Auckland Zoo Education Pack

Secondary

Theme: Adaptations

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Zoo Lesson plan

Theme: Secondary (ages 12-17) **ADAPTATIONS TO HABITAT**

What will I learn: How adaptations allow animals to survive in their habitat.

Inspire

Watch our Zoo Tales to find out how animals like our flamingos, spider monkeys and geckos are adapted to their habitats.

Use the **Adaptations Vocab List** provided to learn more about animal adaptations (resource attached).

Explore

Spider monkeys have four fingers and no thumb! How is this useful in their forest habitat?

Monkey Business! - make a list of regular tasks and see how many you can complete without using thumbs (e.g. tie laces, brush teeth).

Fun with **Venn Diagrams!** (resource attached)
- Comparing **meerkat/giraffe** adaptations.
- Comparing **human/spider** monkey adaptations.

Act

Watch this video to learn about our spider monkeys and issues in their natural habitat.

Conservation Tip: look for the FSC logo when shopping for toilet paper to help sustain South American rainforests.

Create

Animals like red pandas and tigers live on their own, but sometimes it is important for them to find each other and often they do this by leaving scent messages.

Watch How do we Smell and then try this easy experiment: **Super Sniffer** (resource attached).

Try leaving a **Scent Trail** for someone in your whānau to follow. Watch Jaka's Favourite Things for some inspiration (resource attached).

Reflect

Watch Can wildlife adapt to climate change

Investigate 3 of your favourite habitats. Think about how they are changing over time (naturally or due to human influence). How can changes in a habitat affect an animal's ability to survive?

Curriculum links:

Lessons include a range of aspects from the main strands of the NZ Curriculum English, the arts, health and physical education, learning languages, mathematics and statistics, science, social science and technology.

They also consider the Key Competencies Thinking, Using language, symbols and text, Managing self, Relating to others, Participating and communicating.

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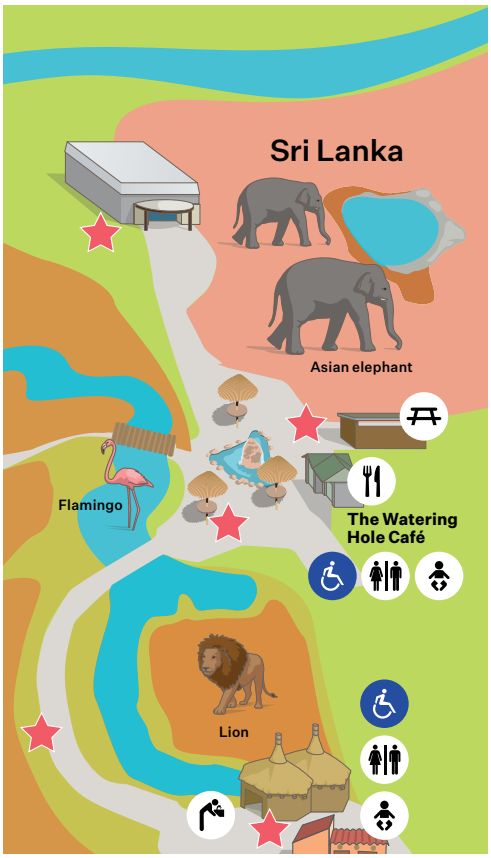
Scent trail

Animals like red pandas and tigers live on their own, but sometimes it's important for them to find each other.

Scent marking is one way animals can send messages to each other. Try leaving a scent trail for someone in your family to follow by following the steps below.

Tools

A smell
e.g. a spice like cinnamon or a perfume



What to do

1. Draw a map of your garden and decide on the path your scent trail will take.
2. Sprinkle spice or spray perfume on things along the path – branches, grass, structures. Remember to mix it up! Place the smell up, down and all around!
3. Ask someone in your whānau to "follow" the scent trail.
4. Can they mark where they found the scents on your map? Who in your family has the best sense of smell?

Design a scent trail for your pet!

Watch Jaka's Favourite Things for some inspiration.

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Super sniffers

Many animals have an amazing **sense of smell** which helps them to **survive** in their habitats. Our sense of smell may not be as good, but it's still important for how we perceive the world. Find out how below.

Tools

- Some powdered spices
  e.g. cinnamon, cocoa, nutmeg, cloves
- Enough cups for each spice
- Water

Instructions

1. Put a pinch of spice (e.g. cinnamon) in a cup. Do this for each spice using a new cup each time.
2. Add a couple of drops of water to each spice and stir.
3. Close your eyes. Ask your helper to carefully dip the cotton wool bud into one of the cups and place the spice and water mixture on your tongue. No peaking!
   Can you guess which spice it is?
4. Repeat the experiment again but plug your nose.

Reflect

- What did you notice when you plugged your nose?
- Watch this to find out more How do we smell?

Please remember to throw away/wash thoroughly, any item that has been in your mouth. Do not use the same item in another person's mouth, as we do not want to spread germs! Stay safe!

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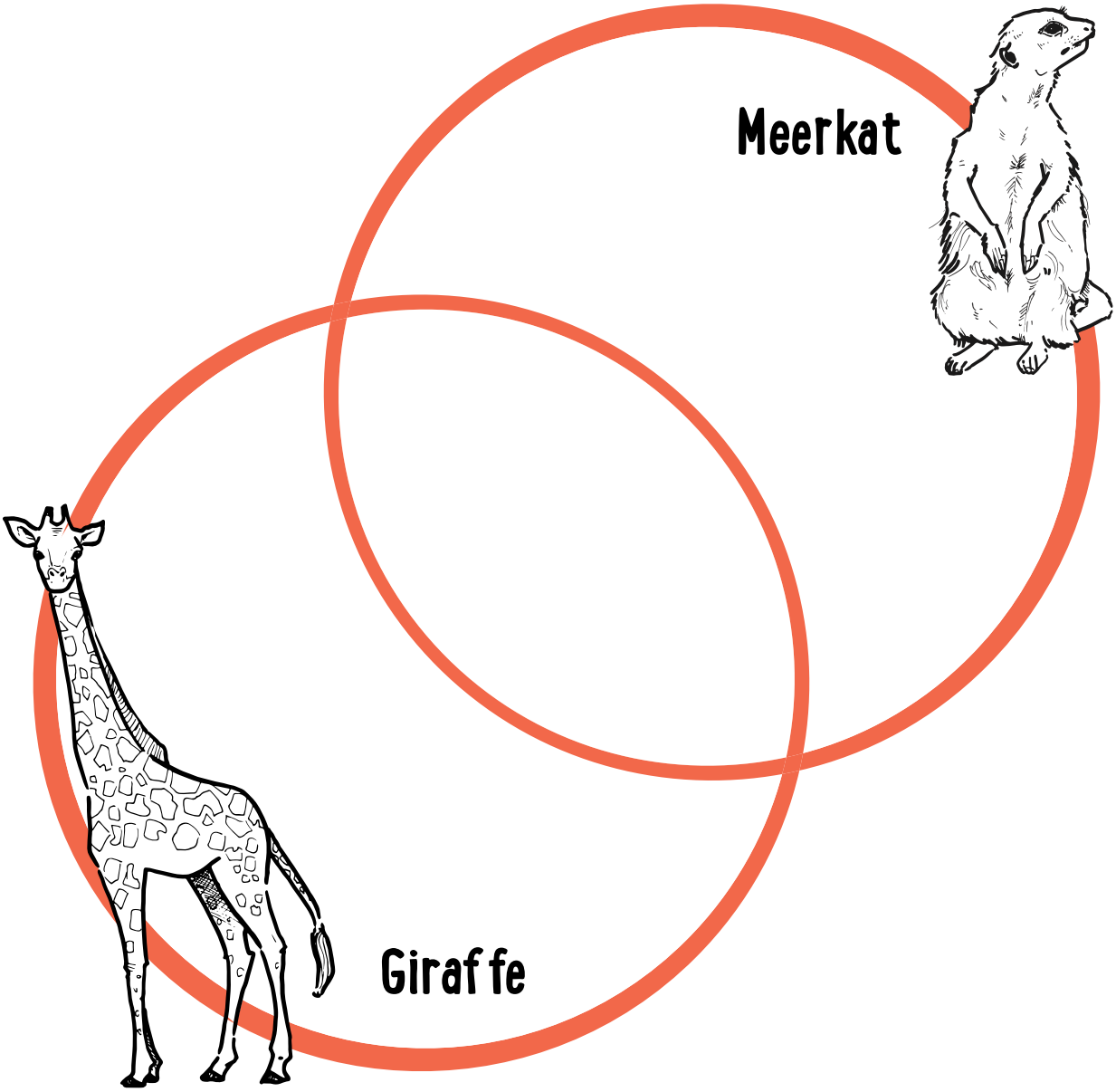
Comparing adaptations

Giraffes and meerkats can both be found in African desert habitats, but look and behave very differently.

Using this Venn diagram, **compare** and **contrast** the **adaptations** that allow these animals to survive in their African savannah habitat.



Explore the Zoo Tales videos and the National Geographic website to learn more about giraffe and meerkat adaptations.

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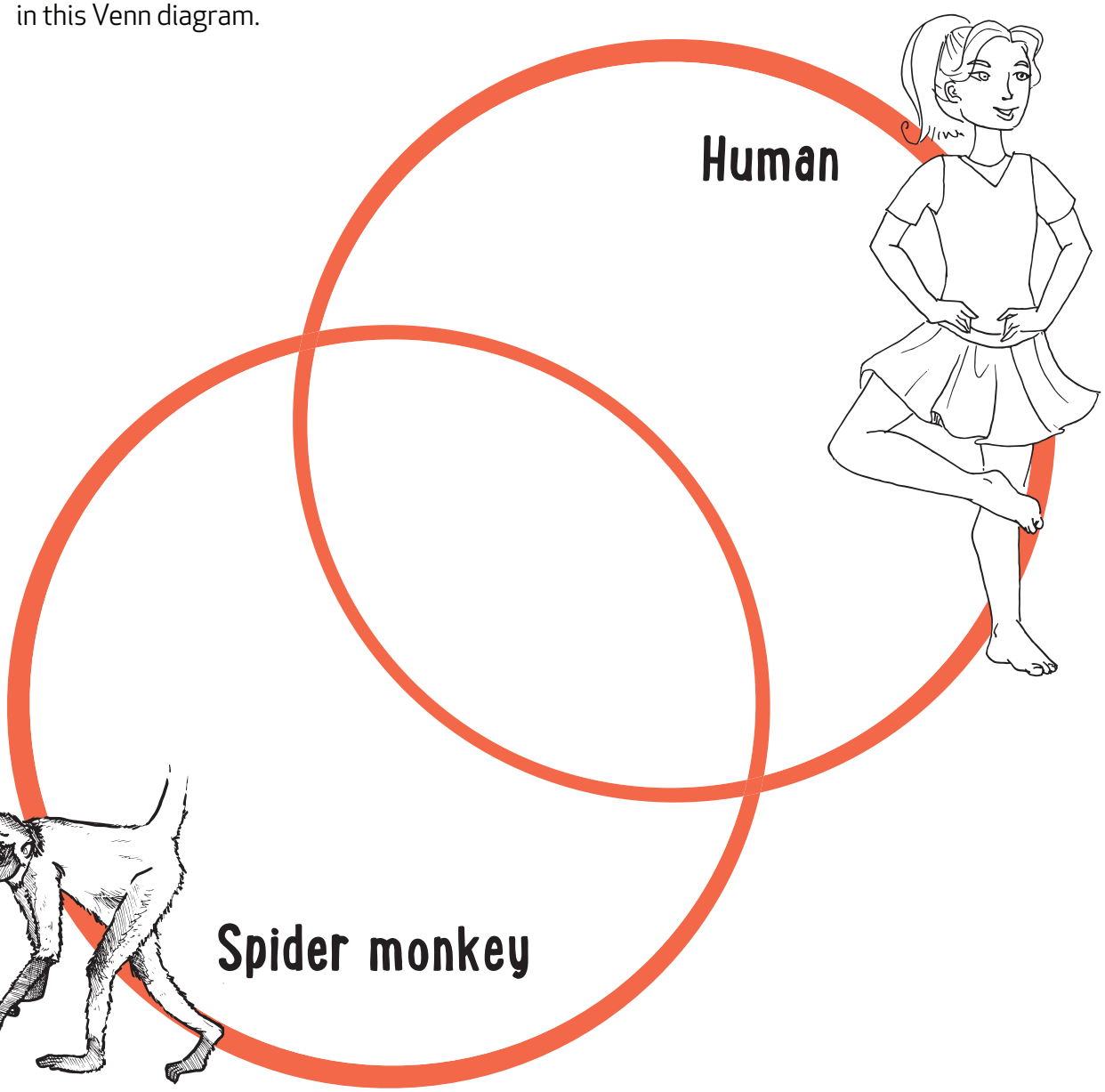
Comparing adaptations

Monkeys and humans are similar in many ways but live in very different places.

Compare and **contrast** the habitat and adaptations of these two animals in this Venn diagram.



Extras for experts

Give the spider monkey a prehensile tail

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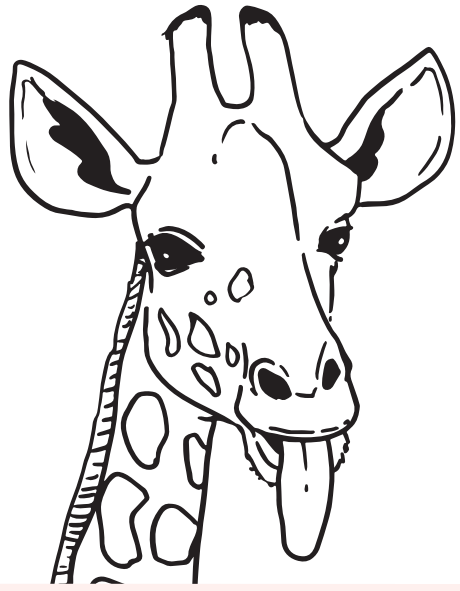
Adaptations

Essential words

Adaptation	A body part, feature or behaviour that helps an animal or plant succeed in its environment
Habitat	The place where animals and plants live and connect with each other
Camouflage	A way of hiding something by colouring or covering it to look like its surroundings, some living things also change their behaviour too
Carnivore	An animal that eats other animals
Herbivore	An animal that eats plants



Extras for experts

Predator	An animal that catches and eats other animals
Prey	An animal that is caught and eaten by another animal
Nocturnal	Animals who are most active during the night
Diurnal	Animals who are most active during daylight
Omnivore	An animal that eats a variety of animals and plants
Observation	Learning through careful watching, then recording what we see over time
Scientist	A person who asks questions about the world and finds evidence and researches to understand
Behavioural adaptation	Actions of an animal that help them to survive in their habitat
Structural adaptation	Features on an animal's body that help it to survive in their habitat

Prehensile

Many animals have developed prehensile body parts. What does prehensile mean? How can this adaptation help different animals?

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