Grindon Infant Science Medium Term Planning - **Year 2 Living Things and their Habitats**
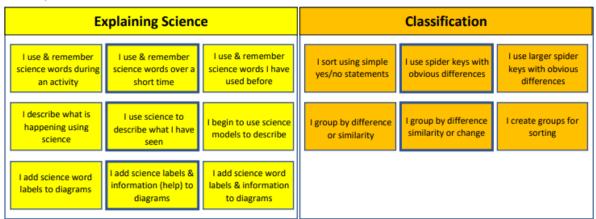
End of Unit Goals
Pupils will be able to:

- 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 animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including microhabitats.
- 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

Prior Knowledge

Identify local plants & animals by sight (Plants; Animals Yr1) Define/identify carnivore, herbivore & omnivore (Animals Yr1) Identify natural & man-made materials (Materials Yr1 & Yr2) Identify sun as natural source of light (energy) (Light Yr1) Identify seasonal changes for abiotic factors (seasons Yr1) Requirements for plant/animal growth (Plants; Animals Yr2) Life cycle of a plant and animal (human) (Plants; Animals Yr2)

Skill Objectives

Explaining Science			Classification		
I use & remember science words during an activity	I use & remember science words over a short time	I use & remember science words I have used before	I sort using simple yes/no statements	I use spider keys with obvious differences	I use larger spider keys with obvious differences
I describe what is happening using science	I use science to describe what I have seen	I begin to use science models to describe	I group by difference or similarity	I group by difference similarity or change	I create groups for sorting
I add science word labels to diagrams	I add science labels & information (help) to diagrams	I add science word labels & information to diagrams			

Enquiry Types

Researching

Classification   Finding Patterns   Observing over time   Fair testing

Key Vocabulary

Living, dead, non-living, movement, respiration, breathing, energy, sensitivity, sight, touch, hearing, smell, taste, growth, reproduction, offspring, excretion, waste, nutrition, habitat, microhabitat, conditions, adapted, adaptation, light, temperature, water, humidity, food chain, feeding, sort, group, classify, criteria, spider key.
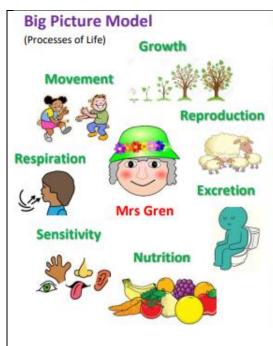
Important Scientists

David Attenborough (1926-) British scientist and broadcaster made ground-breaking programmes about wildlife and conservation since the 1960s. He has had a huge influence on engaging and bringing wildlife decline into common understanding.
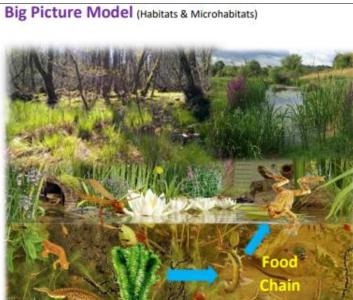
Jane Goodall (1934-) English scientist and world expert on chimpanzee behaviour. She was first introduced to chimps as a baby and spent her whole life studying them in Tanzania. She discovered that chimps are not herbivores but also ate meat.

Common Misconceptions

Breathing & respiration are the same (careful as good enough for Yr2). Respiration and photosynthesis are the same. Excretion is when you poo! Plants are not alive as they don't move. Top of a food chain eats everything below. Our food is made in shops. Food chains just involve animals. Food chain arrow shows what eats what (wrong way around).

Big Picture Model (Processes of Life)

Growth

Movement

Reproduction

Respiration

Mrs Gren

Excretion

Sensitivity

Nutrition

Big Picture Model (Habitats & Microhabitats)

Food Chain

Session	Knowledge Objective	Skill Objective	Enquiry Opportunities	Extension Opportunities	SEN
1			Complete KWL Grid as a class. Recap previous year with a quiz. Explore and discuss skills and knowledge that will be covered in unit.		
2	**What makes something living?** - Know 7 processes of life essential for keeping alive & healthy. Common to all living things. - Know basic definitions for movement, respiration (breathing), sensitivity, growth, reproduction, excretion &	I can use and remember science words. I can use and remember relevant science words during an activity. I can remember science words I have used before (longer term.)	Develop a basic understanding of 7 life processes. Introduce MRS GREN to help remember the processes. **Movement** watch video clip of a child dancing, animal moving and leaf moving using links below. **Respiration(breathing)** Get chn to run about/count pulse rate. **Sensitivity** Recall 5 senses. Play game using the 5 senses. Smell/blind fold and touch and taste. Play sound and see what can be heard. **Plenary** Begin to form mind map to show life processes looked at today. Recap using MRS GREN **Key Vocabulary** movement, making energy (respiration), sensitivity, growth, reproduction, getting rid of waste (excretion), nutrition,	Design spacesuit to support life. How do senses help us to stay alive? Extend to investigation.	Pre-teach vocab Provide word banks to support processes

	nutrition (Mrs Gren) • Dead = once had 7 processes but not anymore					
3	**What makes something living?** • Know 7 processes of life essential for keeping alive & healthy. Common to all living things. • Know basic definitions for movement, respiration (breathing), sensitivity, growth, reproduction, excretion & nutrition (Mrs Gren) • Dead = once had 7 processes but not anymore	I can use and remember science words. I can use and remember relevant science words during an activity. I can remember science words I have used before (longer term.)	Recap previous session discussing MRS GREN and the processes looked at. **Growth** Provide with a selection of growth stages for humans, animals, and plants. Chn put into cycle. **Reproduction** Provide with babies and adults to match. **Excretion** Fill tube with water, when full release water to show how our bladder excretes urine. Watch clips: https://www.eric.org.uk/videos-about-wee-and-poo **Nutrition** Provide with some real foods and sort into hoops of good and bad foods. **Plenary** Continue to form mind map to show life processes looked at today. Recap using MRS GREN **Key Vocabulary** movement, making energy (respiration), sensitivity, growth, reproduction, getting rid of waste (excretion), nutrition,	Design spacesuit to support life. How do senses help us to stay alive? Extend to investigation.	Pre-teach vocab Review words from previous session. Provide word banks to support new processes.

4	**What makes something non-living?** ▪ Non-living = Have some, but not all processes of life. ▪ Know a range of natural (e.g. rock (soil), water, air, light, heat) and non-living items that are not natural (e.g. plastic, machines, etc). (Non-living variables in a habitat are called abiotic factors)	I can group using differences, similarities, or changes. I can group by difference or similarity. I can create groups for sorting.	Recap MRS GREN What does it mean to be living? What does it mean to be non-living? Discuss and add ideas to working wall. Sort pictures into living, non-living., used to be alive. Chn split page and place headings**.** **Plenary** Discuss choices and give reasons. The _____ is alive because____. The _____ isn't alive because_____. **Key Vocabulary** Living, dead, non-living, movement, making energy (respiration), sensitivity, growth, reproduction, getting rid of waste (excretion), nutrition, habitat sort, group, classify, criteria	Research & support sustainability ideas (e.g. plastics).	Provide with concrete resources to sort into living and non-living. Adult to document on post-it note and stick in book.
5	**What is a habitat? What is a micro-habitat?** ▪ Habitat – home that provides all things needed for survival (see Animals / Plants; shelter, need for mate). ▪ Micro-habitat = small; provides special conditions. ▪ Able to distinguish between habitats/micro-habitats using comparative words	I can use and remember science words. I can use and remember relevant science words during an activity. I can remember science words I have used before (longer term.)	What is a habitat? Discuss Identify & describe different habitats within school grounds. Use comparative language to compare. Describe abiotic factors in a habitat. Describe as words (light/dark), comparative language. Identify & describe different micro-habitats within a habitat. Use comparative language. Describe abiotic factors in micro-habitat. Teacher to scribe the different facts as moving around the different habitats.	Investigate: Where do we find most worms (design)?	Pre-teach vocab Comparative word bank with picture clues to support describing abiotic factors.

	(e.g. light/dark, warm/cold) ▪ Can name different habitats / micro-habitats.				
6	**How are living things suited to their habitat / micro-habitat?** ▪ Able to sample / collect living things from a local habitat using a range of appropriate equipment. ▪ Able to increasingly name living things collected by sight and through resources (e.g. keys, ID cards, etc) *Begin to link number caught & simple body features to (micro)habitat where it was found.*	I can sort using simple yes/no questions. I can use a spider key. I can use larger spider keys with obvious differences.	Recap the word habitat. Think about why animals have a habitat and what sorts of habitats there can be. What animals might we find in different habitats. What is a microhabitat? Chn investigate microhabitats around school grounds. Work in pairs using a key to identify the different minibeasts found. Chn record minibeasts found drawing and labelling. What is the habitat like? (dry, damp, wet, dust rocky, muddy, woody, leafy, hard, soft, light, dark) **Key Vocabulary** habitat, microhabitat, adapted, adaptation, conditions, light, temperature, water, humidity. sort, group, classify, criteria, spider key.	Make a wormery. What will be needed? How will we care for the worms?	Pre-teach vocab of minibeasts with picture cues and words. Provide with pictoral word bank of minibeasts and or concrete to support labelling and drawing.
7	**What is a food chain?** **Can you construct food chains?** ▪ Know that plants need light (*energy*) to grow. Animals	I can use science to describe what I have seen. I can add science labels and information to diagrams. I can describe what is happening. I can add science word	Watch clip about food chains. https://www.bbc.co.uk/teach/class-clips-video/science-ks1-the-food-chain/zbr8d6f What did you eat for lunch? Link back to source of food. Chn to make food chains with pictures and draw arrows to show transfer.	Demo starch test on leaf to show sugar formation (emphasise food & energy transfer; not what eats what).	Pre-teach vocab Use of concrete objects to place into a food chain. Word labels with picture cues to use for labels.

	need food (*energy*) to grow. ▪ Can place living things in order according to feeding (plant always at the start). ▪ Can use arrows to represent 'transfer' of food (& energy). Can describe what the arrow represents. ▪ Construct simple food chains independently.	labels to diagrams. I begin to use science models to describe. I can add science word labels and information to diagrams.	**Key Vocabulary** Food chain, transfer, carnivore, herbivore, omnivore, producer, consumer		

End of unit Quiz

Useful Texts, Website & Resources   https://www.bbc.co.uk/teach/class-clips-video/science-ks1-the-food-chain/zbr8d6f - Food Chains   Wiggling Worms at Work – Wendy Pfeffer   Little People, Big Dreams-David Attenborough   Little People, Big Dreams-Jane Goodall   My Living world – Wormery plastic container   Electronic microscope   Magnifying glasses   Petri dishes   Pooters