Year 4 – Living things & their habitats



|  |  |
| --- | --- |
| National Curriculum Outcomes: Knowledge* 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
 | National Curriculum Outcomes: Working Scientifically* Asking simple questions and recognising that they can be answered in different ways
* Observing closely, using simple equipment
* Performing simple tests
* Identifying and classifying
* Using their observations and ideas to suggest answers to questions
* Gathering and recording data to help in answering questions
 |
| Children 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 (*Taken from the National Curriculum*) |
| Links to prior learning**Year 1:** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals**Year 2:** Identify and name a variety of plants and animals in their habitats, including micro-habitats | Links to future learning**Year 5:** Describe the difference in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals**Year 6:** Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics |
| Key VocabularyIdentify, classify, group, same, similarity, similar, different, difference, plants, animals, environment, bird, fish, mammal, reptile, amphibian, insect, vertebrate, invertebrate, flowering, non-flowering, human impact, deforestation, littler, nature reserve | Common Misconceptions* Children may think humans are not animals
 |
| Important scientists**Carl Linnaeus** – Swedish botanist, physician and zoologist who created an organised system for classifying animals**David Attenborough** – British wildlife filmmaker**Jane Goodall** – English primatologist who is best known for her work studying chimpanzees in Tanzania**Rachel Carson** – American biologist whose work showed the dangers of pesticide use on farms to local wildlife. She is credited with advancing the global environmental movement | STEM Career Links**Conservationist** (works for the protection of living things and the environment)**Herpetologist** (studies amphibians and reptiles)**Ichthyologist** (studies fish)**Mammalogist** (studies mammals)**Ornithologist** (studies birds)**Taxonomist** (classifies animals and plants)**Wildlife filmmaker** (creates films and documentaries about wildlife)**Wildlife photographer** (takes pictures of animals and plants)**Zoologist** (studies animals) | Links to real life* What plants and animals can we find in our local area?
* What threats are there to wildlife in our local area?
* What can we do to protect both our local and global environments?
 |
| Important knowledge/facts that the children need to know* Living things can be divided into two main groups: plants and animals
* Animals can be further divided into two main: animals that have a backbone are called vertebrates. Animals that don't have a backbone are called invertebrates.
* Vertebrates and invertebrates are divided into smaller groups. Vertebrates, for example, are divided into fish, amphibians, reptiles, birds and mammals. Mammals have hair or fur. Their young drink their mother’s milk. Amphibians live on land and water. They have moist skin. Reptiles have scales not fur. Have dry skin. Live on land. Fish live in water. They have fins not legs. They have gills instead of lungs to breathe underwater.
* Classification keys can be used to help us identify unknown living things.
* Humans can have both positive and negative impacts on the environment. Pollution, landfill sites and the destruction of animal habitats are some examples of actions with negative impact, and creating nature reserves and planting seeds to grow wildflowers are examples of those with positive impact.
 |
| Suggested Enquiry Activities |
| Identifying and Classifying* How can we classify these different living things from our local environment/an environment completely different to ours?
* Create classification keys to help other identify plants in the school grounds
 | Comparative and Fair Testing* Which habitat/how much light do woodlice like best? (Be sure to be kind to the woodlice while carrying out this one!)
 | Observation over Time* What different kinds of animals can we find in our outdoor area in different seasons (Big Schools Birdwatch Link)
* How does the average temperature of a pond change over a year?
 | Pattern Seeking* Are all plants green?
* What do all insects have in common?
* Is there a link between the number of legs and animal has and how fast it can move?
* Do all animals with … have…?
* Do all carnivores walk on four legs?
 | Research using Secondary Sources* Research unusual animals/plants and/or the answers to children’s own questions using information texts and the internet
* Explore examples of human impact on the environment
 |
| **National Curriculum Statements** | **Outdoor Learning Activities** |
| * 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.
 | Pupils take photographs of plants and animals in the playground or local environment to sort and group.Pupils use classification keys to name living things seen in the playground or local environment.Pupils carry out litter surveys in the playground or local area and consider the impact of this on the living things |

|  |
| --- |
| Wow Factor Experiences* Borrow a Linnaean Society Discover Kit (free, see the link below) and/or use their activity ideas
* Create large scale classification keys using masking tape on hall/gym floors or chalk on outdoor surfaces
* Learn about and classify weird and wonderful living things rather than sticking with the familiar (for example, baseball plants, Venus flytraps, corpse flowers, mantis shrimps, feather starfish, pangolins, axolotls, glass frogs etc.)
* Take part in the RSPB Big Schools Birdwatch (this takes place in January every year, which may be too late on in the academic year to incorporate into this unit, but would be a useful revisit of identification and classification. It could alternatively be set as homework).
* Take a trip to a local park or nature reserve and explore the living things that can be found there.
 |
| Maths Links* Use the book ‘Actual Size’ to explore and compare the sizes of familiar and unfamiliar animals
* Carry out a survey of the school grounds and count the animals found. Use this information to create a bar graph
* Use Venn Diagrams to look at similarities and differences between animals (can be extended to three circles for more able children)
* Take part in the RSPB Big Schools Birdwatch and compare data with the national picture. Can we think of reasons our data differs from that gathered elsewhere?
 | Literacy Links* Write a non-chronological report about the animals that can be found in a particular habitat (could be the school grounds or something more exotic) using the vocabulary learned in this unit.
 | Broader Curriculum Links**Geography:** Look closely at food labels to determine where in the world our food has come from (exotic fruits in particular tend to have been flown long distances). Consider what impact this has on the environment.**History:** How has our local environment changed over time? How has time impacted the living things? |
| Story LinksGiraffes Can’t Dance – Giles Adreae The Gruffalo – Julia DonaldsonBeetle Boy – MG Leonard Actual Size – Steve JenkinsDinosaurs and All That Rubbish – Michael Foreman Ten Things I can do to Help My World – Melanie Walsh |
| Helpful WeblinksAssessment exemplification (could also be useful with planning ideas) – <https://www.planassessment.com/product-page/examples-of-work-living-things-and-their-habitats-y4-chaya>Teacher CPD for this unit – <https://www.reachoutcpd.com/courses/upper-primary/classification/> BBC Class Clips (useful videos) – <https://www.bbc.co.uk/bitesize/topics/z6wwxnb>Linnaean Society Discovery Kit Loan (free box loan, also a range of activity ideas on the website) – <https://www.linnean.org/learning/teaching/primary/discovery-kits/classification-kit>RSPB Big Schools Birdwatch resources – <https://www.rspb.org.uk/fun-and-learning/for-teachers/schools-birdwatch/>STEM Learning’s online resource library for this unit - <https://www.stem.org.uk/resources/community/collection/12774/year-4-living-things-and-their-habitats> |

NB: This module should be taught **before children have done the Year 4 work on Animals including Humans**. This means they will be able to apply the vocabulary they have learned in this unit in different contexts. It should also be taught **before the year 4 work on States of Matter** as then children will have had a good introduction to classification with more familiar things (animals) before tacking classification of the less familiar (materials and states of matter).