



# Mendell Primary School

Aspire Challenge Achieve

## Medium Term Plan Science



<b>Year Group: 1</b>	<b>Term: Spring 2 continued from Spring 1</b>	<b>Teacher: Nicole Morning</b>	<b>Subject lead: Sarah Bride</b>	<b>Overview: Animals including Humans:</b>	<b>Key End Points: By the end of this unit children will be able to:</b>	
<b>Common Misconceptions:</b> Some children may think: <ul style="list-style-type: none"> <li>• only four-legged mammals, such as pets, are animals</li> <li>• humans are not animals</li> <li>• insects are not animals</li> <li>• all 'bugs' or 'creepy crawlies', such as spiders, are part of the insect group</li> <li>• amphibians and reptiles are the same.</li> </ul>		<b>Unit key Vocabulary:</b> <ul style="list-style-type: none"> <li>• Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves</li> <li>• Names of animals experienced first-hand from each vertebrate group</li> </ul>		<ul style="list-style-type: none"> <li>• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</li> <li>• Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>• Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</li> </ul> <div data-bbox="1240 890 1608 948" style="background-color: #e91e63; color: white; padding: 5px; margin-top: 10px;"> <small>Identifying, grouping and classifying</small>  <small>Making observations to name, sort and organise items.</small> </div> <div data-bbox="1240 976 1608 1034" style="background-color: #4caf50; color: white; padding: 5px; margin-top: 10px;"> <small>Research</small>  <small>Using secondary sources of information to answer scientific questions.</small> </div>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Talk about animals that they are interested in.</li> <li><input type="checkbox"/> Talk about and describe different animals.</li> <li><input type="checkbox"/> Talk about what animals eat.</li> <li><input type="checkbox"/> Talk about where animals live.</li> <li><input type="checkbox"/> Talk about how to look after a pet.</li> <li><input type="checkbox"/> Compare animals</li> <li><input type="checkbox"/> Measure animals</li> <li><input type="checkbox"/> Talk about how they can look after animals/pets</li> </ul>	
<b>Links to other learning:</b> DT – healthy eating	<b>Prior Learning:</b> Use all their senses in hands-on exploration of natural materials. <b>(Nursery)</b> <ul style="list-style-type: none"> <li>• Begin to make sense of their own life-story and family's history. <b>(Nursery)</b></li> <li>• Understand the key features of the life cycle of a plant and an animal. <b>(Nursery)</b></li> </ul>	<b>Future Learning:</b> <ul style="list-style-type: none"> <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. <b>(Y2 - Living things and their habitats)</b></li> <li>• 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. <b>(Y6 - Living things and their habitats)</b></li> </ul>		<b>High Quality Text:</b> The Gruffalo. What to do with a tail like this. Joan Proctor, Dragon Doctor Patricia Valdez <b>Scientist to study:</b> Joan Beauchamp Procter - (Herpetologist and Curator of Reptiles, London Zoo)	<b>Risk Assessment:</b> Chicks and snake – animal handling allergies.	<b>Teacher CPD:</b> ASE plan exemplification – Eva/Olivia. Reach out CPD <a href="https://www.reachoutcpd.com/">https://www.reachoutcpd.com/</a> sign up for free.


	<ul style="list-style-type: none"> <li>• Begin to understand the need to respect and care for the natural environment and all living things. <b>(Nursery)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Give reasons for classifying plants and animals based on specific characteristics. <b>(Y6 - Living things and their habitats)</b></li> </ul>			Carnivores don't eat meat they eat other animals.		
<u>Learning Intention</u>	<u>Lesson Outline (Key Questions in colour)</u>			<u>Resources</u>	<u>Vocabulary</u>	<u>Lowest 20% Adaptations</u>	
1.	<p>L.I.I can sort animals according to their features including their diets.</p>  	<p><b>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is reading data using our observations.</b></p> <p><b>Pre assessment: what do we know about animals? – prompt questions:</b>  <b>Can you name any animals?</b>  <b>What animals live on our school field?</b>  <b>Record responses in floor book.</b></p> <p>Read the book the Gruffalo to the children and ask them to name and identify all of the animals in the story. (Ensure they realise the Gruffalo isn't a real animal) You may wish to watch the Gruffalo video prior to this lesson as this would provide a good opportunity to including the frog, dragonfly and additional animals the mouse encounters.</p> <p><b>Big question: how can we sort animals?</b>  Show images of the animals and ask the <b>big question: how can we sort animals?</b> – take feedback – you will get a range of ideas. Explain there are lots of different ways we can sort animals. Encourage the children to look for differences in the ways the animals look and to identify and name body parts to support them.</p> <p><b>Words of the week:</b> carnivore, omnivore, herbivore.</p> <p>Introduce the children to the following words – carnivore, herbivore and omnivore – <b>do the children recognise any of these words? Can they offer a definition?</b> - Some children may have prior knowledge and could offer up examples. Provide the children with word cards, definitions and an example animal from the Gruffalo. Eg. Carnivore would match to – a carnivore is an animal that only eats other animals – owl. Omnivore – an omnivore is an animal that eats other animals and plants – fox. Complete in groups and photograph – an example could be stuck into floor book.</p> <p>Teacher model: choose two of the animals e.g. owl and fox. Model to the children how to identify similarities and differences between the two e.g. both want to eat the mouse (<b>what do we call animals that eat other animals?</b> – Carnivores. <b>Does the fox only eat other animals?</b> No – use matching to support – it is an omnivore.) The owl has feathers and the fox has fur. The owl has wings and can fly the fox walks on the ground. The owl has two legs and the fox has four. Ask the children to pick a criterion using information given by the teacher model e.g. wings, no wings, two legs, four legs, feathers/no feathers, fur/no fur etc... together on the carpet sort all of the animals following one criteria.</p> <p>Provide children with model animals or picture cards and ask them to sort the animals following one of the criteria's you have discussed – e.g. number of legs, fur, feathers, scales, wings. Use sorting circles. Take photos – ask the children to travel around the room and see if they can identify the way in which the animals have been sorted in different groups.</p>			<p>Gruffalo book, print pictures of animals or toy models, hoops, word cards, definition cards and animal examples, whiteboards, post it notes.</p>	<p><b>Carnivore, herbivore, omnivore, fur, feathers, scales, wings, beak, paws, tail, fish</b></p>	

If a group have sorted the animals according to their diets use this as a model to the other children. If no group sorts the animals in this way bring everyone back to the carpet and sort them into carnivores, herbivores and omnivores. **Discuss how can we use two hoops to sort in three ways?**

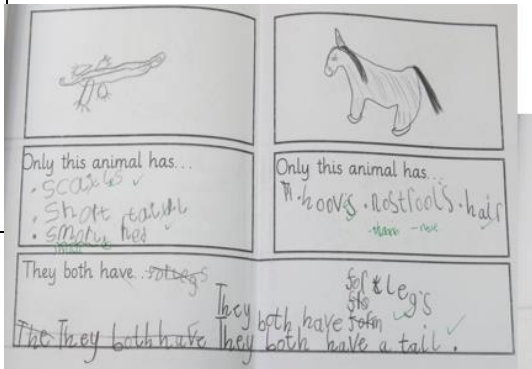
Modell the overlapping section of the Venn diagram. Have some information books available to check if the children are unsure of were to sort the animals. Back at tables give the children more woodland animals and ask them to sort them according to what they eat. Photograph in books.

**Examples:**



2.	<p>L.I. I explain what a mammal is and know some of their characteristics.</p> 	<p><b>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is observing and asking questions.</b></p> <p><b>Prior learning recap:</b>  <b>What is a herbivore?</b> – animal that only eats plants.  <b>What do carnivores eat?</b> – other animals  <b>Can you name an animal that is an omnivore?</b>  <b>What is similar between a fox and a mouse?</b> – tail, fur, four legs  <b>What is different between a snake and an owl?</b> – wings, scale, feathers, omnivore/carnivore.</p> <p><b>Explorify</b> – Odd One Out – Say Cheese – record in floor book – encourage children to name characteristics like in prior lesson. <b>What questions do they have about the animals?</b></p> <p><b>Big Question: What is a mammal? – ask the children if they have ever heard this word or know what it means? Can they name a mammal?</b></p> <p>Work through the mammals PowerPoint and ensure the children can identify features of a mammal. – to do this show the children a range of animals from the different types. As a class, sort them into mammals and not mammals on the carpet – do the children identify features discussed from the PowerPoint.</p> <p><b>Word of the week:</b> mammal – share what is mammal resource/<a href="https://www.youtube.com/watch?v=3ZHiBaecu4">https://www.youtube.com/watch?v=3ZHiBaecu4</a> - <b>Key learning:</b> a mammal is a type of animal. All mammals have a backbone also called a spine, most mammals give birth to live young, they have hair or fur on their bodies, they have lungs to breathe air and all mammals feed their young milk.</p> <p><b>Task:</b> children draw a picture of a mammal of their choosing, label body parts, characteristics and finally labels to prove it is a mammal. Provide a word bank if needed: head, legs, tail, paws, hooves, wings, eyes, fur, hair, backbone, lungs etc..</p> <p><b>Further learning challenge:</b> can they children find out which mammals do not give birth to live young.</p> <p><b>Exit Pass:</b>  True or false quiz</p> <ol style="list-style-type: none"> <li>Humans are mammals. - T</li> <li>Mammals only live on land. -F</li> <li>Mammals have lungs for breathing air.-T</li> <li>Most mammals lay eggs. -F</li> <li>Mammals feed their babies on plants. -F</li> <li>All mammals have hair or fur.-T</li> </ol> <p><b>Challenge:</b> can the children correct any false statements e.g. mammals feed their babies milk.</p> <p><b>Ensure the children have experience of the chick eggs before they hatch – take pictures for floor book – children may have questions you could note down as pupil voice. – Delivered 7<sup>th</sup> March.</b></p>	<p>Odd one out – say cheese.</p> <p>What is a mammal resource PowerPoint and video link, iPads.</p> <p>Range of animal pictures – real not cartoon.</p>	<p><b>Mammal, Fur, hair, young, lungs, habitat, backbone, spine.</b></p>	
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3.	L.I. I can name the characteristics of birds and reptiles.	<p><b>RISK ASSESSMENT – Chicks/pet snake.</b>  <b>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations and asking questions .</b></p> <p><b>Prior learning recap:</b>  <b>What do omnivores eat?</b> – eats other animals and plants.  <b>Can you name a carnivore that lives in a hot, dry habitat?</b> – lion, cheetah, vultures, hyenas, jackals etc..  <b>What is a characteristic of a mammal?</b> – lungs, backbone, feeds young milk, live young (most) fur/hair.</p> <p><b>Big Question: What are the characteristics of birds and reptiles? Explorify</b> – What’s going on? – Unexpected eggs.</p> <p>Provide the children with a range of birds and reptiles and ask them to sort them. Gather ideas about how different groups have sorted their animals e.g.. beak, no beak, scales, no scales, two feet, four feet etc. some discussion may benefit before sending the children off in groups.</p> <p><b>Word of the week:</b> reptile. – invite XMc (Year4) to talk to the children about his pet snake. Share the work of Joan Beauchamp Procter - (Herpetologist and Curator of Reptiles, London Zoo)</p> <p>At this point, have the chicks in class with the children and ask them to make observations about both animals. <b>Are there any similarities?</b> – lay eggs. <b>What are their differences?</b> – wings, feathers, scales. <b>Do children note characteristics discuss in prior learning?</b></p> <p>Together as a class complete a comparison between the two animals naming them bird and reptile. Initially note observations you can see about each animals and then use resources to find out additional characteristics of birds and reptiles. See resources. and web links.  <a href="https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zp9pfg8">https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zp9pfg8</a> / <a href="https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zyd6hyc">https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zyd6hyc</a></p> <p>To ensure the children are clear on differences together sort pictures cards into reptiles and birds. – children then choose a type of bird and reptile to look at in greater detail. Children need to identify characterises and can compare with similarities and differences.</p> <p><b>Example layout HA:</b> <b>LA: group work post it notes to identify similarities and differences around the picture cards.</b></p>	Explorify – what’s going on? Unexpected eggs.  Bird and reptile pictures – real.  Resource book – CGP Discover and learn Year 1 pg 26 A3 to share with children.	<b>Retile, bird, wings, beak, eggs, claws, tails, feathers, omnivores, cold blooded, scaly skin, lungs, carnivore, herbivores.</b>	
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**Key learning:**

**Birds:** have wings, have beaks for eating, lay eggs which hatch into chicks, birds have claws on their feet, birds have tails that help them fly, they have feathers to keep warm, birds are omnivores.

**Reptiles:**

Most lay eggs, are cold blooded, dry scaly skin, have lungs and breathe air. **Most reptiles are carnivores**, and eat whole prey or insects. Some reptiles (adult green iguanas, for example), are herbivores and eat green plants.



**Exit pass:** generate questions for Zoo Lab animal encounter workshop after showing the children the animals they are bringing in.

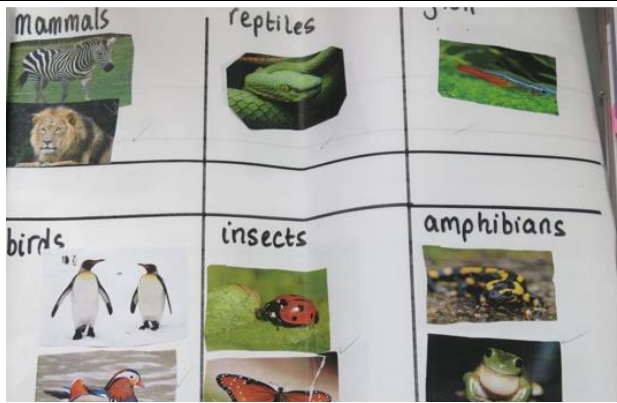
**Animals often used in this workshop:**



**HMK Family Challenge:** using the great British bird watch checklist see how many birds visit their gardens or nearby woodlands.

**Miss Morning** show the children your footage from home.

4.	<p>L.I. I can name the characteristics of amphibians and fish</p> 	<p><b>Animal Encounter session – Zoo Lab – 22<sup>nd</sup> March (9.45-10.15am – Next year have a focus on birds and arrange for Gauntlet Birds of Prey company to come in as FS2 children will have experienced this handling session already. Two-year rolling program for activities. Here children will also gain an understanding of insects and arachnids alongside mammals, reptiles and amphibians. Ensure pupil voice is recorded by the teacher and picture evidence is put into the class floor book along with pupil voice.</b></p> <p><b>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations and asking questions</b></p> <p><b>Prior learning: What Animal am I?</b> Starter quiz. I am a bird, I am an omnivore and eat plants and insects, I like to float on water, I make a quaking sound. – Duck - See how many clues the children need before finding the correct answer. <b>What am I?</b> I am cold blooded, I lay eggs, I have dry scaly skin, I have no legs – snake.</p> <p>Watch the following video and ask the children to name as many different animal they see - <a href="https://www.youtube.com/watch?v=75FP2h8B-Og">https://www.youtube.com/watch?v=75FP2h8B-Og</a> they may not be able to correctly name the newt support them with this. Discuss the names of these different animals – fish, tadpoles, toad, fish, newt etc... <b>What do you notice about them? What do they have on their bodies? How do they move? What is similar/different?</b></p> <p>Explain to the children that within this group of animals are two animal types – <b>can they name either?</b> Explore the words fish and amphibian. At this point, ask them to sort picture cards into whether they think it is a fish or amphibian. After they have sorted discuss with each other how they did it, <b>what features did they notice?</b> E,g, the fish have fins and the amphibians have legs.</p> <p>Ask the children if they handled any of these types of animals in their Zoo Lab session. <b>What do you recall about this animal?</b> – Frog. Ask the children to draw a frog and label it with some of the features that help us classify it into the amphibians' animal group. Ask them to label why they have these features e.g. webbed feet to help them swim underwater. Repeat the drawing and labelling activity but this time for a fish. iPads could be used to allow the children to identify where their specific fish/amphibian lives.</p> <p><b>Key learning:</b>  <b>Fish:</b> fish use fins to help them swim, they live underwater, they breathe under water using their gills, most fish have slippery scales on their skin, some fish lay eggs, most fish are omnivores.  <b>Amphibians:</b>  Amphibians are cold-blooded; they live on land as well as in the water; most lay eggs to reproduce their species (nearly all amphibians lay their eggs in or near water); amphibians have moist skin; they do not have scales; amphibians have webbed feet, adults are carnivores.</p>	<p>What am I quiz, picture cards – real.</p>	<p><b>Fish, amphibian, scales, gills, fins, cold blooded, webbed feet, carnivores, omnivores, eggs, moist.</b></p> 	
5.	TBC	<p><b>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is ...</b></p> <p>Consolidation/gap busting lesson – short lesson planned in order for class teacher to gap bust anything the children may still be unsure of or if misconceptions need addressing.</p>	<p>Picture cards, book – what do you do</p>	TBC	



Read/listen to the story - What do you do with a tail like this - [https://www.youtube.com/watch?v=1ARuoc\\_mrs4](https://www.youtube.com/watch?v=1ARuoc_mrs4) can the children identify what animal group some of the animals belong to from the story. Provide the children with pictures to sort under the following headings: mammals, reptiles, fish, amphibians, birds. Can the children explain how they know e.g. a whale is a mammal because etc...

Note: children may talk about insects following the Zoo Lab experience.

with a tail like this?