diagram, equipment,

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
	Everyd	ay Materials	Animals, inc	luding humans	Plant Parts	Animals
	Distinguish between a	n object and the material	Identify and name a vai	iety of common animals	Identify and name a	Identify and name a
National	from which it is made.		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 va	riety of everyday			plants, including	amphibians, reptiles,
	materials, including wo	ood, plastic, glass, metal,	Identify, name, draw ar	nd 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	sense.		Identify and name a
	Describe the simple ph	ysical properties of a			Identify and describe	variety of common
	variety of everyday ma	terials.	Describe and compare	the structure of a variety	the basic structure of	animals that are
			of common animals (fis	h, amphibians, reptiles,	a variety of common	carnivores, herbivores
	Compare and group to	gether a variety of	birds, mammals, includ	ing pets).	flowering plants,	and omnivores.
	everyday materials on	the basis of their simple			including trees.	
	properties.				_	

Working	Children at Seaton Academy are taught to us	se the following practical scientific methods, proces	s and skills through the te	aching of Science.				
Scientifically:	Children at Seaton Academy are taught to use the following practical scientific methods, process and skills through the teaching of Science. -Asking simple questions and recognizing that they can be answered in different ways. -Observing closely, using simple equipment.							
	-Performing simple tests.							
	-Identifying and classifyingUsing their observation and ideas to suggest answers to questions.							
		ering and recording data to help in answering quest						
				1				
	-A material is what an object is made from.	-Humans are living things and they are	-Plants are important	-Animals are living				
ubstantive	-Everyday materials include, wood, plastic, glass,	mammals.	because they provide	things.				
nowledge:	metal, water, rock, brick, paper and fabric.	-Animals are living things.	food, shelter and	-Carnivores eat othe				
	-Describe the properties of materials.	-The basic body parts are the head, arms, legs,	materials for animals,	animals, herbivores				
Core	-Materials with different properties have	nose, eyes, ears, mouth, hands and feet.	including humans.	eat plants and				
know'	different uses.	-Different animal groups have some common	-Changes happen to	omnivores eat other				
	-Know what the best material for the job is a why.	body parts.	plants across the four	animals and plants.				
		-Name the five senses: sight, hear, smell, taste,	seasons.					
		touch, and know which body part is associated	-Basic plant parts					
		with each sense.	include: root, stem,					
		-Fish, amphibians, reptiles, birds, mammals and	leaf, flower, petal,					
		invertebrates are groups of animals.	trunk and fruit.					
			-Plants grow from					
			seeds or bulbs.					
			-Describe the basic					
			needs of a plant.					
			 -Name a variety of common wild and 					
			garden plans,					
			including deciduous and evergreen trees.					
			-Deciduous trees					
			change across the					
			four seasons.					
			-Evergreen trees keep					
			their leaves all year					
			round.					
			Touriu.					
	-Identify and name what an object is made from.	-Draw and label the main parts of the human	-Identify, compare,	-Identify, compare,				
Disciplinary	-Observe materials closely, using simple	body and say which body part is associated with	group and sort a	group and sort a				

Knowledge:	equipment.	which sense.	variety of common	variety of common
MIOWICUSC.	-Sort and group objects based on the material	-Gather and record simple data by labelling the	wild and garden	animals, including fish
Skill	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	talk about what they have found out.	environment	the basic structures of
			throughout the year	
	might happenObserve the suitability of materials over time		and ask and answer	a variety of common
				animals, including:
	and record their observations.		questions about living	fish, amphibians,
			things and seasonal	reptiles, birds and mammals.
	A		changeDescribe and observe	
				-Gather and record
			how plants and	simple data in a
			animals change over	Carroll diagram.
			time.	- Observe living things
			-Label and describe	grouping and sorting
			the basic structure of	them based on the
			a variety of common	foods they eat.
			plants.	-Ask simple scientific questions.
			-Ask simple scientific	-Describe how to care
			questions about the	for animals, including
			growth of a bean.	pets.
			-Perform simple tests	-Use simple
			to answer questions	equipment to
			and talk about what	measure and make
			they have found out.	observations.
				-Perform simple tests
				to answer questions
				and talk about what
			_	they have found out.
				Whinlatter trip
Experiences:			V	

	Absorbent, bendy, brick, ceramic, clay, concrete,	Amphibian, animal, antenna, beak, bird, body	Bark, blade, blossom,	Amphibian, animal,
Key Vocabulary:	cotton, fabric, glass, hard, human-made, leather,	covering, camouflage, carnivore, claw, ear, eye,	branch, bud, bulb,	antenna, beak, bird,
key vocabulary.	material, metal, metal alloy, natural, oil, opaque,	feather, fin, fish, fur, gill, group, hearing,	deciduous, evergreen,	body covering,
	paper, plastic, property, rough, rubber, sand,	herbivore, human, hunt, invertebrate, limb,	flower, fruit, garden,	camouflage, carnivore
	shiny, silk, smooth, soft, stone, stretchy, synthetic	mammal, mouth, nose, offspring, omnivore, pet,	garden plant,	_ ·
		. •	, ,	claw, ear, eye, feather
	fabric, transparent, water, waterproof, wood,	reptile, scale, sense, shell, sight, skin, smell, tail,	hedgerow, leaf,	fin, fish, fur, gill,
	wool.	teeth, tongue, touch, wild animal, wing.	margin, meadow,	group, hearing,
		Abdaman animal ankla arms salf abast shin	petal, plant, root,	herbivore, human,
		Abdomen, animal, ankle, arm, calf, chest, chin,	season, seed, shelter,	hunt, invertebrate,
		ear, elbow, eye, finger, foot, forearm, forehead,	soil, stalk, stem, tree,	limb, mammal, mouth
		hair, hand, head, hearing, human, knee, leg,	trunk, vein, wild plant,	nose, offspring,
		limb, mammal, mouth, neck, nose, pelvis, sense,	woodland.	omnivore, pet, reptile,
		shoulder, sight, skin, smell, taste, thigh, toe,		scale, sense, shell,
	A	tongue, touch, unique, upper arm, wrist.	A	sight, skin, smell, tail,
				teeth, tongue, touch,
				wild animal, wing.
Scientific Key		rve, question, record, results, venn diagram, bar cha	_	
Vocabulary	investigation, measurement, millimeter, observe, p	rediction, table, temperature, unit, volume, researd	th, block graph, instructio	ns, test.
	Observe shows a second that form a second	Seasonal Changes		
National	Observe changes across the four seasons.			
	Observa and describe weather sees sisted with the	accepted and becaute a development and a		
Curriculum Links:	Observe and describe weather associated with the	seasons and now the day length varies.		
	-The four seasons are spring, summer, autumn and	winter		
Substantive	-Certain events and weather patterns happen in dif			
Knowledge:	-Day length is longer in the summer months and sh			
Micage.	-Habitats for living things can change during the sea			
	Trabitats for living trinigs can change during the set	350115.		
	-Deciduous trees change across the four seasons			
	-Deciduous trees change across the four seasons.			
	-Deciduous trees change across the four seasonsEvergreen trees keep their leaves all year round.			
	-Evergreen trees keep their leaves all year round.			
Disciplinary	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasons.	cross the year.		
	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasonsObserve and describe how the day length varies ac	· ·		
Disciplinary Knowledge:	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasons. -Observe and describe how the day length varies according to the company of	ons.	and seasonal changes	
	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasonsObserve and describe how the day length varies acDescribe ways to stay safe in some familiar situationObserve the local environment throughout the year	· ·	and seasonal changes.	
	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasons. -Observe and describe how the day length varies accepted and the compact of	ons. ar and ask and answer questions about living things	and seasonal changes.	
	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasonsObserve and describe how the day length varies acDescribe ways to stay safe in some familiar situationObserve the local environment throughout the year -Ask simple scientific questionsUse simple equipment to measure and make obse	ons. ar and ask and answer questions about living things rvations.	and seasonal changes.	
	-Evergreen trees keep their leaves all year round. -Observe changes across the four seasons. -Observe and describe how the day length varies accepted and the compact of	ons. ar and ask and answer questions about living things rvations.	and seasonal changes.	

Key Vocabulary:	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 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.

SEATON SEADEMY

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1 Summer 2	
	Human Survival	Habitats	Uses of Materials	Plant Survival	Animal Survival	
National Curriculum links:	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.	Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different food sources. Explore and compare the difference between things that are loving, dead and things that have never been alive. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Identify and name a variety of plants and animals in their habitats, including microhabitats.	Identify and compare the suitability of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Find out and describe how plants need water, light and a suitable temperature 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. Observe and describe how seeds and bulbs grow into mature plants.	Describe how animals obtain their for plants and other animals, using the is simple food chain, and identify and redifferent food sources. Find out about and describe the basicanimals, including humans, for survive food and air). Identify and name a variety of plants animals in their habitats, including microhabitats. Notice that animals, including human offspring which grow into adults.	dea of a name ic needs of val (water,

		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.				
				1	ı	
Working Scientifically:	Children at Seaton Academy are taught to use the following practical scientific methods, process and skills through the teaching of Science. -Asking simple questions and recognizing that they can be answered in different ways. -Observing closely, using simple equipment. -Performing simple tests. -Identifying and classifying. -Using their observation and ideas to suggest answers to questions.					
	-Gathering and recording data to help in answering questions.					
	-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.	
	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	-A habitat provides	materials can be	-A bulb contains a tiny	-Habitats beyond the locality include: beaches,	
	survive.	food, water, shelter	changed by squashing,	plant and all the food	rainforests, deserts, oceans and mountains.	
	-A healthy lifestyle includes: exercise, a	and spaceLiving things are	bending, twisting, stretching, heating,	needed to growA seed is a small object	-A habitat provides food, water, shelter and space.	
	balanced diet, good	those that are alive.	cooling, mixing and	made by a plant that	-Invertebrates are animals without a backbone.	
	quality sleep and	-Dead things are those	being left to decay.	can grow into a new	-Invertebrates include: worms, molluscs,	
	personal hygiene.	that were once living	-A prediction is a best	plant.	crustaceans, insects, arachnids and myriapods.	
	-A prediction is a best	but are no longer.	guess at what might	-Seeds need water and	-An animal's habitat must provide food, water,	
	guess at what might	-Somethings have	happen in an	warmth to start	air and shelter for the animal to survive.	
	happen in an	never been alive.	investigation.	growing (germinate).	-Animals eat food that is found in their habitat.	
	investigation.	-The seven life	-Results from an	-As the plant grows	-Herbivores eat plants.	
	-Results from an	processes of living	investigation can be	bigger, it develops	-Omnivores eat plants and animals (meat).	
	investigation can be	things are: moving,	used to answer a	leaves and flowers.	-Carnivores eat other animals (meat).	

			A		
	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	

			A		
	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
Experiences:					
	Adult, aerobic exercise,	Adaptation, air,	Absorbency,	Air, bark, basal plate,	Adult, air, amphibian, arachnid, bird, birth,
Key Vocabulary:	air, balancing exercise,	amphibian, animal,	absorbent, bend,	branch, bulb,	carnivore, consumer, crustacean, egg, embryo,
L	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. mammal, metamorphosis, microhabitat. germinate/germination. migration, mollusk, myriapod, offspring, herbivore, identify. habitat, leaf, nutrient. energy, exercise, fat. natural, natural 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, shape, smooth, soft, cycle, love, lungs, predator, prev, quill, trunk, tunic, warmth, mammal, muscle, reproduction, reptile, squash, strength, water. nutrient, nutrition. stretch, stretchy, respiration. offspring, oils and sensitivity, shelter. strong, sustainability. spreads, omnivore. texture, t5ransparent. soil, space. twist, waterproof. proteins, reproduction. temperature, thorn. sense, shelter, space, warning colouration, wood. water, woodland. strengthening exercise, stretching exercise. sugar, survive, sweat, began diet, vegetarian diet, vitamin, water.

Scientific Vocabulary:

compare, conclusion, data, investigation, method, observe, prediction, question, record, research, results, block graph, describe, diagram, equipment,

ACADEMY