Year 2 Term 3B Summer

Living things and Habitats

Visit a contrasting habitat to the school grounds.

Background information
All objects are either living, dead or have never been alive. Living things are plants (including seeds) and animals. Dead things include dead animals and plants and parts of plants and animal that are no longer attached e.g. twigs, shells, fur, hair and feathers. (This is a simplification useful for year 2 children.) An object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive (again ignoring that plastic is made of fossil fuels). Animals and plants live in a habitat in which they are suited, which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. The habitat provides the basic needs of the animals and plants – shelter, food and water. Children will study micro habitats in the school grounds and visit a local alternative habitat (local woodland, seaside) to identify organisms living there. The children will know that camouflage helps animals avoid predators and will explore these through investigations such as camouflaged creatures (Crest Star activity) or the caterpillar camouflage activity / RHS campaign for school gardening. Within a habitat, there are different micro-habitats e.g. in woodlands- in the leaf litter, on the bark of the trees, on the leaves. These micro- habitats have different conditions e.g. light/dark, damp/dry. These conditions affect which plants and animals live there. The plants and animals in a habitat depend on each other for food and shelter etc. the way the animals obtain their food from plants and other animals can be shown in a food chain. There are further investigation ideas in a creative approach to teaching science by Nicky Waller.(copy kept in school). Also see https://explorify.uk/teaching-support/teaching-science/living-things-and-their-habitats-tackle-the-tricky-bits Common misconceptions • An animal's habitat is like its home. • Plants and seeds are not alive as they cannot be seen to move. • Fire is living • Arrows in a food chain mean "eats"

What I already know/ can do
Year 1 I can name a variety of common, wild and garden plants. I can make simple observations using appropriate language to describe them. I can compare living things. I can sort and group objects according to their simple properties.

National Curriculum objectives	Children's objectives
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 animals and plants and how they depend on each other. 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. Describe how different habitats provide the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of animals in plants in habitats and micro habitats.	I can identify things that are living, dead and never alive. I can match living things to their habitat. I can describe how animals find their food. I can name some different sources of food for animals. I can explain a simple food chain. I can describe how a specific habitat provides for the basic needs of things living there. (plants and animals) I can name a range of animals and plants living in different micro habitats I know the term habitat and micro habitat.
<u>Working scientifically.</u> identifying and classifying gathering, interpreting and recording data to help in answering questions asking simple questions and recognising that they can be answered in different ways . observing closely, using simple equipment	I can sort and group objects into living, dead and never alive. I can record my research clearly. I can use and spell simple scientific language. I can ask simple questions using different question stems about animals or plants. I can start to find ways to answer my question. I can explain how I found out the answer to my question.

gathering and recording data to help in answering questions	

Can you sort things into living, dead and never alive?

What is a micro habitat? Name some found in the school grounds.

Name a micro habitat and the conditions you will find there. Can you name some living things you would find there?

What is the difference between the living things you found today and those in the school grounds?

Why do animals camouflage themselves?

What features would an animal living in the micro habitat have to survive?

Working towards	Expected	Exceeding
I can sort objects into living, dead and never alive. I can sort living things into the appropriate habitat. I can say how a living thing is suited to living in its habitat with support. I know how animals get their food.

I can name some micro habitats found in the school grounds and name some of the living things I would find there. I can ask questions about the living things I observe with support. I can start to compare the living things found in different habitats. I can investigate how animals use camouflage to avoid predators with support. I can design a living thing to live in a named microhabitat giving simple reasons for my design. | I can sort objects into living, dead and never alive explaining how I know. I know what the term habitat means and can match living things into the appropriate habitat. I can state the conditions found in a habitat and explain how living things are suited to living there. I can explain a simple food chain.

I know what a micro habitat is and name the conditions and living things I would find there. I can ask questions about the living things I observe and think of ways to find them out. I can compare the living things found in different habitats. I can investigate how animals use camouflage to avoid predators. I can use my knowledge of how living things are adapted to living in different habitats to design my own. | I can sort objects into living, dead and never alive explaining how I know confidently. I know what the term habitat means and can match living things into the appropriate habitat, giving reasons to why they are suited to living there. I can explain and construct a simple food chain.

I know what a micro habitat is and name the conditions and living things I would find there confidently. I can ask questions about the living things I observe and can find out the information I need to answer them. I can compare the living things found in different habitats explaining why they are different. I can explain how animals use camouflage to avoid predators. I can confidently use my knowledge of how living things are adapted to living in different habitats to design my own giving reasons behind my design. |

Key Vocabulary	
Names of habitats and micro habitats. **Animal-** a living thing that can't make its own food. **Camouflage** – a way of hiding something by covering or colouring so it looks like its surroundings. **Carnivore**- a meat eater. **Dead**- No longer alive. **Food chain**- a diagram that shows how a living thing gets its food. **Habitat**- a living things home. **Herbivore**– a plant eater. **Invertebrate** - animal without a backbone	**Living**- being alive. **Micro habitat**- A small habitat within a larger habitat. **Omnivore**- eats both animals and plants. **Plant** – a living thing that makes its own food. **Predator**- an animal that eats other animals. **Prey-** An animal that is hunted for food. **Vertebrate** - animal with a backbone **Sort/classify**- put into groups according to properties. **Observe** – to look at something closely **Investigation** – to find something out

Character Opportunities	Possible STEM careers linked to unit
Curiosity and critical thinking - asking questions about the world around us Kindness - looking after the environment Optimism and gratitude - for the environment around us	**Botanist** (studies plants) **Oceanographer** (studies the physical and biological aspects of the oceans) **Marine Biologist** (someone who studies life in the seas and oceans) **Plant geneticist** (works on developing crops to be more robust or nutritious) **Conservationist** (works for the protection and preservation of living things and the environment)

Possible trips Plessey woods pond dipping/ Sea life centre / Wetland trust

Also see https://www.tes.com/teaching-resource/ks1-animal-habitats-scheme-of-learning-6436724

Lesson Objectives	Working Scientifically	Activities
To know the terms **alive, dead and never been alive** To understand these terms and use accurately	To **group** things on the basis of their properties	Children are provided with pictures of things that are living, dead and never been alive. They **sort / classify** on the basis
● To know that there is a wide range of plants and animals in the school environment and in their gardens ● To understand the word '**Habitat**' ● To revisit animal groups **(amphibian, bird, mammal, insect**)	● **Identifying and classifying** ● Gathering and recording data ● Begin to introduce the terms **invertebrate** and **vertebrate**	● Discuss and identify animals, birds and insects and plants that can be found in school grounds. Draw examples/photograph/list animals and plants in garden. Research animals using books /internet where required ● Think about the features and conditions found in the school habitat and what these offer to the plants and animals living there ● Consider how the habitat can be improved in some way eg providing feeding areas, quiet areas etc
● To understand that the school grounds are a **habitat** and smaller **micro habitats** exist within the school grounds which each differ in a small way to the larger habitat. Use the term **'Microhabitat'** ● To learn that specific animals need specific habitats ● To understand the term **camouflage**	● Using **observations** and ideas to suggest answers to questions ● Gathering and recording data to help answer questions	● Discuss/describe range of habitats within the school grounds eg in air, underground, in grass, under stones in forest school areas etc, Compare the conditions in different **microhabitats** ● Make a list of the animals found in these different **microhabitats**. Are the same animals found in all of the different places? why?/Why not? ● Draw / describe(literacy link) different habitats and record types of animals found there including **invertebrates** and **vertebrates** ● **camouflage** investigations https://primarylibrary.crestawards.org/all-superstar-challenges/61747644/51 and https://schoolgardening.rhs.org.uk/Resources/Activity/Caterpillar-Camouflage ● Investigate animals that are able to use **camouflage** to survive

● To learn about the range of things that live in seas/ rivers	● Use observation to generate and answer questions	● Visit to St Mary's island or wetland trust or other example of a different habitat
● To find out about insects and other **invertebrates** that live in **microhabitats**	● Gathering and recording data ● Use secondary sources to find answers	● http://www.wafeducation.org.uk/teaching-materials/year-2/living-things-and-their-habitats/ ● See above link to make a **microhabitat** (Wildlife Aid Education website) ● Set up a wormery ● Survey microhabitats in school garden ● Use books and online sources to identify animals
● To understand the characteristics of a woodlouse in its habitat	● Gathering and recording data ● Observing closely	● Create a woodlice choice chamber http://www.heritagewoodsonline.co.uk/schools/pdfs/Y1%20Woodlice.pdf for ideas on recording (can be made from a small box divided into 4 parts with different conditions in each
● To identify a variety of living things around a pond area and begin to understand their interdependence	● Gathering and recording data ● Observing closely ● Using observations and ideas to suggest answers to questions	● Discussing what plants need to grow. Compare and describe plants living in a variety of different places eg light and shady places ● Investigating pond area (Carlisle Park? Plessey woods) ● Discuss how to protect habitats ● Assessment -Using Meercat Mail (Emily Gravett) as a basis, children write series of postcards home from different habitats, describing the environment, food available etc and deciding if their animal would like living there
● To know about **food chains** in a known habitat ● To use the terms **predator and prey** ● To know about food chains in a less familiar habitat	● Use simple secondary sources to answer questions	● To know about food chains that include birds, mammals and humans ● Complete food chain diagrams (hanging mobiles?) ● To know about simple food chains in other habitats such as rainforests and oceans
● To find out how living creatures move through their habitat in different ways	● To make close observations and describe what has been seen	● Observe ways in which creatures move, eg listen to earthworm bristles scraping on paper as it moves. Watch snail or slug on plastic petri dish from underneath. Place slug on paper and see if it eats the paper as it moves

● To understand how habitats can be created and preserved		● Create a new habitat in garden area see https://www.rspb.org.uk/birds-and-wildlife/bird-and-wildlife-guides/a-z-of-a-wildlife-garden/habitats.aspx for some ideas