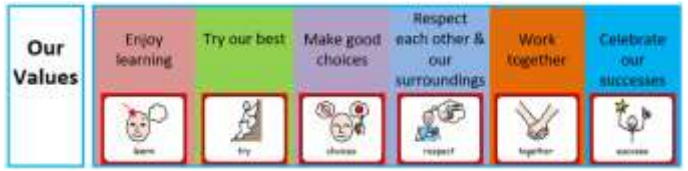
Science



SUBJECT MEDIUM TERM PLANNING – SCIENCE

Year Group: 1	**TERM:** Summer 1	**Theme:** Animals including humans

National Curriculum:

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- identify and name a variety of common animals that are carnivores, herbivores and omnivores
- describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)

Context: -	**Concepts:** Animals including humans	**Vocabulary:**
Children will develop their understanding of common animals and be able to idenfity the structure and whether they are a herbivore, carnivore or omnivore.		Fish, amphibians, reptiles, birds, mammals Carnovores, herbivores, omnivores Structure - Head, eyes mouth leg wing fin feathers beak hooves body ears teeth tail claw scales fur paw hair Senses: touch, taste, sight, hear, smell Working scientifically – investigate Identifying, classifying and grouping, simple tests

Prior Substantive Knowledge :

- Use all their senses in hands-on exploration of natural materials. (Nursery - Humans)
- Name and describe people who are familiar to them. (Reception - Humans)

Prior Displinary Knowledge

- Observations - Explore the natural world around them, making observations and drawing pictures. Discuss findings using a wide range of vocabulary
- Use magnifying glasses to look at objects in more detail.

Future Substantive Knowledge :

- 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. (Y2 - Living things and their habitats)
- 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. (Y6 - Living things and their habitats)
- Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their habitats)

• Asking Questions- Children will begin to ask simple questions about the world around them • Use their senses in hand on exploration of natural materials	**Furture Displinary Knowledge** • Asking Questions with a yes/no question to aid sorting • Ask 1 or 2 simple research questions linked to a topic • Observation - compare objects based on obvious features • Predictions - Children consider in advance what might happen or what they may find out
End points /by the end of this unit pupils will… • Chidlren will be able to identify and name 1 example of a fish, amphibians, reptiles, birds and a mammal.	**Crucial Knowledge** • Children will know that animals have different characteristics.

Lesson Number 1

Key learning:
Idenitfy and name a varirty of common animals

Concepts:
Animals includiong humans

Success Criteria:
This should what the children should be able to do by the end of the lesson

- I can identify what a fish amphibians, reptiles, birds, mammals is.
- I can name a fish amphibians, reptiles, birds, mammals is.

Working scientifically:
Identifying and classifying

Suggested resources:

Flipchart

Pictures of animals and labels

Word mats - fish amphibians, reptiles, birds, mammals

Lesson structure: Introduction, direct teaching, activities, key questions
Concept map at the beginning of the topic. This will assess how much prior learning has been retained. What do the children already know about the topic?

Engage – show children a vairty of animals (a fish, owl, cat, snake, frog). Ask children to discuss what the animals. Make a recorded of what the children say.

Introduce
Introduce key vocanbulary and show animals.
https://www.bbc.co.uk/bitesize/subjects/z6svr82/year/zjpqqp3

P and C – Children to identify the pictures with their names and animal type

Independent task (recorded) – children to have different pictures of animals. Children to name and label whether they are a fish amphibians, reptiles, birds, mammals

Deepening: Odd one out – have discussions as to which animal is the odd one out. Have 2 birds and a fish. Can they identify the fish is the old one out and why? Encourage conversation and discussions

Key questions?

Why do you think that animal is a …..? Children to respond in full sentences. I think it is this animal because ……

Challenge: Can children think of an animal for each category?

Adaptive teaching for SEND:
Have fewer animals for children to name and identify what typr of animal they are. Also have labels available that they can stick.

Vocabulary:

Fish (Live under water, have gills to breath – goldfish, catfish, shark)
Amphibians (Lay eggs on water – frog toad neut)
Reptiles (lay eggs on land – snake, crocodile, lizard)
Birds (wings to fly and beaks to eat their food – owl, woodpecke, kingfiosher, owl)
Mammals (have lungs to breath and give birth to their babies – people, dogs, cats, foxes, hedgehog)

Lesson Number 2

Key learning:
Describe and compare the structure of a common animals

Concepts:
Animals includiong humans

Success Criteria:
This should what the children should be able to do by the end of the lesson

- I can identify a fish amphibians, reptiles, birds, mammals is.
- I can name a fish amphibians, reptiles, birds, mammals is.
- I can compare the differences and similarities of different types of animals.

Working scientifically:
Identifying and classifying


Suggested resources:

Flipchart

Word mats structure - Head, eyes mouth leg wing fin feathers beak hooves body ears teeth tail claw scales fur paw hair

Lesson structure: Introduction, direct teaching, activities, key questions

Engage: Recap what a feature is
https://www.youtube.com/watch?v=8BOEm44u2Bg&t=30s

Introduce – show a variety of different things in common on a page (for example on 1 page all animals will have a tail, on another all animals will have a beak ect)

P and C – Give children a variety of different pictures, children to group them according to their features

Independent (recorded individual work) – Children to label the parts of an owl (bird) and a fox (mammal)

Deepening: Compare the features of the different animals

		Challenge: **Adaptive teaching for SEND:** Word mats available

Vocabulary:

Fish (Live under water, have gills to breath – goldfish, catfish, shark)
Amphibians (Lay eggs on water – frog toad neut)
Reptiles (lay eggs on land – snake, crocodile, lizard)
Birds (wings to fly and beaks to eat their food – owl, woodpecke, kingfiosher, owl)
Mammals (have lungs to breath and give birth to their babies – people, dogs, cats, foxes, hedgehog)
Difference and similarity

Lesson Number 3

Key learning:
identify and name a variety of common animals that are carnivores, herbivores and omnivores

Concepts:
Animals includiong humans

Success Criteria:
This should what the children should be able to do by the end of the lesson

- I know the difference between carnivores, herbivores and omnivores.
- I can tell my partner what carnivores, herbivores and omnivores mean.
- I can work scientifically to investigate and compare the differences between carnivores, herbivores and omnivores.

Suggested resources:

Flipchart

In pairs children will have a plate of different 'poo'
Playdough in brown colour – these are to be rolled into small balls, leaves to be rolled into one set, small 'bones' into another and both in the last set'
(Chidlren will be going throught the poo to identify whether the animal that ate it is a carnivore, herbivore or omnivore.

Lesson structure: Introduction, direct teaching, activities, key questions

Engage- Recap names of the animals learnt in the previous lesson.
Can we guess what they eat?

Introduce
Teach children what a carnivore/herbivore and an omnivore is.

Show BBc biteside video: https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/z96vb9q

Provide children with different animal and show what they eat, children to work together to group them into herbivores, carnviores and omniovores.

Introduce the investigation: Can children identify whether the animal is a herbivore, carnivore and omnivore based on its 'poo'

Model key sentences – I think it is a …. because …..

Deepening: Can they match the previously organised animals to the poo

Key questions
What is a carnivore? / If an animal eats only meat what would they be?

What is a herbivore? / If an animal eats only plants what would they be?

What is an omnivore? / If an animal eats plants and meat what would they be?

How do you know an animal is a carnivore, herbivore or an omnivore?

Challenge:
Adaptive teaching for SEND:

Working scientifically: Identifying and classifying 	Camera to take photos for classbook Word mats – carnivore, herbivore, omnivore	Visuals of the definitions of carnivore, omnivore and herbivore. If needed record the key vocabulary on a voice recorder so children can remember them.

Vocabulary:

Carnivore (Only eats meet – lion, eagle, kingfisher)
Herbivore (Only eats plants - rabbit, elephant)
Omnivore (eats both meat and plants – hedgehog, squirrel , fox, woodpecker)

Lesson Number 4

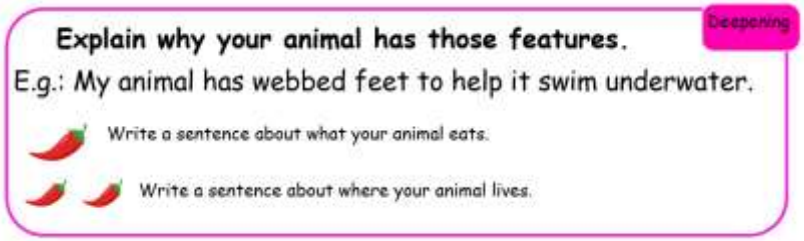
Visit from zoo lab – Animal explorer
https://www.zoolabuk.com/animalexplorer

Key learning: Apply all animal knowledge to a zoolab workshop. Opportunity for children to meet a variety of different animals	**Concepts:** Animals including humans	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Recap prior learning on animals, **Aim of the wokshop** Guided by your expert ZooLab Ranger, you'll meet a menagerie of reptiles, mammals, inverts, amphibians and arachnids while learning about adaptations, classification, climate, habitats, minibeasts and rainforests. 
Success Criteria: This should what the children should be able to do by the end of the lesson • Meet a variety of different exotic animals • Introduce pupils to adaptations, classification, climate, habitats, minibeasts and rainforests. • Introiduce what a habitat is and what it	**Suggested resources:** Book Zoo Lab – check for allegies of children!!	

needs to include for animals survival • Explain the importance of adaptations • Use knowledge to discuss how animals are grouped **Working scientifically**: Using resources, Identifying and classifying  		**Challenge: Extend questioning, ask children why the think that** **Adaptive teaching for SEND:** Proviude adult support if required for SEND Visual supports and all the previous word mats to be made available.
Vocabulary:		

Lesson Number 5

Key learning: identify key features of animals. Content: Apply animal knowledge learnt in year 1	**Concepts:** Animals including humans	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Create a mash up of animals. Ask children what do they notice?   **Introduce** Show childrent he video about how to create an imaginary animal. https://www.youtube.com/watch?v=inCSn0HtyW4
Success Criteria: This should what the children should be able to do by the end of the lesson I can describe different features of common animals. I can recognise features and the animals they belong to.	**Suggested resources:** Flip chart Post it notes Photos of ideas for the children	

I can design and label features of an imaginary animal. I can say why my imaginary animal has these features. **Working scientifically**: Using their observations and ideas to suggest answers to questions 		Children to identify the following (to write on post it notes which will be later attached to the independent work) • what type of animal theirs is going to be (is it going to be a fish or a mammal, children must include those features) • what is your animal going to eat? • What structure is the animal going to have? (*again based on what type of animal it is) **Independent task** – Based on the above information children to design and label their imaginary animal **Deepening: explain why you have chosen the features that you chose.,**  **Challenge:** **Adaptive teaching for SEND:**

Vocabulary:

Features

Fish (Live under water, have gills to breath – goldfish, catfish, shark)
Amphibians (Lay eggs on water – frog toad neut)
Reptiles (lay eggs on land – snake, crocodile, lizard)
Birds (wings to fly and beaks to eat their food – owl, woodpecke, kingfiosher, owl)
Mammals (have lungs to breath and give birth to their babies – people, dogs, cats, foxes, hedgehog)

Carnivore (Only eats meet – lion, eagle, kingfisher)
Herbivore (Only eats plants - rabbit, elephant)
Omnivore (eats both meat and plants – hedgehog, squirrel , fox, woodpecker)

Assessment: Complete end of topic assessment and concept map