

CURRICULUM FOCUS: LIFE CYCLES

KANGAROO (Kangaroo Country)



SOUTHERN CORROBOREE FROG
(Cool Conservation in Fighting Extinction Aviary)



Key Questions:

- Look at the signs around the red kangaroo exhibit. What is the kangaroo's life cycle?
- There is something very special about a female kangaroo and her pregnancy. See if you can find the answer.
- Visit the *Pouch House* in Kangaroo Country. Look at the signs to find out how a joey grows?
- What do joeys look like when they are first born and what is the first thing they must do when they are born?
- Kangaroo mums are very clever. How many joeys can they have at once? Look at the signs in *Pouch House* to find out.
- How do joeys recognise their mum when they are out of the pouch?

Photo evidence: Can you find a cosy pouch to curl up and stay safe in? Take a photo as evidence.

ANSWERS

- Kangaroos are marsupials - mammals that give birth to underdeveloped young after a very short gestation period and then keep their young in a pouch.
- Female kangaroos can pause their pregnancy called 'embryonic diapause' if environmental conditions are not favourable to raise a joey.
- Females give birth to a single jelly bean- sized joey, around 33 days after mating.
- The joey will climb up its mother's belly after mating and into the pouch where it begins to suckle from one of the teats. It remains attached and the milk changes to meet its needs as it grows.
- At about 6 months the joey leaves the pouch for short periods at a time and is permanently out by 8 months
- Kangaroo mothers can have up to three joeys at once- one out of the pouch at foot, one in pouch and one as an embryo.
- Joeys recognise their mum by their scent.

Key Questions:

- Look at the signs around the *Cool Conservation* area. What is the Corroboree frog's life cycle?
- Female frogs are very fussy about choosing a mate. How do they find the right one?
- Look around the exhibit. Where do female corroboree frogs lay their eggs?
- Who looks after the eggs and helps them to grow?
- Frogs have an interesting life cycle. How long does it take for a Corroboree frog to grow into an adult?
- How do Zoos Victoria keepers help the eggs to hatch?
- Why are Southern Corroboree Frogs endangered?
- How can you help save them?

Indigenous Culture link: A *corroboree* is a special ceremony that is performed by many Indigenous tribes. A corroboree frog's yellow and black markings look similar to the body paint used in Aboriginal corroborees.

Photo Evidence: Do your best hip hop corroboree frog dance moves and take a photo as evidence.

ANSWERS

- During summer the male frogs look for water logged areas in which to build small mossy nests.
- From January to March, the males call to attract females to their nest. Females are attracted to the males with the best call.
- Females lay 20-30 large fertilised eggs in the male's burrow.
- The eggs have to wait for heavy autumn/winter rain to help them to hatch.
- The male looks after the eggs.
- Corroboree frogs have a slow life cycle- it takes 4 years for a tadpole to grow into an adult.
- Keepers helicopter to remote release sites and place the eggs in special pools to hatch and metamorphose into young frogs which then make their way into the wild. This keeps them safe from predators in the early part of their life cycle.
- They are endangered due to habitat loss, climate change and a deadly chytrid fungus which spreads through soil and waterways. It damages their skin so they cannot survive.
- Help save Corroboree frogs by riding or walking to school, keeping the heater below 21 degrees and switching off power points/lights to help save energy.

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TASMANIAN DEVILS (near Animals of the Night)



- Look at the signs around the Tasmanian devil exhibits. What physical features do they have that help them survive in the wild?
- There is something amazing about the joeys that a female devil has. How many does she have and how big are they when they are first born?
- How are Tasmanian devils similar to kangaroos?
- How long do Tasmanian devil joeys stay in the pouch?
- How do the joeys learn how to feed when they are outside of the pouch?
- Why are Tasmanian devils endangered?
- How can you help save the Tasmanian devil?

Photo Evidence: Having ‘jaws of steel’ means that you can survive eating dead things like road kill. You can crunch, munch and grind your way through meat, bones, hair-the lot! Show your best muscle pose and take a photo as evidence.

ANSWERS

- Tasmanian devils have very strong jaws and sharp teeth to help crush bones and tear meat.
- Their dark markings help them to camouflage at night time (nocturnal species).
- Tasmanian devils are marsupials. They give birth to around 30 joeys but only 4 survive because the mother has only 4 teats. They are the size of a grain of rice when they are first born.
- Tasmanian devils are like kangaroos because they are marsupials that have a pouch.
- Joeys latch onto the teat in the pouch until around 4 months old. At around 9 months old they leave the pouch.
- Joeys learn how to feed by watching their mum drag carcasses back into the den.
- Tasmanian devils are endangered due to Devil Facial Tumour Disease which are large sores that develop around the face, neck and mouth of the devils.
- The disease develops rapidly and kills the infected devil within 6 months.
- Help save them by telling their story and switching to 100% recycled toilet paper to save their habitat.

HELMETED HONEYEATER (Fighting Extinction Aviary)



- Observe the helmeted honeyeater in the Fighting Extinction Aviary. What physical features do helmeted honeyeaters have to help them survive in the wild?
- Helmeted honeyeaters build nests to keep their eggs in. Look for clues in the signs about how they build their nests.
- Our keepers collect certain things to help the Helmeted Honeyeater ‘feather’ their nests. What are they?
- Why are helmeted honeyeaters endangered?
- How can you help save the helmeted honeyeater?

Photo Evidence: The Helmeted Honeyeater’s ability to fly with speed is critical for survival in native forests to help it escape from predators. Do your best fast flying aerodynamic pose and take a photo as evidence.

ANSWERS

- Helmeted honeyeaters have a brush-tipped tongue and long beak to dip into flowers to get nectar.
- Their quick flight helps them to escape predators such as birds of prey and protect their territory by chasing other birds.
- Its olive green and yellow colour helps it to camouflage into the canopy.
- Helmeted honeyeaters usually lay 1-2 eggs.
- In the wild, their nests are woven from spiders’ webs, feathers and dried grasses and lined with soft fibres.
- At the Sanctuary keepers collect dingo fur, emu feathers and cobwebs to help them feather their nests.
- Females do most of the nest building, and incubating of eggs and males defend the nest.
- Threatened by habitat loss due to land clearing, bushfire and competition from introduced birds.
- Less than 200 in the wild.
- They are the bird emblem of Victoria and only found in one place in Victoria- Yellingbo Nature Reserve.
- You can help save helmeted honeyeaters and their habitat by switching to 100% recycled toilet paper.

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ECHIDNA (Koala Forest)



- Observe the echidna in its habitat. What features do echidnas have to help them survive in a bushland habitat?
- Look for clues around the echidna exhibit. What is an echidna love train?
- Echidna's have a very special way of feeding their young. They create a temporary pouch. Can you find out how they do this?
- What is a puggle and how do they suckle milk from their mother?
- How does mother echidna make sure she doesn't get pricked by her puggle's spines?

Indigenous Culture link: The Dreaming story of Kubaroo (koala) is located further on from the echidnas, up along the board walk of Koala forest.

Photo evidence:

Find the echidna love train and take a photo with it.

- Echidna's have long claws for digging, long sticky tongues and electro receptors in their nose to help them find food. They have spines to protect themselves from predators such as birds of prey and hair under their spines to keep them warm.
- During winter, lines of up to 11 male echidnas can follow a single female hoping that she will choose one of them to mate with.
- Female echidnas develop a temporary pouch to keep their egg in. They do this by tightening their stomach muscles.
- A puggle is a baby echidna.
- The female builds a nursery nest to keep her baby in as it gets bigger and starts to grow its spines.

LYREBIRD (RACV Lyrebird Aviary)



- Look around the aviary. What features do lyrebirds have to help them survive in a dense forest habitat?
- How do males impress the female before mating?
- How many eggs do the females lay and how do they look after them?
- What do lyrebird chicks eat?
- How can we help to save lyrebirds?

Indigenous Culture link: Look for the story of the Mist people as you enter the Lyrebird aviary. Find out about Indigenous plants and their uses as you wander along the path.

Photo evidence: Did you walk through an impressive *giant bower* on the way into the aviary. What is a bower? Take a photo under it on your way out.

- Lyrebirds have long claws to help them scratch through leaf litter to find insects and worms to eat.
- Their brown feathers help them to camouflage into the trees at night and into the forest floor during the day.
- Males dance on a mound of dirt and shimmer their tail over their head to impress the female. They mimic the calls of other birds to impress her.
- Females build a nest and lay a single egg in it.
- Females build a nest to incubate their eggs and keep them warm.
- Help save lyrebirds and their habitat by switching to 100% recycled toilet paper.

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LACE MONITOR (Woodlands Walk)



- Lace monitors have a very special way of laying their eggs. Look at the clues around the exhibit to find out how.
- Why would a mother bury her eggs in a termite nest?
- How does the nest assist the development of the eggs?
- How do the hatchlings get out of the termite nest?
- What type of animals would eat the hatchlings?
- How can you help save lace monitors?

Photo evidence:

Can you poke your tongue in and out like a goanna and taste the chemicals in the air! Take a photo as evidence.

- Lace monitors are one of Australia's largest lizards. They can grow up to 2m in length.
- Their scales help them to camouflage and also act as solar panels to help them absorb the sun's rays and warm their body.
- They are fast runners and have large claws which are used for hunting and climbing.
- Lace monitors live alone, except during breeding season and are very clever when it comes to laying eggs.
- The female makes a hole in a termite mound and lays her eggs inside (4 to 14 eggs).
- The termites repair the hole and then the eggs lay incubated and undisturbed until they are ready to hatch 12 months later.
- The mother returns to the nest after 12 months and digs the hatchlings out of the termite mound.
- Large owls and birds of prey eat young lace monitor hatchlings.
- Switch to 100% recycled toilet paper to help save their habitat because they rely on trees to live in and to escape predators.

PLATYPUS (World of the Platypus)



- Platypus are a special type of mammal. What are they called?
- Observe the platypus in its habitat. What physical features do they have to help them survive?
- Look around at the signs in *World of the Platypus* and find out where platypus lay their eggs.
- Keep looking- How does a female platypus keep her eggs warm?
- How do the young platypus grow?
- How old are platypus when they leave the burrow?
- How do platypus choose a mate?
- What are platypus threatened by and how can you help save them?

Indigenous Culture link: The Dreaming Story of Woterang (the platypus) is located next to the Woterang totem pole at the entrance to the Platypus arena.

Photo evidence:

Can you make a public pledge to help save platypus? Look for a large sign with bubbles and take a photo in front of it.

- Platypus are mammals that lay eggs called monotremes. Echidnas are the only other monotreme to exist.
- Their webbed feet help them to swim and their thick fur traps air which helps to keep them warm when they are in the water.
- Platypus cannot breathe underwater, they hold their breath for two minutes and use their bill to forage for food on the bottom of the creek bed. They can find their prey such as worms and yabbies by touch and using the electroreceptors in their bill which pick up the electrical signals of their prey in the water.
- Platypus lay their egg in a ball shaped nest made of leaves and grass dug into the bank of the river or creek.
- A female platypus keeps her eggs warm by pressing them against her belly with her tail.
- In winter breeding season, males court females for a few days. When she chooses a mate, they swim side by side and circle repeatedly, nose to tail.
- Platypus are affected by pollution in the waterways- they can become entangled in plastic or accidentally ingest it thinking that it is food. Detergents that wash down your drain can also affect the water quality of local waterways.
- Reduce your use of single use plastic and use bubbles instead of balloons outdoors to help save the platypus.