



Topic Title: Swords and Sandals

Year Group: 4

Academic Year: 2022 - 2023

Science Intent: How can we identify animals in different groups?

Living Things and Their Habitats:

Children will explore a variety of ways to identify, sort, group and classify living things. They learn how animals are split into 'vertebrates' and 'invertebrates'. Throughout the topic children work scientifically by gathering, recording and presenting information in different ways.

Prior Scientific Learning/Linked Topics: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans) Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain (Y2 – Living things and their habitats)	Literacy Links (including texts/media used):	Maths Links: Statistics/data handling – bar charts
Scientific Knowledge Objective from NC: <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	Working Scientifically Asking relevant questions and using different types of scientific enquiries to answer them Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Using straightforward scientific evidence to answer questions or to support their findings Identifying differences, similarities or changes related to simple scientific ideas and processes Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	



<p>variety of living things in their local and wider environment</p> <ul style="list-style-type: none"> • recognise that environments can change and that this can sometimes pose dangers to living things 	
<p>Content:</p> <p>Lesson 1: What is a habitat? Can you think of a definition with a partner? Children to think, pair, share their ideas then go through the information on the slides. • How many different types of habitat can you think of? Give children a few minutes to discuss their ideas, then list on the slides. Show children the picture of a woodlouse on the slides. Where in the school grounds or our local environment do you think we would find a woodlouse and why? Invite children to share their ideas then go through the answer on the slides. Explain that animals will live in the place that is best suited to them and this is why different animals are found in different habitats. Some organisms like darkness while others need light; some like damp conditions and some like dry conditions, etc. Go through the pictures on the slides and ask children to predict what kind of habitat each animal might be found in. Children match animals to their habitats and give reasons as to why they live in that habitat. Identify different habitats in the school grounds. - Problem solving</p> <p>Lesson 2: To be able to group organisms according to their characteristics. Show children the organisms on the slides. How could you organise these animals into groups? Children to organise the animals into groups according to their own criteria on a mini-whiteboard or a sheet of scrap paper. When children have had time to do this, invite them to share how they grouped the organisms with the rest of the class. How many different ways did we sort the organisms? • Repeat this activity with the other set of organisms on the slides. • Why do you think it is important to be able to group organisms? Invite children to share their ideas, then go through the explanation on the slides. Provide children with a set of the Animal Cards and worksheet 2A. Children to sort the animals according to the three different sorting criteria. Children to write the names of the animals that fit in each group on the table on the worksheet and label the sorting criteria they used. Extension: use Carroll diagram - Identifying grouping and classifying</p> <p>Lesson 3: To be able to classify animals into specific groups according to their characteristics. Show children the pictures of the animals on the slides. How many different ways could you sort these animals into groups? Children to think, pair, share their ideas. Go through the slides describing some of the ways in which animals can be classified, including vertebrates, invertebrates, mammals, amphibians, reptiles, fish, birds and insects. Show children the classification key on the slides showing how to identify which group an animal belongs to. Show children the animal on the slides and ask them</p>	



to use the key to show which group it belongs to. Repeat this with the other animals on the slides. Provide children with a set of Animal Cards. Children to use the Animal Classification Key to sort each of the animals into the correct group and then list. - **Identifying grouping and classifying**

Lesson 4: To be able to use a classification key to identify animals.

Can you remember what a classification key is? Invite children to share their ideas, then show them the classification key that can be used to identify which group an animal belongs to. How else could we use classification keys? Explain that keys are very useful for helping to identify unfamiliar plants and animals. Show children the example on the slides and discuss how it has been constructed to help identify animals through a series of yes and no questions. Show children the second key and the animal they are going to identify. Go through the questions on the key together to identify the animal. Repeat this with the other animals on the slides. Provide children with the British Animals Classification Key. Children to use the key to identify the given animals. Can they identify animals native to Egypt using a classification key? -

Identifying grouping and classifying

Lesson 5: To be able to identify and classify a variety of British plants.

Show children the pictures of different plants on the slides. How could you organise these plants into groups? Invite children to share their ideas. Show children some of the ways the plants have been grouped and ask them to identify how they have been classified. Show children the picture of a tree on the slides. What kind of tree is this? What is it called? Invite children to share their ideas. How can we find out what a plant is if we are not sure? Children to think, pair, share their ideas, then go through the suggestions on the slides. Take children in school grounds. Provide children with the Plant Cards in pairs or small groups. Challenge children to answer the questions on worksheet 5B to identify the different characteristics of the plants, then choose one way of grouping the plants according to their own criteria and record. Extension: Give children a digital camera in small groups. Children to take photos of the plants they see. Encourage children to take close-up pictures that will help them identify what the plant is and to take pictures of both flowering and nonflowering plants. Once back in the classroom, challenge children to identify the plants they have found using a variety of sources, e.g. books, the internet, etc. Once they have done this, children could create a poster or guidebook about the plants in their local area. They could print out the photos and annotate them with information about each plant, or create a multimedia presentation using ICT. - **Identifying grouping and classifying**

Lesson 6: To explore the human impact on habitats and environments.

Show children the picture of a forest on the slides. What would happen if all the trees in this forest were cut down? How would it affect the animals that live there? Children to think, pair, share their ideas (e.g. the squirrels would have nowhere to live, the caterpillars would have no leaves to eat, etc.). EXTEND - encourage children to think about how the animals are all linked together in food chains and how this would affect the habitat. Explain that humans can have both positive and negative effects on habitats and environments. They can both help sustain environments and they can destroy environments. Can you think of some ways in which humans help sustain environments? Can you think of some ways in which humans destroy environments? Children to think, pair, share their ideas, then go through the suggestions on the slides. Children to list as many examples as they can to show both the positive and negative effects humans can have on environments and habitats. When finished, children to discuss with a partner what they can do to help support and sustain their local environment, e.g. not dropping litter, putting out bird food, etc. Children could then create a poster. - **Research – Problem solving**



Key Vocabulary:

Organism, sort, group, criteria, Venn diagram, Carroll diagram, variation, classification, vertebrates, invertebrates, specimen, invertebrate, thorax, abdomen, antenna, segmented, wing case, mandible, proboscis, prolegs, characteristic, classification, key, habitat, environment, wildlife, change, danger. Endangered, extinct, conservation

Stunning Start/Marvellous Middle/Fabulous Finish:

OAA/Trips/Visits/Visitors: