Curriculum Skills and Progression Map
Science – Biology

Key Concepts:

Living Things and their Habitats

Animal including Humans

Evolution and Inheritance

Plants

Organisation of knowledge	Working scientifically	Plants	Animals including humans	Everyday materials	Seasonal changes
Relevant ELG	**ELG: Listening, Attention and Understanding** - Make comments about what they have heard and ask questions to clarify their understanding. **ELG: Fine motor skills** - Use a range of small tools, including scissors, paint brushes and cutlery. **ELG: Building Relationships** Work and play cooperatively and take turns with others.	**ELG: The Natural World** - Explore the natural world around them, making observations and drawing pictures of plants and animals. - 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: Speaking** Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.		**ELG: The Natural World** - Understand some important processes and changes in the natural world, including the seasons and changing states of matter. **ELG: Speaking** Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.	
Vocabulary: seasons, change, senses, touch, sight, hearing, taste, smell, life cycle, roots, leaves, soil, water, floating, sinking.					
KS1 readiness objectives	To feel confident to answer simple questions about observable properties of objects and people, animals and plants around them To compare objects in their environment and talk about similarities and differences To ask questions about the world around them, and seek to find their own answers	To know what a plant is To know what a flower is To know where you see plants To describe different plants and flowers	To know what an animal is To recognise and name a variety of different animals To know the names of different body parts of humans and animals they have experience of	To recognise that different everyday objects are made from different materials To describe how different objects look and feel	To know about different types of weather To observe changes in trees and plants as the seasons progress

Programmes of study **Year 1**	With PLANTS pupils should be taught to: □ 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. With ANIMALS INCLUDING HUMANS pupils should be taught to: □ 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.
Progressive objectives	The child can identify and name a range of local plants. The child can name parts of a range of familiar plants. The child can compare and contrast a collection of items, sorting into categories: 'living', 'dead' and 'things that have never been alive'. The child can identify and name a number of common animals. The child can identify and group a range of familiar animals. The child can identify key features of a range of common animals. The child can relate each of the human senses to organs.
Assessment opportunities	Can the child answer the Biq Question: Plants -Can I identify the basic structure of common plants? Animals Including Humans – Can I group animals based on their similar features and diets?
Vocabulary	**PLANTS:** fruit, vegetable, bulb, seed, leaf, root, branches, trunk, tree, evergreen, deciduous, petals, blossom, flower, bud, stem, wild plants, garden plants **ANIMALS INCLUDING HUMANS:** carnivores- meat eaters, herbivores- plant eaters, omnivores, smell, taste, vision, touch, hearing, amphibians, birds, reptiles, mammals, fish

Programmes of study **Year 2**	With PLANTS, pupils should be taught to: □ 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. With ANIMALS INCLUDING HUMANS, pupils should be taught to: □ 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. With LIVING THINGS AND THEIR HABITATS, pupils should be taught to: □ 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 and plants, and how they depend on each other. □ identify and name a variety of plants and animals in their habitats, including micro- habitats. □ 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.
Progressive objectives	The child can explore and identify what plants need to thrive. The child can describe stages of development of a full grown plant. The child can describe the relationship between adult animals and their offspring. The child can identify human's basic needs. The child can describe the importance of a healthy diet and exercise. The child can explain how, for a named animal or plant, it gets what it needs from its habitat and other living things that are there. The child can identify a range of living things in habitats of various sizes. The child can construct a simple food chain and identify what is eating what.
Assessment opportunities	Can the child answer the Big Question: Plants - What are the stages of a plants life cycle? What does a plant need to grow well? Animals Including Humans – What are the stages of an animal and a human lifestyle and how do different animals change as they get older? Living Things and their Habitats – Where do different animals live and why do they live there? How do certain living things depend on each other?
Vocabulary	**PLANTS:** As previous year plus: disperse, flowering plant, pollen, nectar, scent germination, pollination, reproduce, germinate, sprout, energy **ANIMALS INCLUDING HUMANS:** As previous year plus: egg, caterpillar, pupa, butterfly, offspring, grow, reproduce, baby, toddler, child, teenager, adult, elderly, want, need, survive, water, air, shelter, dairy, carbohydrate, protein, fats, sugar, fruit, vegetables, balanced diet **LIVING THINGS AND THEIR HABITAT:** living, dead, never alive, habitat, seashore, woodland, ocean, coastal, micro- habitat, ocean, rainforest, conditions, features, food chain, producer, consumer,

Programmes of study **Year 3**	With **PLANTS,** pupils should be taught to: □ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers □ explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant □ investigate the way in which water is transported within plants □ explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. With **ANIMALS INCLUDING HUMANS**, pupils should be taught to: □ identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat □ identify that humans and some other animals have skeletons and muscles for support, protection and movement
Progressive objectives	The child can explain what all plants need to flourish and recognise how these requirements vary in amount. The child can describe what each part of a flowering plant does. The child can explain, with the aid of a diagram or plant, how water is carried up from the soil. The child can explain how pollination, seed formation and seed dispersal play a role in the reproduction of flowering plants. The child can describe why animals, including humans, depend on the correct nutrition. The child can explain which parts of the skeleton provide support and protection, and how they allow for movement.
Assessment opportunities	Can the child answer the Big Question: Plants - Can I explain the functions of the different parts of the plant? Animals Including Humans - What is a skeleton and what are its functions?
Vocabulary	**PLANTS:** As previous years plus: common wild plants **ANIMALS INCLUDING HUMANS:** As previous year plus: nutrition, nutrients, fibre, vitamins, minerals, skeleton, bones, joints, endoskeleton, exoskeleton, hydrostatic skeleton, vertebrate, invertebrate contract, relax, muscles, ball joint, socket joint, hinge joint, gliding joint

Programmes of study **Year 4**	With LIVING THINGS AND THEIR HABITATS, pupils should be taught to: □ recognise that living things can be grouped in a variety of ways □ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment □ recognise that environments can change and that this can sometimes pose dangers to living things. With ANIMALS INCLUDING HUMANS, pupils should be taught to: □ describe the simple functions of the basic parts of the digestive system in humans □ identify the different types of teeth in humans and their simple functions □ construct and interpret a variety of food chains, identifying producers, predators and prey.
Progressive objectives	The child can suggest different ways of sorting the same group of living things, e.g. grouping birds according to where they live, what they eat and size of adults. The child can use classification keys to group and identify members from a range of familiar and less familiar living things. The child can describe examples of living things that are threatened by changes to environments, e.g. owls and habitat loss. The child can identify what each of the principal organs in the digestive system do. The child can describe the function of each type of tooth in the humans skull. The child can use a food chain to represent predator-prey relationships.
Assessment opportunities	Can the child answer the Big Question: Living Things and Their Habitats – Can I use a classification key to sort livings things based on their characteristics? How can we stop dangers to endangered animals? Animals Including Humans – How do humans and living things digest food and what happens to it?
Vocabulary	**LIVING THINGS AND THEIR HABITATS**: As previous Year (2) plus: environment, flowering/non-flowering (including mosses and ferns) plants, animals, vertebrates, invertebrates, fish, amphibians, reptiles, birds, mammals, snails, slugs, worms, spiders, insects, human impact, garden ponds, deforestation, classification key **ANIMALS INCLUDING HUMANS:** As previous years plus: digestion, mouth, teeth, tongue, saliva, oesophagus, stomach, gastric juices, enzyme, small intestine, bile, large intestine, rectum, incisors, cut, slice, canines, molars, pre-molars, crush, grind

Programmes of study **Year5**	With ANIMALS INCLUDING HUMANS, pupils should be taught to: □ describe the changes as humans develop to old age. With LIVING THINGS AND THEIR HABITATS, pupils should be taught to: □ describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird □ describe the life process of reproduction in some plants and animals
Progressive objectives	The child can identify similarities and differences in two different life cycles, e.g. sparrow and butterfly, with reference to eggs and intermediate stages. The child can describe the changes as humans develop to old age, e.g. trends in changes to size, weight, mobility etc. The child can describe in sequence the stages of reproduction in some plants and animals, e.g. dog and a thistle.
Assessment opportunities	Can the child answer the Big Question: Animals Including Humans – How do humans change as they change as they develop to old age? Living Things and their Habitats – How are life cycles of mammals, amphibians, birds and insects similar and different?
Vocabulary	**ANIMALS INCLUDING HUMANS:** As previous year (2) plus: life cycle, gestation, growth, foetus, fertilisation, childhood, old age, life expectancy, adolescence, adulthood, early adulthood, middle adulthood, late adulthood. **LIVING THINGS AND THEIR HABITATS:** As previous year plus: life cycle, life process of reproduction, sexual, asexual, naturalists, animal behaviourist, rainforest, oceans deserts

Programmes of study **Year 6**	With LIVING THINGS AND THEIR HABITATS, pupils should be taught to: □ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals □ give reasons for classifying plants and animals based on specific characteristics. With ANIMALS INCLUDING HUMANS, pupils should be taught to: □ identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood □ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function □ describe the ways in which nutrients and water are transported within animals, including humans. WITH EVOLUTION AND INHERITANCE pupils should be taught to : □ recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. □ recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents □ identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
Progressive objectives	The child can use similarities and differences in observable features to decide how living things should be grouped, e.g. a cat is a mammal because it is warm blooded and gives birth to live young. The child can explain why certain features are useful in classifying living things, e.g. backbones in animals and flowers in plants. The child can describe what heart, blood vessels and blood do, e.g. carry oxygen to all parts of the body. The child can suggest how their bodies are affected by substances and actions, e.g. that a high fat diet coupled with little exercise is likely to lead to obesity. The child can describe with aid of diagrams the route that water takes within animals, e.g. through the human body. The child can use fossils as evidence that living things have changed over time, e.g. explain that these have died out and others have taken their place. The child can recognise that offspring normally vary from each other and from their parents, e.g. that puppies vary from each other and from their parents. The child can describe examples of a living thing that has adapted to live in a particular habitat and evolved as a result, e.g. a polar bear or cactus.
Assessment opportunities	Can the child answer the Big Question: Living Things and Their Habitats – How are living things classified into groups? Animals Including Humans – What are the functions of the skeletal, digestive and circulatory systems in the body? Evolution and Inheritance – How do animals adapt to their environment? How does natural selection occur?

Vocabulary	**LIVING THINGS AND THEIR HABITATS**: As previous year (4) plus: classification, Linnaean system, Carl Linnaeus, taxonomy, taxonomist, domain, kingdom, phylum, class, order, family, genus, species, characteristics, micro-organisms. **ANIMALS INCLUDING HUMANS:** As previous year (4) plus: internal organs, heart, lungs, liver, kidney brain, skeletal system, digestive system, circulatory system, blood vessels, blood, impact of diet and exercise, lifestyle, drugs, substances alcohol. **EVOLUTION AND INHERITANCE:** offspring, inheritance, variations, characteristics, adaptation, habitat, environment, evolution, natural selection, fossil, adaptive traits, inherited traits.