Kingsland School

Natural Sciences: Progression Map

Subject–specific curriculum

Key Vocabulary is identified in **bold.** This is the typical vocabulary teachers will use in lessons. Some of this vocabulary may be used by pupils whose expressive language is at an appropriate level, but the expectation of pupils to do this will be judged by teachers with the overall communication needs of each pupil in mind. The aim is to support pupils to understand some of this vocabulary over time.

NB. Whilst the coverage of knowledge & skills is the same between the SLD and subject-specific SCERTS curriculum pathways, SCERTS natural sciences teaching will often be within a functional context in line with the overall aims and approaches of subject-specific SCERTS-based teaching.

Natural Sciences progression map:– subject-specific curriculum **Plants**

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Use the senses to explore a range of **plants** (including **trees)** using first hand experiences, images and videos ♦ Observe the **growth** of **plants, flowers, vegetables and seeds** ♦ Explore different plant parts including **leaves, flowers, petals, roots, bulb and stem** ♦ Observe how plants change over a **season**	♦ Identify and name a variety of common **plants** ♦ Explore the requirements of plants for **life** and **growth** e.g. **water** & **sunlight**, and what happens to a plant if these are removed ♦ **Group, sort** and **classify** a variety of common plants e.g. by size, colour, shape etc. ♦ Understand that **plants** change throughout the year and that this is called a **life cycle** ♦ Perform simple **tests** e.g. **observe** & **investigate** what happens when a healthy plant is placed in the dark for a period of time	♦ Identify and name a variety of common **plant** parts ♦ Identify the functions of different parts of **plants**—e.g. the brightly coloured petals attract insects, the roots hold the plant in the soil and help it take up **water** and **food** (nutrients) ♦ Use a wide range of techniques and devices to **record** what they did or observed, and answer questions about this e.g. where plants are found ♦ Make a suggestion about what to do or change during a **test,** and know how to conduct a simple **fair test** ♦ Make a **prediction** about what might happen e.g. *I think the plant in the dark will die* ♦ **Measure** changes e.g. use standard or non-standard measurement to record the growth of a plant or seed ♦ Suggest how some **plants** may adapt over time in order to survive in their surroundings e.g. cacti in a dessert

Natural Sciences progression map:– subject-specific curriculum **Animals including humans**

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Use the senses to explore a range of common **animals** (which may include examples of **birds, fish, amphibians, reptiles and mammals)** using images, videos and where possible first-hand experiences ♦ Use a range of methods to label the main body parts of the **human body** e.g. use songs such as '**head, shoulders, knees** and **toes'** or a computer programme to drag labels to various **body** parts. ♦ Explore what different **animals eat** including **humans** and **pets** ♦ Observe through video, photographs and first hand experience how **animals**, including **humans**, move and grow	♦ Identify, name and group a variety of common animals that may include examples of **birds, fish and mammals.** ♦ Become familiar with names for a wider range of human parts such as parts of the face & begin to recognise animal parts e.g. **fur, feathers and claws** ♦ Begin to understand the importance of **exercise** and a well-**balanced diet** for humans ♦ Be able to match animals to their **young** and understand that they grow into **adults**.	♦ **Observe**, **measure** and **compare** the e.g. comparing the height of peers at the beginning and end of the school year. ♦ Use a wide range of techniques and devices to **record** what they did or observed, and answer questions about this e.g. using prepared charts, tables and diagrams, communication devices & iPads. ♦ Describe the basic needs of animals, including **humans**, for survival (**food, water** and **air)** ♦ Compare the **diets** of different animals e.g. those that eat meat, plants or both ♦ **Predict** what might happen e.g. a bird might fly away or a person might feel out of breath after exercise. ♦ Use books, images and internet searches to find out about animals that cannot be observed first hand

Natural Sciences progression map:– subject-specific curriculum **Living things & their habitats**

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Explore and locate **plants** and **living** things in different **habitats** within the local area or school grounds e.g. the woodlands and the sensory garden or their garden at home/ local park. ♦ Explore and respond to stimuli related to **habitats** in different ways e.g. feel underneath stones, feel leaves ♦ Investigate different sources of **food** for **animals** in the local **environment** e.g. what does a bird eat? what does a spider eat?	♦ **Sort** and **group** photographs or pictures of plants and animals in different ways e.g. by colour, number of legs etc. ♦ Become familiar with the term '**habitat'** ♦ Contrast local **habitats** by exploring images and resources from less familiar habitats such as the seashore or rainforest ♦ Observe and explore how l**iving things** depend on each other for example the bird relies on the worm for food, the bee relies on the nectar to produce honey. ♦ **Observe** and **record** changes in plants and animals over time e,g. how frogspawn develops into a frog or how an egg becomes a chicken.	♦ Become familiar with the term '**micro habitat'** ♦ Ask and respond to questions about what they did or saw using appropriate communication methods ♦ Perform simple **investigations** e.g. go on a treasure hunt and then sort objects into living/non-living ♦ Make a suggestion about what to do or change during an **investigation** ♦ Make a **prediction** about what might happen e.g. *I think there will be more worms in the wet soil* ♦ **Observe** and **measure** changes e.g. *the froglet began to grow legs so it could spend time in the water and on the land when it developed into a frog*

Natural Sciences progression map:– subject-specific curriculum **Seasonal changes**

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Experience different types of **weather** and observe **changes** on a daily basis. ♦ Use first hand observations, photographs and videos to observe and explore changes in familiar areas throughout the **seasons** e.g. record how the same **tree** changes during the 4 seasons. ♦ Explore & respond to stimuli related to season changes *e.g. green **leaves** & dry/brown **leaves**; wet & dry **soil***	♦ Use their emerging understanding of the **seasons** to make suggestions *e.g. what to wear in different types of **weather** or what they might expect to see outside in **winter**.* ♦ Observe & replicate **patterns** in **nature** *e.g. the stripes of a zebra, the growth lines of a tree trunk or the cells in honeycomb.* ♦ Begin to make **observations** and suggestions regarding how the **seasons** affect **wildlife, humans** and **plant life** e.g. leaves turn brown in Autumn and fall from the trees, or some animals hibernate for the winter.	♦ Use a wide range of techniques and devices to **record** what they did or observed, and answer questions about this *e.g. using prepared charts, tables and diagrams, communication devices & iPads.* ♦ Perform a simple **investigation** *e.g. investigating whether it **rains** more in **April** than it does it **August*** ♦ Make a suggestion about what to do or change during a **test,** and know how to conduct a simple **fair test** ♦ Make a **prediction** about what might happen e.g. *I think the weather **tomorrow** will be sunny* ♦ **Observe** and **measure** changes *e.g. measuring daily **changes** in **temperature***

Natural Science progression map:– subject-specific curriculum

Key vocabulary by topic

Plants	**Animals including humans**	**Living things & their habitats**	**Seasonal changes**
Seeds, bulbs, plant, tree, leaves, flowers (blossom), petals, fruit, roots, trunk, branches, stem. Water, temperature, light, growth, air, soil	Fish, reptiles, mammals, birds, amphibians Leg, arm, elbow, head, ear, nose, back, wings, beak, skin, fur, feathers, bones, muscles, skeleton, mouth, tongue, teeth Water, air, food, adult, baby, offspring, reproduce, kitten, calf, puppy, exercise, hygiene, movement (Herbivore, carnivore, omni-vore)	Living, dead, habitat, food chain, life cycle, woodland, pond, dessert, ocean, river Fish, amphibians, reptiles, birds, mammals, (vertebrates/ invertebrates) Snails, slugs, worms, spiders, insects, Environment, habitat, micro habitat Predator, prey	Seasons, Spring, Summer, Autumn, Winter Months of the year/ days of the week Weather—sun, rain, cloud, snow, fog, ice, lightning, thunder, rainbow, hot, warm, cold Day, night, moon, stars, light, dark