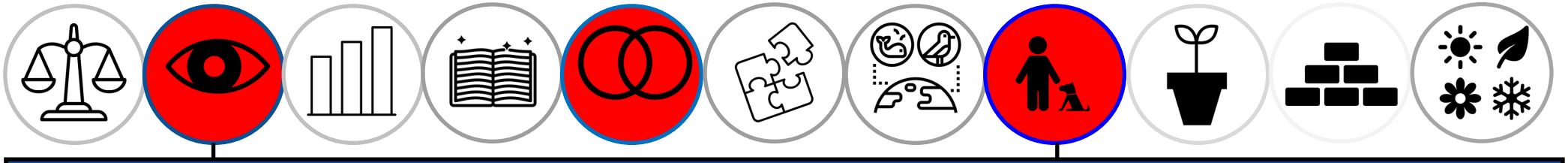
Year 1: Animals including humans

SCIENCE CONTEXT: Biology



KEY VOCABULARY:

Fish	Fish are **vertebrates (vertebrates have backbones) that live in water**. They breathe using special organs called gills.
Amphibian	Amphibians are **cold-blooded vertebrates (vertebrates have backbones) that don't have scales**.
Reptile	Reptiles are **cold-blooded vertebrates**. (Vertebrates have backbones.) They have dry skin covered with scales or bony plates.
Bird	Birds are **vertebrate animals that have feathers, wings, and beaks**.
Mammal	**Mammals include humans and all other animals that are warm-blooded vertebrates (vertebrates have backbones) with hair**.
Carnivore	A carnivore is an animal that **eats mostly meat, or the flesh of animals**.
Herbivore	A herbivore is **an animal hat feeds mostly on plants** .
Omnivore	An omnivore is **an animal that regularly consumes a variety of material, including plants, animals**
Senses	Senses refer to **the ability to see, taste, touch, smell, and hear**.

As Scientists we will...

- 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),
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Working scientifically:

- Identify and classify,
- Use observations and ideas to suggest answers to questions.

Key Questions

- *Show pictures of common animals and ask:* can you name these animals?
- What do animals eat?
- *Showing pictures of common animals, ask:* can you label the features or these animals?
- *Showing pictures of different parts of the body:* Can you label the parts of the body and describe what it does?

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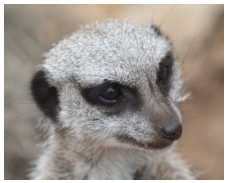
KEY VOCABULARY (continued):



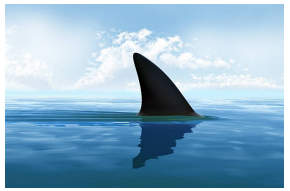
Head

Eyes

Ears

Teeth

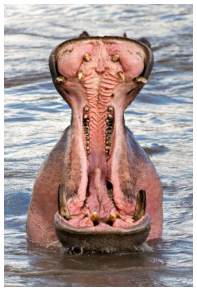
Wings



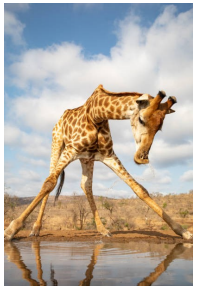
Fin

Hooves

Feathers



Mouth



Legs

Tail

Claws

Paws

Fur

Beak

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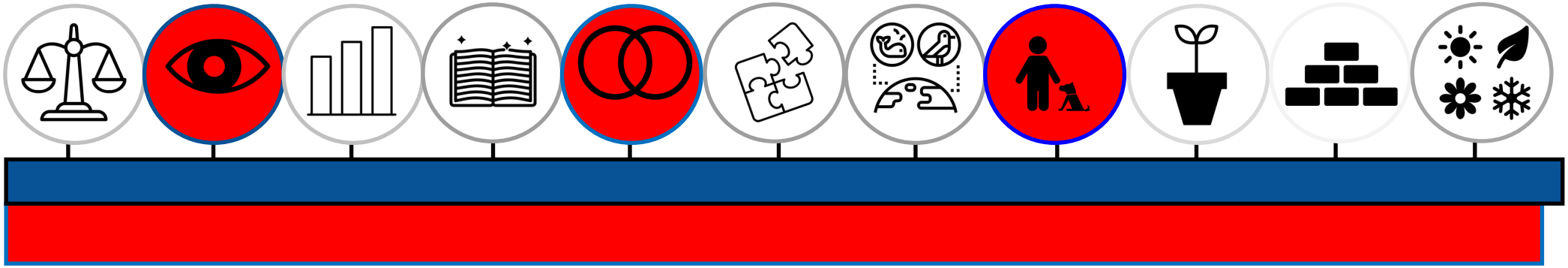

Prior learning:

Use all their senses in hands-on exploration of natural materials. (Nursery - Humans)

Name and describe people who are familiar to them. (Reception - Humans)

What I need to know:

Animals vary in many ways having different structures e.g. wings, tails, ears etc. They also have different skin coverings e.g. scales, feathers, hair. These key features can be used to identify them. Animals eat certain things - some eat other animals, some eat plants, some eat both plants and animals. Humans have key parts in common, but these vary from person to person. Humans (and other animals) find out about the world using their senses. Humans have five senses – sight, touch, taste, hearing and smelling. These senses are linked to particular parts of the body.

Opportunities for science capital:

- Walking with minibeasts workshop at We are the Curious.
- Visit from a vet, (potential for parents to come in).

Part of science capital includes scientific media consumption- documentaries, reports etc. So, I have added a couple of links which give daily science news for children. Checking in on these every now and then would be beneficial to help children see science in the wider world.

https://www.sciencenewsforstudents.org/

https://www.sciencejournalforkids.org/

Assessment:

By the end of this unit, pupils should be able to: 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); identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

When working scientifically, pupils will be able to: identify and classify and use observations and ideas to suggest answers to questions.

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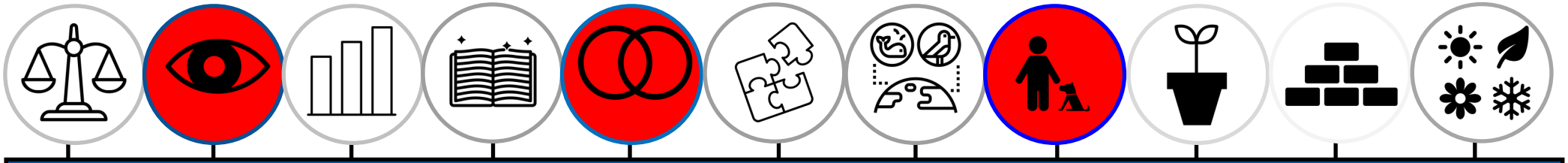

Theme 1: Animal classification

Starter:

Complete KWL grid

Substantive knowledge:

Introduce the 5 main groups of vertebrates with the tigtag video: https://www.tigtagjunior.com/film/vertebrates-and-invertebrates-TTJ00011/

Explain by looking for things that are the same, we can group animals! Write the names of the five vertebrate groups on the whiteboard, underneath each one, recap from the video things that were the same about animals in these groups. E.g:

Reptiles: scaly skin

Mammals: hair/fur

Amphibians: soft, wet skin

Fish: breathe underwater

Birds: have feathers

Can you add any more? Add to list.

Main:

Disciplinary knowledge

Grouping

Working scientifically objective: Identifying and classifying

Today we are going to be zoologists

Give children a small selection of pictures or plastic toys of different animals from all of the main vertebrate groups (ensure that these represent a true image of the animal). Children to identify and classify into fish, amphibian, reptile, bird and mammal and explain why they belong to that group. Prompt children to name animals and discuss their choices. Using a prepared chart or labels, children sort under the headings fish, amphibian, reptile, bird and mammal.

Plenary/Assessment:

Either take photo of classifying or stick pictures onto template (template: https://cdn-media.tigtagworld.com/tigtag-junior/learning-materials/02_animal_kingdom/activity_sheets/VertebrateGroups_ActivitySheet.pdf)

See TAPS full plan: Animal classification

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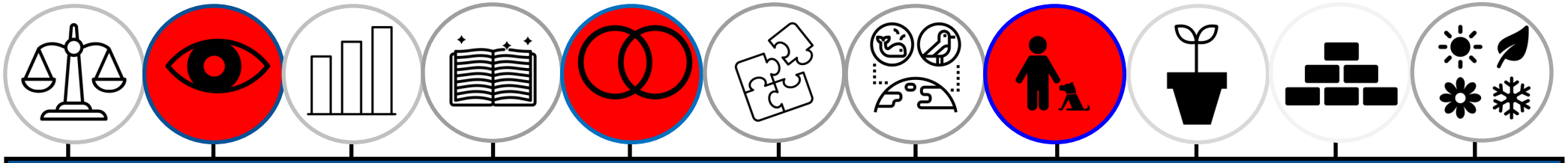

Theme 2: Food

Starter:

Recap: Explorify, odd one out

https://explorify.uk/en/activities/odd-one-out/baby-animals

Substantive knowledge

Watch video: https://www.tigtagjunior.com/film/what-do-animals-eat-TTJ00014/

Check understanding by asking:

What do we call animals that eat plants?

What do we call animals that eat meat?

What do we animals that eat both plants and meat?

Main:

Substantive knowledge

Ask the children to stand in a circle and give each child a herbivore, carnivore or omnivore sticker (roughly an equal number of each). Tell the children that they are going to play a game that will help them to remember the terms herbivore, carnivore and omnivore. Stand in the centre of the circle and explain to the children that you will call out the name of an animal and what it eats, for example, "I am a frog and I eat insects", and in this example all the children who have a sticker that says "carnivore" should take a step back from the circle and run in a clockwise direction around the circle and back to their place.

Examples: *I am a cow and I eat grass. I am a child and I eat beef and rice. I am a lion and I eat wildebeest and zebras. I am a panda and I eat bamboo. I am a bird and I eat berries and worms. I am a fox and I eat mice and*

Plenary/Assessment:

Disciplinary knowledge

Grouping

Working scientifically objective: Identifying and classifying

Ask the children to sort the animal images from the What do these animals eat? activity sheet into three groups: herbivores, carnivores and omnivores.

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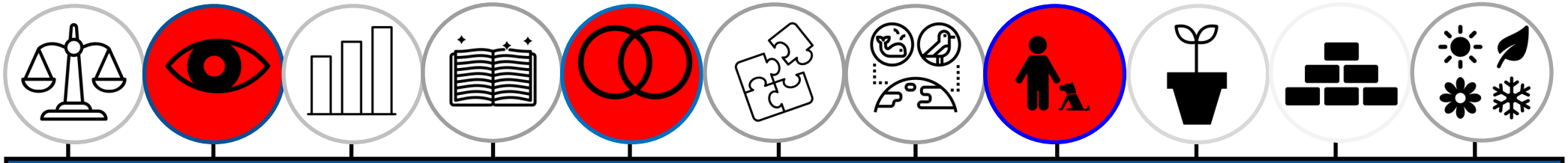

Theme 3: Animal structures

Starter:

Recap: Concept cartoon from: Science Discussion Starter A4.pdf

Which child do they agree with? Why do they agree with them? Can they give examples of animals to back up their answer? Record children's comments on post-it-notes.

Display key vocab from page 2. Generate a class list of questions about the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). Start by prompting with a question e.g. do all animals have claws? Do all animals have tails?

Main:

Disciplinary knowledge

Grouping and comparing

Working scientifically objective: using their observations and ideas to suggest answers to questions

Provide children with a range of pictures of different animals, including common pets. Tell children you are going to observe the photos and use a venn diagram to help you answer your question list. Pick two question headings e.g. claws and wings. Model using a venn diagram to group and compare SOME of the photos into animals that do have claws, those that have wings and those that have both.

Using hoops organized into a venn diagram, allow children to observe the remaining photos in groups and sort into the venn diagram. Check children's understanding.

Plenary/Assessment:

Now children have an understanding of the structure of different animals and how to compare them using a venn diagram, children do a similar activity, but independently, not in groups.

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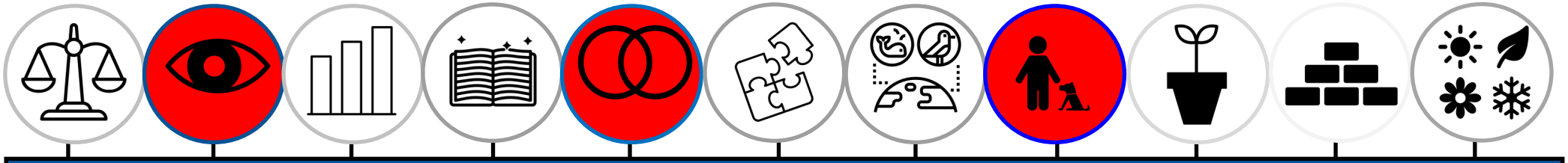

Theme 4: Body parts

Starter:

Recap: Hard, harder, hardest:

Hard: name an amphibian, a reptile, a mammal, a fish, a bird.

Harder: name two animals with a beak, two animals with claws, two animals with gills, two animals with hooves.

Hardest: name a herbivore, a carnivore, name a omnivore.

Watch the video and complete the two quick activities: https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zsbntrd

Main:

Disciplinary knowledge

Working scientifically objective: Use observations and ideas to suggest answers to questions

Today you are an anatomist.

Play body part games e.g. Heads, shoulders, knees & toes, Simon says etc.

What parts of the body do you know? Point to parts on themselves or others.

Could look closely at body parts using magnifying glasses / mirrors (mouth, eyes, ears, noses) – are they all the same? What are these parts for?

Plenary/Assessment:

Ask children to create a model (e.g. play dough or clay) of the human body and label the parts (head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth).

Describe which part is associated with each sense and explain what we use each sense for. Could label with different coloured paper or on a class/group model.

See TAPS full plan Body parts

Complete KWL