

## Whitestone Infant School Progression of skills in Science



Area of study	Reception	Year 1	Year 2
Plants	Understanding the world: The world Range 5 Ask questions about plants e.g., Why do flowers/seeds/bulbs grow or not grow? Develop an understanding of how plants grow. Learn about what plants need to grow (sunlight, water, soil). Talk about why plants need sun, water and soil. Show care for plants in the environment. Name the basic parts of a plant (roots, flower, stem). Explore different leaf shapes. Experience planting in the Eco garden and observing the changes over time. Range 6 Make simple observations of plants Explore change over time, for example, growing plants Explore how different conditions affect the growth of a plant/seed (Why do seeds need light to grow?) ELG: Observe and draw pictures of plants. Identify basic parts of a plant.	Identify and name a variety of common wild and garden plants (e.g. daisies, dandelions, oak, bluebell, sunflower, rose, grass, bramble, and primrose).  Identify between deciduous and evergreen trees  Name some deciduous trees (horse chestnut, birch, ash, oak)  Name some evergreen (conifer, holly, pine)  Name the petals, stem, leaf and root of a plant.  Name the leaves, branches, trunk, roots and crown of a tree.  Explore foods that are harvested.  Identify what parts of the food we eat- roots, leaves, stems etc.	Observe how seeds and bubs grow. Describe how seeds and bulbs grow into mature plants Find out, through experimentation that plants need water, light and a suitable temperature to grow and stay healthy and describe what they observe. Identify and name a variety of plants Describe how plants they are suited to different habitats.

Key	Flowers, petals, leaves, seeds, bulbs, trees,	Leaf, flower, blossom, petal, fruit, berry, root,	*Same as Year 1
Vocabulary	branch, sunflower, roses, sunlight, water, soil,	seed, trunk, branch, stem, bark, stalk, bud	
	roots, stem, grow, tall, short, plant, fruit,	Trees — oak, ash, birch, chestnut, beech,	light, shade, sun, sunlight, warm, cool, water,
		conifer, holly, pine.	grow, healthy, temperature, nutrition
		Garden plants — pansy, sunflower, rose,	
		lavender, fuchsia	
		Wild flowering plants – daisy, ivy, buttercup,	
		nettles, dandelion	
Animals	Understanding the world: The world	Identify differences between different animals.	Find out about the basic needs of animals.
including	Range 5	Identify and name a variety of common	Describe the basic needs of animals including
humans	Ask questions about animals.	animals including fish, amphibians, reptiles,	humans for survival (water, food and air).
	Develop an understanding of different types of	birds and mammals	Describe the main changes as young animals,
	animals and their features (e.g. giraffes have	Name some rainforest animals.	including humans grow into adults and draw
	long necks).	Describe how an animal is suited to its	a simple lifecycle.
	Show care for animals in the environment.	environment.	Describe the importance of exercise, balanced
	Name the basic parts of an animal.	Classify animals by what they eat.	diet and hygiene for humans.
	Range 6:	(carnivores, herbivores and omnivores)	Name some different types of food and
	Make observations of animals (watching	Sort animals by what they eat.	describe a healthy balanced meal.
	caterpillars change into butterflies)	Classify common animals (fish, amphibians,	Recap on the difference between carnivores,
	ELG:	reptiles, birds and mammals)	herbivores and omnivores.
	Make observations of animals.	Name, draw and label the basic parts of the	
	Know that animals live in different places.	human body (feet, legs, knees, arms,	
		shoulders, elbows, hands, fingers, neck, head)	
		Say which part of the body is associated with	
		each sense (sight hearing, smell, taste and	
		touch).	

Key Vocabulary	Head, body, eyes, ears, mouth, teeth, leg, arm, hands, fingers,	Head, body, eyes, ears, mouth, teeth, leg, arm, elbow, thigh, back, hands fingers, palm tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves Including parts of the body linked to RHE teaching (penis, anus, vulva, vagina)  Senses — touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue Fish, amphibians, reptiles, birds, mammals, pets, herbivore, omnivore, carnivore	Adult, develop, lifecycle, young, live young offspring, reproduction, growth, child, Young/old stages (E.g chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease food types (E.g. — meat, fish, vegetables, bread, rice, pasta)
Everyday materials	Understanding the world: The world Range 5 Comment on everyday materials. Ask questions about materials. Range 6 Investigate melting Explore water Expressive arts and design: Creating with materials Range 6 Explore changes that may be reversed (ice investigation)	Explain what material objects are made from and group them. (e.g. a chair is made from plastic)  Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock  Describe some everyday materials.  Explain why a material might be useful for a specific job.  Describe the simple physical properties of a variety of everyday materials e.g. hard/soft; stretchy/stiff; shiny/dull; rough/smooth; waterproof/not waterproof; bendy/not bendy; absorbent/not absorbent; opaque/transparent.  Sort materials into groups on the basis of their simple physical properties.	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.
Key Vocabulary	Touch, shiny, hard, rough, soft, smooth, pour, drip, full, empty, cold, freezing, slippery	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough,	Names of materials — wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials — as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting,

		smooth, shiny, dull, see-through, not see- through	squash/squashing, bend/bending, stretch/stretching Materials, suitability, properties
Seasonal changes	Understanding the world: The world Range 6 Go for walks in the different seasons and make observations about what they see, feel and hear and the changes they notice Explore the weather every day	Observe changes across the four seasons Name the four seasons. Observe and describe weather associated with the 4 seasons. Identify the months in each season. Explain how day length varies in each season. Talk about the changes in each season. Explore the purpose of a weather station.	
Key Vocabulary	Weather (Sunny, rainy windy, snowy, thunderstorm, hail, fog, cloudy, drizzle) Seasons (winter, summer, spring, autumn) Day, dark, light, night, moon	Weather, (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn) Sun, sunrise, sunset, day length, shorter, longer, darker, lighter, day, night,	
Living things and their habitats	Communication and Language: Understanding Range 5 Begin to understand why and how questions Understanding the world: The world Range 5 Ask questions about living things. Ask questions about where animals live. Show care and concern for living things and the environment.		Identify and group whether things are alive, dead, and or have never lived.  Sort and classify living and non-living creatures.  Explore what some creatures eat.  Explore and compare differences between things that are living, dead and things that have never lived.  Identify that most living things live in habitats to which they are suited  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 get their food from plants and other animals. Learn about food chains. Use simple food chains to describe relationships of living things. Identify and name different sources of food. Learn about Owls. Make a micro-habitat. Explore what nocturnal animals are.
		Learn about an owl's habitat and explore an owl's lifecycle.
Key Vocabulary	Where, what, why, how, who	living, dead, never living, energy, food, food chain, predator, prey, habitat, micro-habitat, depend, survive, survival, grow, reproduce Habitats — woodland, coastal, rainforest,
		arctic, dessert, ocean, river, mountain Microhabitats — short grass, flowers, under leaves, in and on soil Conditions: hot/warm/cold dry/damp/wet bright/shade/dark