


## Dereham Church Infant and Nursery School- Science

	Year group: 2, Summer 1 & 2	Area/topic: Living things and their habitats
	<p><i>(Objectives from NC/ELG/Development matters)</i></p> <p><b>Working scientifically:</b></p> <ul style="list-style-type: none"> <li>*Asking simple questions and recognising that they can be answered in different ways.</li> <li>*Observing closely, using simple equipment.</li> <li>*Identifying and classifying.</li> <li>*Using their observations and ideas to suggest answers to questions.</li> </ul> <p><b>Living things and their habitats:</b></p> <ul style="list-style-type: none"> <li>*Explore and compare the differences between things that are living, dead, and things that have never been alive (F1)</li> <li>*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 (F2)</li> <li>*Identify and name a variety of plants and animals in their habitats, including microhabitats (F3)</li> <li>*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. (F4)</li> </ul>	

Prior learning	Future learning
<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants)</p> <p>*Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants)</p> <p>*Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans)</p> <p>*Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans)</p> <p>*Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 - Animals, including humans)</p> <p>*Observe changes across the four seasons. (Y1 - Seasonal changes)</p>	<p>*Recognise that living things can be grouped in a variety of ways. (Y4 - Living things and their habitats)</p> <p>*Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 - Living things and their habitats)</p> <p>*Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats)</p> <p>*Construct and interpret a variety of food chains, identifying producers, predators and prey. (Y4 - Animals, including humans)</p>

## Working scientifically & encouraging scientific enquiry

### Observations

- \*Children will identify micro-habitats in the local environment and use equipment such as magnifying glasses to observe these.
- \*Children to explore and make observations of real life objects to decide if they were once living or have never been living.
- \*Children to make observations of real animal bones through the exploration of owl pellets or similar.

### Identifying and classifying

- \*Identify and sort real items into categories of living, once living but now dead and never been living. Children to record their findings.
- \*Classify items found in the local environment.

### Research using secondary resources

- \*Children to use books, photos and online resources such as Explorify to learn about animal habitats, living/not living things as well as food chains.
- \*Research food chains in the local environment through first-hand observations.

## What pupils need to know or do to be secure

Key knowledge and skills	Possible evidence
<p>*I can recognise and explain that plants and trees are alive and how I know, using my knowledge of plants/trees breathing and growing. (F1)</p> <p>*I understand that fallen leaves, petals and branches are dead but that the tree remains alive. (F1)</p> <p>*I can recognise that some animals eat other animals and that these animals are alive before they are eaten but dead once they have been caught by predators. I can recognise that parts of these animals may be found such as their skeletons and that these are no longer part of a living being. (F1 &amp; F4)</p> <p>*I can explain <b>at least one</b> characteristic of a living thing such as moving, breathing or eating and how these characteristics are no longer present if something is dead. (F1)</p> <p>*I understand and can explain the word 'habitat'.(F2)</p> <p>*I can explain multiple characteristics of a living thing, including growing, eating, moving or reproducing, and use these to explain how I know if something is dead or has never been living. (F1)</p> <p>*I can sort things into categories of living, dead and never been alive and explain how I know.(F1)</p> <p>*I can explain how I know that something was once living but no longer is by identifying features. (F1)</p> <p>*I can identify that some materials come from something that was once living whilst others have</p>	<p><b>There will be evidence of children meeting the 'I can' statements through:</b></p> <ul style="list-style-type: none"> <li>*Quotes taken from discussions.</li> <li>*Children can correctly use the key vocabulary during lessons.</li> <li>*Children recording through drawing.</li> <li>*Photographs of children's learning.</li> <li>*Written explanations of understanding or adult scribing a child's understanding depending on individual needs.</li> <li>*Children answering and asking questions.</li> </ul>

never been alive. E.g. Wood comes from something that was once alive whilst metal has never been living. (F1)

\*I can make a model animal and explain why it has never been living comparing it to the real version of the animal by listing what the real animal would be able to do and what my model cannot. (F1)

\*I can observe, explore and describe a micro-habitat which can be found in the local environment as well as identify what lives there. (F2 & F3)

\*I can understand why some animals survive better in a micro-habitat and how the conditions can be different than the wider habitat. (F2)

\*I can recognise some different habitats for wildlife and can explain how the habitats provide for the basic needs of animals and/or plants that live there. (F2)

\*I can compare two plants from contrasting habitats and describe *one feature* each plant has to make it suited to its habitat. (F2)

\*I can understand and explain why animals rely on plants as well as plants rely on animals within their habitats. (F2)

\*I can recognise that habitats can have different conditions for living and identify the typical conditions of each. (F2)

\*I can explain the features an animal has and how these help it to survive in its habitat. (C3 & F2)

\*I can recognise and name *some* of the main habitats found in the world including aquatic, desert, forest, woodland, tundra or grassland. (F2)

\*I understand ocean habitats and can identify the different zones of the ocean whilst describing the characteristics of each zone and how it is suited to certain animals and/or plants. (F2)

\*I can identify and name plants and animals that live in each ocean zone. (F3)

\*I can explain the characteristics and features of an animal and/or plant and how it is suited to an ocean habitat. (F2 & C3)

\*I can discuss how an animal and/or plant lives and survives in its habitat including how an animal obtains its food, if they have the ability to camouflage or if they need oxygen to breathe. (F2 & F4)

\*I can learn about and explain the features of a microhabitat for an ocean animal and how it is suited to the animals needs. (F3)

\*I can independently represent a food chain of more than three links using arrows in the correct direction and labelling each part of the chain. (F4)

\*I understand that humans are part of a food chain. (F4)

\*I can correctly use the terms herbivore, omnivore and carnivore whilst explaining a food chain. (F4)

\*I understand that a plant can make its own food whilst an animal cannot. (F4)

\*I understand the vocabulary 'predator' and 'prey' and can use these words to discuss the animals/plants in a food chain. (F4)

\*I understand the vocabulary 'producer' and 'consumer' whilst being able to identify and label

these within a food chain. (F4)

### Key vocabulary

Habitat, micro-habitat, microclimate, natural environment, shelter, living, dead, never been alive, adaptations, camouflage, survival, food chain, consumer, producer, predator, prey, source of food, arctic, rain forest, ocean, tundra, coral reef, burrow, suited/suitable, adapted, adaptations, desert, polar, woodland, forest, names of living things in the habitats and micro-habitats children study, conditions, adjectives for conditions of habits e.g. damp, dry, light, dark.

### Common misconceptions

- \*An animal's habitat is like its 'home'
- \*Plants and seeds are not living
- \*All things that move are living e.g. fire, a bike etc.
- \*Arrows in a food chain mean 'eats'
- \*Deciduous trees are dead in the winter

### Books linking to this area

- \*Shark lady by Jess Keating & Marta Alvarez Miguens
- \*The Gruffalo by Julia Donaldson (Create a food chain using the characters)
- \*Many: The diversity of life on Earth by Nicola Davies and Emily Sutton
- \*Life in the ocean by Claire A. Nivola
- \*My friend Earth by Patricia MacLachlan
- \*The big book of the blue by Yuval Zommer
- \*Meerkat mail by Emily Gravett
- \*Flotsam by David Wiesner
- \*Oceanarium by Loveday Trinick & Teagan White
- \*Earth's incredible oceans by Jess French & Claire McElpatrick
- \*Lost and found by Oliver Jeffers
- \*Dear Greenpeace by Simon James

### Memorable first hand experiences

- \*Children to visit a sea life centre to see the animals they have been learning about.
- \*Children to investigate owl pellets to find real bones of animals.

### Opportunities for communication

- \*Children to be given opportunities for communication with partners, groups and whole class to discuss as completing practical activities and also to share findings.

	<p>*Children to share their thoughts and ideas during first-hand experiences.</p> <p>*Through the use of Explorify.</p>
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DCINS Reasonable adjustments for pupils with SEND

<p><b>Communication and Interaction</b></p> <ul style="list-style-type: none"> <li>*Visual aids, pictures of equipment with words labelled, word mats with pictures for key words in that lesson.</li> <li>*Freedom to explore scientific equipment and investigate in own way.</li> <li>*Hands on experiences to encourage communication and interaction with others.</li> <li>*Pre teaching any new vocabulary.</li> </ul>	<p><b>Cognition and Learning</b></p> <ul style="list-style-type: none"> <li>*Opportunity for lots of hands on exploration and verbally sharing thoughts and ideas.</li> <li>*Freedom to explore scientific equipment and processes.             <ul style="list-style-type: none"> <li>*Pre teaching new vocabulary or concepts.</li> <li>*Activities adapted if needed for safety and ease.</li> </ul> </li> <li>*Visual aids, pictures of equipment, mats with key words and pictures</li> <li>*Learning recorded through photos and adult quotes, children not expected to write for recording their understanding.</li> <li>*Using working walls to aid learning and remind of previous learning.</li> </ul>
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### *Social, Emotional and Mental health*

- \*Awareness of individual needs, any potential triggers within the curriculum and the child's background.*
- \*Pre prepare children for any activity they could find triggering or difficult in some way.*
- \*Practical activities or experiments to be completed within a smaller group or 1:1 if needed.*
- \*If the class are sharing their learning within a large group, take the child in a smaller focus group if they struggle with social situations.*
- \*Adjustments made where needed to suit individual.*

### *Sensory and Physical*

- \*Adult support with any practical activities.*
- \*Awareness of the individual's likes or dislikes and their own reactions to sensory activities.*
- \*If a child enjoys sensory activities, then plan for this wherever possible within the lesson.*