Dimple Well Infant School and Nursery Science Long Term Plan

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**All About Me** **Autumn**	**Light & Dark**	**Winter**	**Animal growth**	**Plant Growth** **Keeping Healthy**	**Sports-keeping healthy**
Upper Foundation	**Food and harvest**	**Celebrations**	**Houses and winter**	**All about me**	**Pets and animals**	**Journeys**
EYFS **Understanding the World** **Early Learning Goals**	• Know about similarities and differences in relation to places, objects, materials and living things. • Talk about the features of their own immediate environment and how environments might vary from one another. • Make observations of animals and plants and explain why some things occur, and talk about changes.					
Year 1	**Animal groups**	**Humans**	**Materials**	**Plants**	**Materials**	**Hungry animals**
Year 1 **National Curriculum** **Science Objectives**	• Identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals. • Describe and compare the structure of a variety of animals	• Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense.	• Distinguish between an object and the material from which it is made. • Identify and name variety of everyday materials	• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. • Identify and describe the basic structure of	• Compare and group together a variety of everyday materials on the basis of their simple physical properties.	• Identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of common

	including fish, amphibians, reptiles, birds and mammals.		including wood, plastic, glass, metal, water and rock. • Describe the simple physical properties of a variety of everyday materials.	a variety of common flowering plants, including trees.		animals that are carnivores, herbivores and omnivores
Year 1 **Knowledge** **I can statements**	• I can name a range of common animals from each of the vertebrate groups (mammals, reptiles, amphibians, fish and birds). • I can describe the key features of these named animals. • I can label key features on a picture/diagram.	• I can follow instructions involving parts of the body. • I can label parts of the body on pictures and diagrams. • I can explore objects using different senses.	• I can label a picture or diagram of an object made from different materials. • I can describe the properties of different materials.	• I can name trees and other plants that they see regularly. • I can describe some of the key features of these trees and plants e.g. the shape of the leaves, the colour of the flower/blossom. • I can point out trees which lost their leaves and those that kept them the whole year. • I can point to and name the parts of a plant, recognising that they are not always the same e.g. leaves and stems may not be green.	• I can label a picture or diagram of an object made from different materials. • I can describe the properties of different materials.	• I can describe what a range of animals eat.

Year 1 **Working scientifically** **I can statements**	• I can sort and group animals using similarities and differences. • I can use first-hand close observations to make detailed drawings • I can talk about my findings from investigations using appropriate vocabulary.	• I can name body parts correctly when talking about measurements and comparisons e.g. “My arm is x straws long.” “My arm is x straws long and my leg is y straws long. My leg is longer than my arm.” “We both have hands, but his are bigger than mine.” “These people have brown eyes and these have blue.”	• I can sort objects and materials using a range of properties • I can choose an appropriate method for testing an object for a particular property • I can use test evidence to answer the questions about properties e.g. “Which cloth is the most absorbent for my puppy’s bed?”	• I can sort and group parts of plants using similarities and differences. · I can use simple charts etc. to identify plants · Can collect information on features that change during the year. · I can use photographs to talk about how plants change over time.	• I can choose an appropriate method for testing an object for a particular property • I can use test evidence to answer the questions about properties e.g. “Which material will be the best for Traction Man’s suit?”	• I can use secondary resources to find out what animals eat.

Year 1 Key vocabulary	head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves … names of animals experienced from each vertebrate group	arm, back, foot, hand, neck, brain, thumb, nose, ear, shoulder, hips, nose, face, eyes, lips, tongue, head, brain, bones, knee, elbow, chin … senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, eat and tongue	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, smooth, shiny, dull, see-through, not see-through	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud names of trees in the local area names of garden and wild flowering plants in the local area	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, smooth, shiny, dull, see-through, not see-through	carnivores (examples: tigers, lions, wolves, sharks…) herbivores (examples: sheep, cow, deer, squirrels, rabbits, elephants, caterpillars) omnivores (examples: human beings, grizzly bears, ants, badgers)
Year 1 Seasonal change (targeted termly)	• I can name the four seasons and identify when in the year they occur. • I can describe weather in different seasons over a year. • I can describe days as being longer (in time) in the summer and shorter in the winter. • I can describe other features that change through the year. <u>Key vocabulary</u> • weather (sunny, rainy, windy, snowy etc.) • Seasons (winter, summer, spring, autumn) • Sun, sunrise, sunset, day length					

Year 2	Marvellous Materials		Plant Power		Amazing Animals	
	Materials	**Dead, Living, Never Lived**	**Plant Survival**	**Plant Habitats**	**Food Chains**	**Animal Habitats**
Year 2 National Curriculum Science Objectives	• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular use. • 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 the basic needs of animals, including humans, for survival (water, food and air). • Explore and compare the differences between things that are living, dead, and things that have never been alive.	• 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.	• 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. • Notice that animals, including humans, have offspring which grow into adults. • Describe the importance of humans of exercise, eating the right amounts of different types of food and hygiene.	• 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.
Year 2 Knowledge I can	• I can name an object, say what material it is made from, identify its properties and make a **link** between the	• I can state the basic needs of animals, including humans, for survival.	• I can describe how plants that I have grown from seeds and bulbs have developed over	• I can name a range of plants that live in a habitat and micro-habitats	• I can construct a food chain that starts with a plant and has the arrows	• I can name a range of animals that live in a habitat and micro-habitats

statements	**properties** and a particular **use.** • I can identify what properties a suitable material needs to have (for a given object). • I can describe the **action** used whilst **changing the shape** of an object. • I can use the words **flexible and/or stretchy** to describe materials that can be changed in shape and stiff and/or rigid for those that cannot. • I can recognise that a material may come in different forms which have different properties	• I can find a range of items outside that are living, dead and never lived. • I can use the understanding that an object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive (ignoring that plastics are made of fossil fuels).	time. • I can identify plants that grow well in different conditions.	that they have studied. • I can talk about how the features of these plants make them suitable to the habitat.	pointing in the correct direction. • I can describe how animals, including humans, have offspring which grow into adults. • I can state the importance for humans of exercise eating the right amounts of different types of food, and hygiene. • I can name foods in each section of the main food groups.	that they have studied. • I can talk about how the features of these animals make them suitable to the habitat. • I can talk about what the animals eat in a habitat.

Year 2 **Working scientifically** **I can statements**	• I can sort materials using a range of properties. • I can explain using the key properties why a material is suitable or not suitable for a purpose. • I can begin to choose an appropriate method for testing a material for a particular property. • I can use test evidence to select appropriate material for a purpose e.g.	• I can sort into living, dead and never lived.	• I can make close observations of seeds and bulbs. • I can classify seeds and bulbs. • I can make close observations and measurements of plants. growing from seeds and bulbs. • I can make comparisons between plants as they grow.	• I can give key features that mean the plant is suited to its micro-habitat. • I can explain in simple terms why a plant is suited to a habitat e.g. the seaweed on the beach cannot live in a pond. because it is not salty.	• I can explain what animals eat - using a food chain. • I can describe, including using diagrams, the life cycle of some animals, including humans. • I can explain how development and health might be affected by differing conditions and needs being met/not met.	• I can give key features that mean the animal is suited to its micro-habitat. • I can explain in simple terms why an animal is suited to a habitat e.g. the caterpillar cannot live under the soil like a worm as it needs fresh leaves to eat.
Year 2 Vocabulary	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/puling, twist/twisting,	living, dead, never been alive, suited, suitable	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud names of trees in the local area names of garden and wild flowering plants in the local area	living, dead, never been alive, suited, suitable, basic needs, names habitat e.g. pond, woodland etc. names of micro habitats e.g. under logs, in bushes etc.	offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly) , exercise, heartbeat, breathing, hygiene, germs, disease,	living, dead, never been alive, suited, suitable, basic needs names of local habitats e.g. pond, woodland etc. names of micro habitats e.g. under logs, in bushes etc.

	squash/squashing, bend/bending, stretch/stretching		(Year 1) light, shade, sun, warm, cool, water, grow, healthy		food types (examples – meat, fish, vegetables, bread, rice, pasta)food, food chain, shelter, move, feed, predator, prey	