Science – Living things and their habitats – Year 2 and Year 4

Year 2 NC - pupils should be taught to:	How we do this in Year 2	Year 2 Vocabulary	Year 4 NC - pupils should be taught to:	How we do this in Year 4	Year 4 Vocabulary
Explore and compare the differences between things that are living, dead, and things that have never been alive <u>How working scientifically can be met</u> • identifying and sorting • give reasons	Discuss things that we do that let us know that we are alive. Introduce the seven life processes, giving examples of how these processes appear in plants and animals. Sort 'Living' and 'Non-Living' cards, giving reasons for choices. Sort 'Dead' and 'Never Alive' cards, giving reasons for choices. Identify living, dead, or have never been alive, and give reasons for their answers. Draw out answers that focus on the presence or absence of life processes, and in the case of the pine cone, what has changed now that it is no longer a part of the tree.	Life process, living, non-living, dead, never alive, movement, respiration, sensitivity, growth, reproduction, excretion, nutrition.	Recognise that living things can be grouped in a variety of ways <u>How working scientifically can be met</u> • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • use a range of methods to sort	Revisit the characteristics that are shared by all living organisms. Demonstrate that living things can be grouped together in a number of different ways based on their similarities and differences, and that we can organise them into diagrams to help us. Children to generate as many criteria for sorting animals. Children are to sort animals into different diagrams (Venn and Carroll) using a range of criteria. Show the children how a Venn diagram can be used to sort into three groups simultaneously - sort animals with given characteristics into three groups.	Organism, sort, group, criteria, Venn diagram, Carroll diagram.
Identify and name a variety of plants and animals in their habitats, including microhabitats <u>How working scientifically</u>	What do humans need to stay alive? Revisit the seven life processes and discuss how humans and all other living things need certain conditions to stay alive and healthy.	Habitat, conditions, survive, urban, woodland, pond, coast, coastal.	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	Introduce children to the concept of classification. Introduce the classifications of vertebrate and invertebrate, asking children to give examples	Variation, classification, vertebrates, invertebrates.

can be met • identify and classify, and sort objects into categories	Discuss how humans have adapted their habitats so that they meet the right conditions to keep us healthy and safe. Introduce children to the following British habitats: urban habitats, woodland, ponds and coastal habitats. Identify the objects in a heathland habitat that are living, dead or have never been alive. *Visit a local habitat* - survey the local habitat and make a list of all the things that are living, dead or have never been alive. Look closely into cracks and crevices with their magnifying glasses. Draw their attention to fallen leaves and plant debris (dead), to rocks and stones (never alive) and what is beneath them (alive). Children draw a map of the local habitat, labelling plants, trees and animal homes.		How working scientifically can be met • generate questions • identify vertebrates by observing their similarities and differences	of each. Explain that vertebrates can be further split into five groups: amphibians, birds, fish, mammals and reptiles. Explain the broad characteristics of each, asking children to note their similarities and differences. Children answer the 'yes or no' questions to sort the vertebrates into animal groups. Introduce the idea of classification keys as a way of sorting animals into groups through a series of 'yes or no' questions. Children generate questions to sort vertebrates.	
• gather and record data to help in answering questions	Do all minibeasts like living in the same microhabitats? Consider how they could find out	Minibeast, microhabitat, enquiry, survey, pictogram			

	the answer to this question. Investigate two different microhabitats in the local environment and counting the different minibeasts they find there. Refer to their maps from the previous lesson to identify possible microhabitats. Microhabitats Enquiry – Location / Survey / Pictogram / Conclusion. Establish that different kinds of microhabitat encourage different kinds of minibeasts, and to suggest some reasons why this might be the case.				
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 <u>How working scientifically can be met</u> • ask and answer questions	Introduce children to the following habitats: the ocean, the Arctic, tropical rainforest and the desert to research using topic books and the internet – focus on the conditions. Children to generate questions to ask other groups about the habitats they have researched and support groups to answer. Consider an animal from each of the four habitats and suggest how it survives in its environment.	Habitat, research, conditions, ocean, tropical rainforest, arctic, desert, adaptation.	Recognise that environments can change and that this can sometimes pose dangers to living things <u>How working scientifically can be met</u> • reporting on findings from enquiries/research • presentations of results and conclusions	Recap how living things depend upon their habitats for survival. Discuss and identify some of the changes, natural and man-made, that can occur in the environment, and the ways these can impact on living things. Introduce some species that have become endangered and extinct due to changes in their environment. Children choose an endangered animal to research (and present) from topic books and the Internet – focus on	Endangered, extinct, conservation.

• label and give reasons	Recap the oceans, Arctic region, tropical rainforests and deserts. What are the special conditions of these habitats? What animals and plants live here? Play World Habitats Game, considering the animal or plant adaptation and deciding which habitat the living thing belongs in. Discuss dependency – give example of a squirrel, an oak tree and a fox to explain how the living things in a habitat depend on one another to stay alive. Children to label a habitat with living things and a brief description of their dependencies to show how the living things in their habitat depend on each other to stay alive. How do humans depend on other living things for survival? What living things depend on us?	Survive, adapt, adaptation, depend, dependency.		describing the animal's habitat, writing about the environmental dangers that it faces, and suggesting how the animal can be saved from extinction. Outline ways in which children can contribute to help with protecting endangered species.	
Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different	Recap previous learning about herbivores, carnivores and omnivores and think of examples of each and possible sources of their food.	Food chain, consumer, producer, predator, prey, herbivore, carnivore, omnivore.			

sources of food. <u>How working scientifically can be met</u> • ask and answer questions	Outline the idea of a food chain and introduce key vocabulary. Children draw two food chains and record which habitat they would be found in. Rearrange the animals to make two food chains and add a final predator to finish them. Which habitats are they from?				