Knowledge and Skills Progression – Science
(Nature)

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Identification and classification	Plants and trees are living things. Care for growing seeds and plants and describe observable features of different types of plants and trees. Animals are living things. There are lots of different types of animals. Pets are animals. Name a variety of domestic and wild animals.	Plants and trees are living things. They can be identified according to their features, such as leaves, seeds and flowers. Begin to name and group plants and trees according to their observable features. Animals are living things. There are different types of animal. Parent and baby mammals include cow and calf, sheep and lamb, and cat and kitten. Parent and baby birds include duck and duckling, chicken and chick, and goose and	Plants are living things. Common plants include the daisy, daffodil and grass. Trees are large, woody plants and are either evergreen or deciduous. Trees that lose their leaves in the autumn are called deciduous trees. Examples include oak, beech and rowan. Trees that shed old leaves and grow new leaves all year round are called evergreen trees. Examples include holly and pine. Identify, compare, group and sort a variety of common wild and garden plants, including deciduous and evergreen trees, based on observable	Animals have offspring that grow into adults. Different animals have different stages of growth or life cycles. Describe the basic life cycles of some familiar animals (egg, caterpillar, pupa, butterfly; egg, chick, chicken; spawn, tadpole, froglet, frog). A habitat is a place where a living thing lives. A microhabitat is a very small habitat. Identify and name a variety of plants and animals in a range of habitats and microhabitats.	Some animals have skeletons for support, movement and protection. Endoskeletons are those found inside some animals, such as humans, cats and horses. Exoskeletons are those found on the outside of some animals, such as beetles and flies. Some animals have no skeleton, such as slugs and jellyfish. Identify and group animals that have no skeleton, an internal skeleton (endoskeleton) and an external skeleton (exoskeleton).	Scientists classify living things according to shared characteristics. Animals can be divided into six main groups: mammals, reptiles, amphibians, birds, fish and invertebrates. These groups can be further subdivided. Classification keys are scientific tools that aid the identification of living things. Compare, sort and group living things from a range of environments, in a variety of ways, based on observable features and behaviour.	Flowering plants reproduce sexually. The flower is essential for sexual reproduction. Other plants reproduce asexually. Bulbs, corms and rhizomes are some parts used in asexual reproduction in plants. Group and sort plants by how they reproduce.	Classification keys help us identify living things based on their physical characteristics. Use and construct classification systems to identify animals and plants from a range of habitats. Scientists classify living organisms into broad groups according to their characteristics. Vertebrates are an example of a classification group. There are a number of ranks, or levels, within the biological classification system. The first rank is called a kingdom, the second a phylum, then class, order, family, genus and species. Classify living things, including microorganisms, animals and plants, into groups according to common observable characteristics and

		gosling. Match animals to their young.	features. Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians, reptiles, birds, invertebrates and mammals. Identify, compare, group and sort a variety of common animals, including fish, amphibians, reptiles, birds, invertebrates and mammals, based on observable features.					based on similarities and differences.
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Parts and functions	Parts of a plant include flower, petal, leaf and stem. Begin to talk about and draw plants with attention to their parts. Animals have some similar and some different body parts.	Parts of plants and trees include trunk, branch, twig, roots, stem, flowers and leaves. Name and describe basic features of plants and trees. Different animal groups have some common	The basic plant parts include root, stem, leaf, flower, petal, fruit, seed and bulb. Trees have a woody stem called a trunk. Label and describe the basic structure of a variety of common plants. Different animal groups have some common body parts,	Plants need water, light and a suitable temperature to grow and stay healthy. Without any one of these things, they will die. Describe how plants need water, light and a suitable temperature to grow and stay healthy.	Water is transported in plants from the roots, through the stem and to the leaves, through tiny tubes called xylem. Investigate how water is transported within plants. The plant's roots anchor the plant in the ground and transport water and minerals	There are four different types of teeth: incisors, canines, premolars and molars. Incisors are used for cutting. Canines are used for tearing. Premolars and molars are used for grinding and chewing. Carnivores, herbivores and omnivores have characteristic types of teeth. Herbivores have	Parts of a flower include the stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal. Pollination is when the male part of a plant (pollen) is carried, by wind, insects or other animals, to the female part of the plant (carpel). The pollen travels to the ovary,	Animals that sexually reproduce generate new offspring of the same kind by combining the genetic material of two individuals. Each offspring inherits two of every gene, one from the female parent and one from the male parent. Identify that living things produce offspring of the same kind, although the

	Begin to talk about and name the body parts of common animals, including pets.	body parts, such as birds have wings and fish have fins. Identify common features for different groups of animals, including wild and domestic animals.	such as eyes and a mouth, and some different body parts, such as fins or wings. Label and describe the basic structures of a variety of common animals, including fish, amphibians, reptiles, birds and mammals.		from the ground to the plant. The stem (or trunk) support the plant above the ground. The leaves collect energy from the Sun and make food for the plant. Flowers make seeds to produce new plants. Name and describe the functions of the different parts of flowering plants (roots, stem, leaves and flowers).	many large molars for grinding plant material. Carnivores have large canines for killing their prey and tearing meat. Identify the four different types of teeth in humans and other animals, and describe their functions.	where it fertilises the ovules (eggs). Seeds are then produced, which disperse far away from the parent plant and grow new plants. Label and draw the parts of a flower involved in sexual reproduction in plants (stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal).	offspring are not identical to either parent. Animals and plants can be bred to produce offspring with specific and desired characteristics. This is called selective breeding. Examples include cows that produce large quantities of milk or crops that are disease-resistant. Describe how animals and plants can be bred to produce offspring with specific and desired characteristics (selective breeding).
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Nutrition	Animals, including pets, eat different kinds of foods. Describe what a familiar animal or pet eats.	Animals eat different kinds of food, including other animals, plants or both animals and plants. Match animals to the foods that they eat.	Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants. Group and sort a variety of common animals based on the foods they eat.	Food chains show how living things depend on one another for food. All food chains start with a plant, followed by animals that either eat the plant or other animals. Interpret and construct simple food chains to describe how living things depend on each other as a source of food.	Animals cannot make their own food and need to get nutrition from the food they eat. Carnivores get their nutrition from eating other animals. Herbivores get their nutrition from plants. Omnivores get their nutrition from eating a combination of both plants and other animals. Compare and	Food chains show what animals eat within a habitat and how energy is passed on over time. All food chains start with a producer, which is typically a green plant. The producer is eaten by a primary consumer (prey), which is eaten by a secondary consumer (prey), which is eaten by a tertiary consumer. All food chains end	Population changes in a habitat can have significant consequences for food chains and webs. Describe, using their knowledge of food chains and webs, what could happen if a habitat had a living thing removed or introduced.	The role of the circulatory system is to transport oxygen, water and nutrients around the body. They are transported in blood and delivered to where they are needed. Explain that the circulatory system in animals transports oxygen, water and nutrients around the body.

					contrast the diets of different animals.	with a top or apex predator. Changes within a food chain, such as an abundance or lack of one food type, have an impact on the entire food chain. Construct and interpret a variety of food chains and webs to show interdependence and how energy is passed on over time.		
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Survival	Plants and animals are living things. They need food and water to survive. Begin to talk about ways to care for a plant or animal.	Plants and animals are living things. Plants need water, sunlight and air to survive. Animals need food, water, air and shelter to survive. Describe some ways that plants or animals should be cared for in order for them to survive.	Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. Describe how to care for plants and animals, including pets.	Animals need water, food, air and shelter to survive. Their habitat must provide all these things. Explain how animals, including humans, need water, food, air and shelter to survive.	Plants need air, light, water, minerals from the soil and room to grow, in order to survive. Different plants have different needs depending on their habitat. Examples include cacti, which need less water than is typical, and ferns, which can grow in lower light levels. Describe the requirements of plants for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant.	An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their habitat, they are at risk of becoming extinct. Explain how adaptations help living things to survive in their habitat.	Reproduction is the process of producing offspring and is essential for the continued survival of a species. There are two types of reproduction: sexual and asexual. Sexual reproduction involves two parents (one female and one male) and produces offspring that are different from the parents. Asexual reproduction involves one parent and produces offspring that is identical to the parent. Describe	An adaptation is a physical or behavioural trait that allows a living thing to survive and fill an ecological niche. Adaptations evolve by natural selection. Favourable traits help an organism survive and pass on their genes to subsequent generations. Identify how animals and plants are adapted to suit their environment, such as giraffes having long necks for feeding, and that adaptations may lead to evolution.

							the life process of reproduction in some plants and animals.	