

Pioneer Federation
Medium term plan
Cycle 1, Term 3
Science



Subject: Science

Key Concept/ Theme: *Animals including humans*

Prior Learning links: They will have named animals and know about what a human needs to survive- they will make links to other animal groups using their knowledge.

Vocabulary:

Mammals, fish, birds, amphibian, reptile, invertebrates, vertebrates, omnivore, carnivore, herbivore.

School specific areas to cover (where applicable):

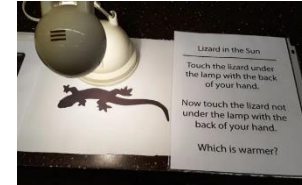
Use of forest and field/pond- all schools make use of local environments.

Chiddingly: Pond dipping- observing newts and helping to develop the habitats for newts within Forest School.

1.	<p>Deeper learning question: Why do we need to group animals?</p> <p>Prior learning reconnection (year group, cycle & term): c1 t1 human survival and needs. Reception- naming animals and where they live/ naming parts of the human body.</p> <p>LO: Let's learn how to sort mammals and fish.</p> <p>Enquiry skill: sorting/classifying</p> <p>Activity: comparing mammals and fish- introduce vertebrate vocab. Describe what makes a mammal and a fish- play a sorting game to sort the characteristics. Are any the same? Look at bone structures of the two groups. Plan lots of opportunities throughout the week to play 'What am I? Yes/no game' to start to group lots of different animals. Children to sort the pictures/descriptions into the two categories.</p> <p>Future learning links: <i>During forest school sessions in the spring/summer term focus on aquatic animals- pond dipping/amphibians. Look at sea invertebrates in science week which will also link to the topic in term 4.</i></p>
2.	<p>Deeper learning question:</p> <p>Reconnection: How do we sort mammals and fish. What does sorting mean?</p> <p>Enquiry skill: sorting/classifying and observing</p> <p>LO: Let's learn to observe and classify reptiles and amphibians.</p> <p>Activity: reptiles and amphibians. Describe the difference between the two. Children to use a table to select an amphibian or reptile then tick or cross depending on the category. EG born on land, born in the water, has scales...</p> <p>STEM activity: To further understand the meaning of cold and warm blooded. Children to feel the lizard under the lamp and then without and compare.</p> <p>Explore the concept of "cold-blooded" (having an internal temperature determined by-and-large by the external environment.)</p> <p>Gather:</p> <p>Two lizard shapes cut from black construction paper</p> <p>Small desk lamp</p>

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Place one lizard shape directly under the lamp and one at least three feet away, preferably in a shaded or dark area. Have the children compare the temperature of each, record/quotes about their observations.



3

Deeper learning question:

Reconnection: Why do we need to classify and sort?

Enquiry skill: observing, recording

LO: Let's learn how to identify birds and record these.

Activity: birds- link to the RSPB Big school's birdwatch and enter data for each school.

- Talk with children about the different ways in which birds can be identified: colours, shape, song and flight patterns. Show them pictures of common birds, talk about how they fly, and let them listen to recording of bird song. Sounds of birds and other very useful information can be found on the RSPB website: <http://www.rspb.org.uk/wildlife/birdguide/name/a/>
- Identify birds. Find a quiet place to watch birds. If possible, use binoculars (Health and Safety - Warn the children NOT to look at the Sun). Children could note down the size of the bird (provide them with cut-outs of outlines of some common birds to use for comparisons – e.g. robin, blackbird, feral pigeon and mallard). The children could also note down any colours, shape of beak, and length of legs, noise it made and how it flew. The children can then try to identify their birds by either looking at bird pictures or going on a website such as www.rspb.org.uk/wildlife/birdidentifier/
- Take part in the RSPB's Big Schools' Birdwatch - <http://www.rspb.org.uk/schoolswatch/index.aspx> . This is a great opportunity to hook children into nature as they will know that they are taking part in a real piece of science. It is also something they can do at home (Big Garden Birdwatch - <http://www.rspb.org.uk/birdwatch/index.aspx>)

4

Deeper learning question:

Reconnection: What are the different animal groups and sort using facts learnt so far.

LO: Let's learn about and identify land invertebrates.

Activity: invertebrates- land invertebrates. (Look at sea invertebrates in science week which will also link to the topic in term 4). What is an invertebrate? Compare the structure of vertebrates and invertebrates- children to look at x-rays of these creatures to compare. Groups to make a minibeast house ready for the summer months to then observe what might live in there. They could make individual ones or a class one. Children to draw the invertebrates that they think will live in there. Take photos in the summer to see if they are correct. The children could draw and label the invertebrates and what makes them an invertebrate- explanation writing.

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5	<p>Deeper learning question: Reconnection: What is the difference between an invertebrate and a vertebrate? Enquiry skill: recording LO: Let's learn about, carnivores and herbivores and record in our investigation. Activity: Omnivores, carnivores and herbivores. Describe the difference and sort the animals. As scientists how could we find out which animals live near us? Explain that through tracking animal's footprints and their faeces we can classify the type of animals that live around us. Set up experiment 'Who does it belong to?' Get some playdough and add in herbs to one set, 'meat' (pink paper) to another and then both to another. Link this to animal footprints and see if the children can solve the clues to work out what animals have been in their classroom.</p>
6	<p>Quiz in groups</p>
<p>End points:</p> <p>To be able to sort and classify mammals, birds, fish, amphibians and reptiles. To describe the features and structures of these animal groups. To observe and present findings in tables. To name a range of animals. To know the difference between vertebrates and invertebrates. To identify omnivore, herbivore and carnivores.</p>	