

Year 4 Biological Science: Living things and habitats
 (Changing Habitats and Basic Classification)

Unit 5

<p>Scientific Model (KS2): N/A</p>	<p>Scientific Skills Applied: ASK - To ask relevant questions BREAKDOWN - To decide what equipment to use - To learn how to use new equipment CAPTURE - To observe carefully - To measure using a range of equipment - To gather data and record in different ways - To make systematic observations - To identify differences, similarities and changes - To group, sort and classify using different criteria DESCRIBE - To draw simple conclusions - To present data in different ways - To explain what they have found out using correct scientific language - To record finding using correct language in varied ways - To answer questions based on evidence orally and in writing</p>
<p>Scientific Investigations:</p> <ul style="list-style-type: none"> - Observing Changes over Time - Identifying and Classifying Things 	
<p>Scientists:</p> <ul style="list-style-type: none"> - Gerald Durrell's conservation work in Madagascar. 	
<p>Prior Learning:</p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) • Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans) • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) • Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats) 	

Curriculum	Learning Intention	Knowledge and Key Vocabulary
<p><u>Making links to learning and discuss the model (if needed)</u></p>	<p>What is classification?</p> <ul style="list-style-type: none"> - Brief introduction to classification and recap prior learning. 	

<p><u>Knowledge and skills through investigations</u> Pupils should be taught to:</p> <ul style="list-style-type: none"> - recognise that living things can be grouped in a variety of ways - explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment - recognise that environments can change and that this can sometimes pose dangers to living things. <p>Notes and guidance (non-statutory)</p> <ul style="list-style-type: none"> - Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. They should identify how the habitat changes throughout the year. Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. - Note: Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses. - Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation. - Pupils might work scientifically by: using and making simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched. 	<p>What do all living things have in common?</p> <ul style="list-style-type: none"> - explore the requirements for life - MRS GREN <p>How can we group living things?</p> <ul style="list-style-type: none"> - recognise that living things can be grouped in a variety of ways - group living things in a range of ways - gather, record, classify and present data in a variety of ways to help in answering questions <p>How can we use a classification key to identify animals?</p> <ul style="list-style-type: none"> - investigate local habitats (field, forest school, pond) - complete plant sampling using a grid - use classification keys to identify plants and animals <p>How do you create a classification key?</p> <ul style="list-style-type: none"> - use prior knowledge from using keys to create own keys - use computer to create a digital version <p>Can humans damage animal habitats?</p> <ul style="list-style-type: none"> - explore the negative impact humans can have on animal and plant habitats. <p>Can humans have a positive impact on animal habitats?</p> <ul style="list-style-type: none"> - explore Gerald Durrell's conservation work in Madagascar - discuss how this apply to local habitats 	<p><u>Knowledge:</u></p> <ul style="list-style-type: none"> - Name the seven key features all living things have in common. - Explain how living things are classified into groups. - Explain how the habitats and the animals living in them change over the course of the year - Identify 3 ways human behaviour can damage animals and their habitat. - Explain 4 things we can do to protect animal habitats. <p><u>Vocabulary:</u> classification; groups; branching database (dichotomous key); vertebrates; invertebrates; exoskeleton; endoskeleton; mammals; reptiles; amphibians; birds; fish; snails; slugs; worms; spiders; insects; flowering plants; non-flowering plants; environment; eco-system; pollution; damage; deforestation; global warming; floods; litter; desertification; drought; nature reserves; conservation; habitat; camouflage; organism; species; conditions; characteristics; adaptations</p>
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Application and Assessment Activity

8. If you were writing your own key what question would you use to separate birds and cats?



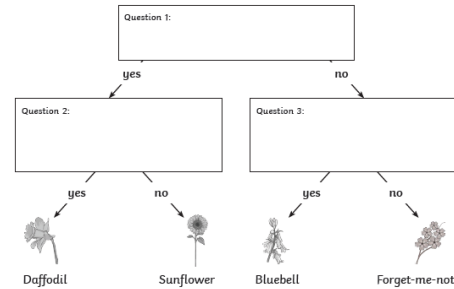
1 mark

9. What question would you use to separate a bat and a bird?



1 mark

10. Now write your own key by filling in these blank questions to classify these flowers:



2 marks

Total for this page

Local Habitat and Environmental Changes

11. When developers build a new housing estate where some fields used to be, what are the problems or dangers caused to wildlife?

1 mark

12. Litter and pollution in the sea is a danger to wildlife, what can be done to help?

1 mark

13. Why do you think we are now seeing more urban foxes roaming in places where there is housing?

1 mark

14. What are most of the changes to habitats caused by?

1 mark

Thinking Deeper:

Why do living things have Latin names?
Why is a mushroom not a plant?

Links to other subjects:

- Subject Specific links – Computing – making digital knowledge organisers. Geography – Protecting local environment
- Personal Development – Respect for the natural world
- SMSC – Learning to respect the natural world
- Cultural Capital – to appreciate animals from different countries, particularly Madagascar
- Careers – Explore the work of Gerald Durrell and conservationists
- British Values – mutual respect- respecting our environment
- Equality – Looking at how each and every one of us as an equal responsibility to protect the world around us.