

Year 4 Science Spring 1 Unit

Living Things and their Habitats - Conservation

Lesson Sequence

1. Describe ecosystems and how they are affected by changes in the seasons
2. Understand human impact on the environment through deforestation
3. Explore air pollution
4. Understand water pollution
5. Explore methods that can be used to conserve water
6. Understand that humans can have a positive impact on nature

How environments change?

The water people use in their homes comes from nature and must be cleaned up to be returned to nature so it can be used again. This is an important part of our water cycle.

Rocket Words

	migrate	to move from one area to another
	monsoon	rainy season
	deforestation	the cutting down of forests, including rainforests
	biodiversity	the variety of living things
	emissions	the production or discharge of something, especially gas or radiation
	pollution	harmful or poisonous substances
	pesticide	a chemical substance used to kill insects that harm plants and crops
	contaminate	to make something impure by adding a poisonous or polluting substance
	drought	a long period of time where there is a shortage of water
	freshwater	water that does not contain salt
	marine sanctuaries	ocean areas that protect the wildlife from harm
	conservation areas	areas on land or sea that protect the wildlife from harm

Progression of Knowledge

Unit	YEAR 2	YEAR 4	YEAR 5	YEAR 6
Living things and their habitats	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>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.</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats.</p> <p>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.</p>	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>
	<div style="border: 1px solid black; padding: 5px;"> <h3 style="text-align: center;">Why environments change</h3> <p>NATURAL CHANGES – different seasons can change habitats. Greenhouse gases cause climate change and climate change has caused our planet to get a lot warmer over a very short period of time. This has caused more extreme weather events like hurricanes, floods and droughts. It has also caused the extinction of many living things.</p> <p>HUMAN CHANGES – How humans live and what they do can impact habitats both negatively and positively.</p> <p>Negative ways:</p> <ul style="list-style-type: none"> • Deforestation - cutting down trees for a range of reasons • Littering – dropping rubbish or leaving large objects lying in the environment • Pollution – introducing harmful substances into the environment. • Air pollution from cars, e.g., carbon monoxide, and the burning of fossil fuels. • Water pollution through industrial waste and farm fertilisers that can pollute rivers and streams. • Rubbish—Plastic and household waste ends up on the streets, in the sea or in rubbish dumps, destroying habitats and wildlife. <p>Positive ways:</p> <ul style="list-style-type: none"> • Protecting endangered species via conservation projects • Cleaning bodies of water • Recycling • Creating nature reserves </div>			

Key Scientific Skills	Year 4 Living things and their habitats - Conversation
Ask relevant questions and using different types of scientific enquiries to answer them	
Set up simple practical enquiries, comparative and fair tests	
Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	
Gather, record, classify and present data in a variety of ways to help in answering questions	
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	
Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	
Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	
Identify differences, similarities or changes related to simple scientific ideas and processes	
Use straightforward scientific evidence to answer questions or to support their findings	