

Science Knowledge and Skills Overview – Year Four Living things are their Habitats

| National Curriculum Objectives | Sticky Knowledge | Key Questions | | |
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| <ul style="list-style-type: none"> Pupils should be taught to recognise that living things can be grouped in a variety of ways. Pupils should explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Pupils should be able to recognise that environments can change and that this can sometimes pose dangers to living things. | <ul style="list-style-type: none"> All living things are organisms which can be classified by their features using a classification key. A vertebrate is a creature which has a spine (mammals e.g. humans; reptiles e.g. snakes; fish e.g. goldfish; birds e.g. owls and amphibians e.g. frogs). An invertebrate is a creature which does not have a spine (arachnids e.g. spiders; insects e.g. ants, crustaceans e.g. woodlice; molluscs e.g. snails and annelids e.g. worms). Environments can change throughout the year and this can have an effect on the animals and plants that live there (seasonal change). Humans can have a positive impact on the environment (e.g. nature reserves, animal sanctuaries). Humans can also have a negative impact on the environment (e.g. air pollution, water pollution, deforestation, littering). Sometimes the negative impact is not expected but can have a drastic effect on the living things there (e.g. flooding, forest fires). | <p>What food chains and webs are there in our local habitat?</p> <p>How does energy move through the food chain?</p> <p>How does removal of one species from an environment affect others?</p> <p>How does environmental change affect different organisms?</p> <p>What are the most important things we could do to improve our outside area? (pond, compost, wildflowers, litter picking)</p> <p>How does human activity affect our environment? (new house buildings, use of pesticides, deforestation)</p> | | |
| Links to NHFS core curriculum themes | Vocabulary | Key Scientists | | |
| <p>Sustainability – direct and indirect impact of human activity on the planet</p> <p>Aspirations – Science professionals e.g. Biologist</p> <p>Equality – Impact of human activity/climate change on poorer nations (link to natural disasters).</p> | <p>Organism, classified, classification key, vertebrate, invertebrate, mammals, reptiles, fish, amphibians, birds, insects, arachnids, crustaceans, molluscs, annelids, pollution, environment, deforestation, habitat, flooding</p> | <p>Jacques Cousteau (Ocean Explorer & Conservationist)</p> <p>Rachel Carson (Marine Biologist, Conservationist & Author)</p> | | |
| Prior Learning | Future Learning | Investigating . . . | | |
| <p><u>In Year 2 children should:</u></p> <ul style="list-style-type: none"> Explore and compare the difference 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 micro habitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food. | <p><u>In Year 5 (Animals, including humans):</u></p> <ul style="list-style-type: none"> Describe the differences 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. <p><u>In Year 6 (Living things and their habitats):</u></p> <ul style="list-style-type: none"> Classify living things into broad groups according to observable characteristics and based on similarities and differences. Give reasons for classifying plants and animals based on specific characteristics | <p>Using classification keys to explore and identify local plants and animals. Making a guide to local living things (red squirrels in New Hartley).</p> | | |
| <p>Does the amount of light affect how many woodlice move</p>  | <p>Can we use the classification keys to identify animals in school grounds?</p>  | <p>How does the variety of invertebrates on the school field change over the year?</p>  | <p>Has the use of insecticides affected the bee population?</p>  | <p>Why are people cutting down the rainforests and what effect does that have?</p>  |

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