

Brough Primary School – Curriculum Intention Plan 2022 - 2023



Subject: Science Year Group: Year 3/4		Area of learning: Living Things and their Habitats (Year A)
Links to previous work/Remember when	<ul style="list-style-type: none"> • The Year 3 children studied common animals found in the local environment last year, as well as the basic needs of animals including humans. • The Year 3 children also examined habitats and microhabitats. • The Year 4 children studied similar topics when they were in the single age Year 2 class and of course completed work on the digestions system and teeth last year. <p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> • 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. 	
Term	Year 3/4	Key Skills to be taught
Autumn 2024 What the children should know at the end of this series of lessons		<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><u>Working Scientifically</u></p> <ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • (not using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions)

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	<ul style="list-style-type: none"> identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings
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Vocabulary

life process, living/non-living, movement, respiration, sensitivity, growth, reproduction, excretion, nutrition, sort, group, herbivore, omnivore, carnivore, criteria, characteristics, mammal, fish, amphibian, bird, reptile, vertebrate, invertebrate, skeleton, exoskeleton, endoskeleton, habitat, environment, nature, classification key, identify, questions, characteristics, features, environmental change, pollution, deforestation, climate change, biodiversity, littering extinction.

Sequence of learning	Learning Objectives/Outcomes	Suggested lesson outline
1 Use Explorify zoom in zoom out 'Strange stripes' as a starter for discussion.	<p>Learning Objective: Recognise that living things can be grouped in a variety of ways – specifically I can develop descriptions using relevant scientific language and vocabulary.</p> <p>Key Knowledge: Know that the seven life processes define living things and mark them as different to non-living things.</p> <p>Enquiry Type N/A</p>	<p>Recap What can we remember about living, and non-living things? How do we know if something is alive? Recap MRS GREN as the seven life processes.</p> <p>Seven Life Processes The seven life processes are movement, respiration, sensitivity, growth, reproduction, excretion and nutrition. All living things, all plants and animals do these things too. We can remember them with MRS GREN</p> <p>What children record Children complete a matching activity with the seven life processes and then write one sentence saying why they are important. Secondly, children complete the challenge showing how a cat and a plant get rid of waste.</p>
2	<p>Learning Objective: I can recognise that living things can be grouped in various ways.</p> <p>Key Knowledge: Animals can be grouped into fish, amphibians, birds, reptiles and mammals. Know at least some key characteristics from Y2 work.</p>	<p>Recap Can you remember MRS GREN? What do they stand for? What are the five main groups of animals?</p> <p>Grouping Animals Fish live in water, have gills, scales and fins. Mammals have hair on their body and drink milk when it is a baby. Amphibians are born in water with gills, and then grow up to be able to go on land as well, breathing through lungs that they develop. Reptiles are cold blooded and are born on land. They are born from soft eggs. Birds</p>

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	<p>Enquiry Type Making systematic observations and classifying and presenting data.</p>	<p>have feathers and are born from hard eggs – not all birds can fly of course. NUTRITION – herbivores, carnivores and omnivores.</p> <p>What children record Children spend time classifying animals based on their nutrition, then the animal groups and then a method of grouping of their own choice. (One example could be given if needed as a prompt). If time, complete the next step together as a whole class – no need for the children to record this.</p>
3	<p>Learning Objective: I can recognise that living things can be grouped in a variety of ways.</p> <p>Key Knowledge: Many animals have skeletons, however, they don't all look the same. Vertebrates have a spine or backbone. Invertebrates do not have a backbone. Some animals have an exoskeleton, and some have no skeleton.</p> <p>Enquiry Type Making systematic observations and classifying and presenting data.</p>	<p>Recap Can you remember MRS GREN? What do they stand for? Last week we talked about grouping animals based on nutrition. What can you remember about that?</p> <p>Skeleton and no Skeleton Animals with a backbone do not have the same skeleton – e.g. an owl and a frog. Vertebrates were the groups we looked at last week. All of them have skeletons. Invertebrates are a group that do not have backbones and are insects, arachnids, crustaceans, myriapods and molluscs, as well as jellyfish, earthworms, starfish and many more. Some animals have an exoskeleton – a skeleton on the outside.</p> <p>What children record Children sort animals into the correct group based on vertebrates and non-vertebrates. After that, children to write a short information leaflet style entry for one of the groups. A challenge could be to give the difference between invertebrate and vertebrate using scientific language.</p>
4	<p>Learning Objective: I can explore, identify and name a variety of living things in their local and wider environment.</p> <p>Key Knowledge: A mini beast is a word used to describe a wide variety of small invertebrate animals. Some examples are</p>	<p>Recap Discussion questions with a partner: - What do living things do? What is a vertebrate? Can you give examples of a vertebrate? What is an invertebrate? Can you give examples of an invertebrate?</p> <p>Classification and the local environment of the school We will use iPad to take photographs of different plants and animals found in the</p>

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	<p>butterflies and moths, spiders, dragonflies, slugs and snails, beetles. Our school environment is a habitat for several different living things. Many living things (animals) must be returned to their environment as soon as possible.</p> <p>Enquiry Type Making systematic observations and classifying and presenting data.</p>	<p>school grounds. Photographs should include a ruler to show scale. With the children and a list of likely plants and animals, including mini beasts, carry out a search of the school grounds.</p> <p>What children record Once back in the classroom, review the pictures and discuss what has been found. Is that what we might have expected? Select one of the things the children photographed and complete an information page, including a diagram and caption for the organism concerned. Children could use the iPad to research more about the organism, for their description.</p>
<p>5 Use Explorify What's going on 'River Life' as a way into this lesson.</p>	<p>Learning Objective: I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Key Knowledge Classification keys help us identify plants and animals. These use animals' features and characteristics usually through a statement or question.</p> <p>Enquiry Type Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p>	<p>Recap Remember our search of the school grounds last week. What could we use to identify plants and animals that we do not know the name of?</p> <p>Classification Keys Classification keys use questions or statements about an organisms features or characteristics. Have a go at using one to identify the three minibeasts given. We are now going to write a classification key for Liquorice Allsorts. You can only use questions which have a yes or no answer.</p> <p>What children record Children write a Liquorice Allsorts classification key. Once that is done and tested by other groups, children investigate the classification key given as a challenge. Is this correct or not? (It is correct)</p>
<p>6</p>	<p>Learning Objective: I can recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p>Key Knowledge Environment is a place that a living thing lives in and change is an alteration to</p>	<p>Recap Remember our search of the school grounds last week. What could we use to identify plants and animals that we do not know the name of?</p> <p>Environmental Change Go through each of the topics identified on your key knowledge section. If possible, provide quality videos of each topic. Allow time for the children to question and</p>

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	<p>that environment. A change in environment can cause extinction. Biodiversity is really important because the loss of one species can have a huge impact on the others. We are guilty of destroying natural habitats, over-hunting specific species, causing climate change and pollution (including littering)</p> <p>Enquiry Type Making systematic observations and classifying and presenting data.</p>	<p>discuss together so they really understand the importance of each topic.</p> <p>What children record Children write about their feelings about one of the environmental change topics discussed in this lesson. They should say why they have chosen this particular one and what they think should be done about it. Make sure the children understand changing some of these things is never easy – it may cost money and people may have to change what they currently do...</p>
7 (Assessment Activity)	<p>Learning objective:</p> <p>To demonstrate what has been learnt about living things and their habitats.</p>	<p>ASSESSMENT LESSON</p> <p>Children complete a short formative assessment task to judge what they have learnt and retained about this topic.</p>

Learning Outcome/product

During this unit of work, children will learn to recognise the seven life processes common to all living things. They will learn to sort living things using a variety of criteria and extend their use of scientific vocabulary to describe the features and characteristics of animals and plants.

They will conduct a local habitat search and learn to identify unknown living things using a classification key. Children will consider how environmental change impacts the local area and suggest ways humans can prevent further damage.

Assessment records	List only those children who have not achieved the expected outcomes.

End of unit assessment question

E.g. Are humans good or bad for the environment? How do scientists classify living things?