



Survival and Adaptations! Year 5 Science at Home

You can help! Australia has some of the most amazing animals on Earth — and your child is learning exactly WHY they look and behave the way they do. Great to explore outside or while watching nature documentaries together!

Why are we learning this? Amazing creatures of the north

The Top End is one of the most biodiverse regions in Australia — home to extraordinary animals found nowhere else on Earth. First Nations families have deep knowledge of these animals: which tracks to follow, which animals signal the start of the wet season, which fish spawn at certain times. This knowledge is ecological science — understanding how animals are adapted to their environment and how they behave across the seasons. When your child studies adaptations, they are learning the scientific framework behind knowledge that First Nations peoples have held for thousands of years.

My child will learn to:

✓ What is an adaptation?

Explain that an adaptation is any feature or behaviour that helps a living thing survive in its environment.

✓ Behaviours

Describe things an animal does to survive — nocturnal behaviour, burrowing, migrating — and explain why.

✓ Structural features

Describe the physical body parts of an animal — things you can see — and explain how they help survival.

✓ Match to habitat

Explain how an animal's adaptations are suited to the specific habitat it lives in.

Big ideas to know:

What is an adaptation?

An adaptation is any feature or behaviour that helps a living thing survive in its environment. Every part of an animal has a reason — shaped by evolution over millions of years. Thick fur keeps animals warm in cold climates. Big ears help animals hear predators. Camouflage colouring hides animals from predators or prey. These features are not accidents — they are the result of natural selection over many generations.

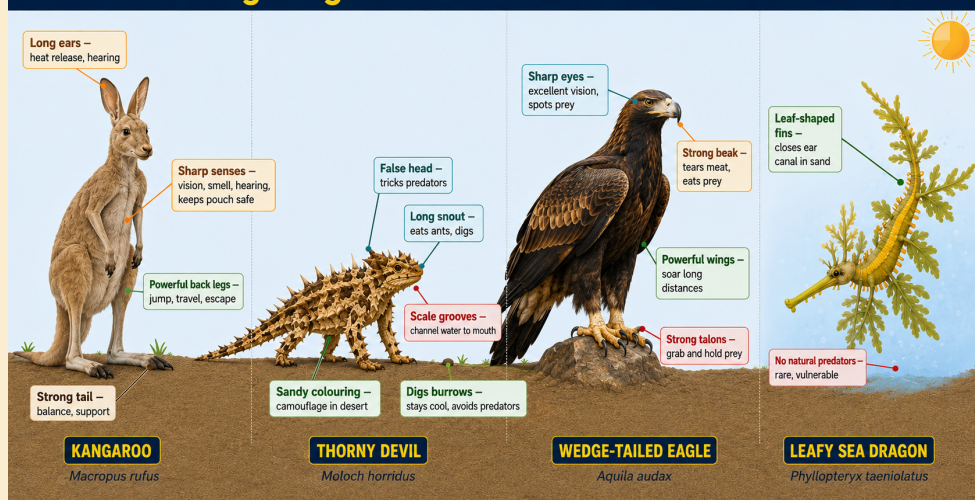
Structural features

These are physical body parts — things you can see and touch. Examples: sharp claws for hunting, thick fur for warmth, long legs for speed, camouflage colouring for hiding, a pouch for carrying young, big eyes for seeing at night, webbed feet for swimming. Every structural feature helps the animal survive in its particular habitat.

Behaviours

These are things an animal does to survive. Examples: coming out only at night (nocturnal) to avoid daytime heat and predators; migrating to follow food and water; burrowing underground to escape extreme temperatures; travelling in mobs for protection. Many animals in the Top End are nocturnal — a key adaptation to the intense heat up here.

How living things are built to survive – Australian Animals





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Animals of the north and their adaptations

Animal	Habitat	Key adaptations and why they help
Red kangaroo	Open grassland and scrub	Strong back legs for speed and escape; pouch for young; large ears detect sound and release heat; grey-brown coat for camouflage
Bilby	Arid areas; burrows underground	Huge ears for night hearing and heat release; long claws for burrowing; nocturnal to avoid daytime heat; excellent night vision
Thorny devil	Desert sand and scrub	Spiny skin collects dew for drinking; colouring matches desert sand; false "head" on neck confuses predators; absorbs water through skin
Saltwater crocodile	Estuaries and rivers of the north	Armoured scales for protection; eyes and nostrils on top of head for ambush; uses sun to warm body; powerful tail for swimming
Barramundi	Tropical rivers and estuaries	Changes sex as it ages; streamlined body for fast swimming; silver scales for camouflage in water; tolerates salt and freshwater

Think Like a Scientist — Spot an Adaptation

Find an animal — outside, at the zoo, or on TV. Look closely at its body and ask: what does it have that seems unusual? Big ears? Thick skin? Camouflage? What does that feature help the animal do?

Ask: "Why does it have that? What does it help the animal do? Where does this animal live?" There are no wrong guesses — encourage your child to think it through, then look it up together!

You will need: (Materials)

- Paper and pencil (for sketching the animal and its features)
- Magnifying glass (for observing small animals up close)
- Phone or tablet (for looking up animals — optional)
- Outdoor space to observe real animals (optional)

Steps for observing adaptations:

1. OBSERVE: Look closely at the animal's body — what stands out?
2. NOTICE: What does it have that seems useful? Big ears? Thick skin? Claws?
3. WONDER: "Why does it have that? What does it help the animal do?"
4. CONNECT: "Where does this animal live? How does that feature help it survive there?"
5. RESEARCH: Look it up online — confirm (or correct) your ideas!

Questions to ask your child

1. Why do you think a kangaroo has such powerful back legs?
2. How do a bilby's huge ears help it survive at night and in the heat?
3. What is camouflage? Can you think of an animal up here that uses it?
4. What is the difference between a structural feature and a behaviour?

5. Why do you think some animals only come out at night?
6. If an animal has thick, waterproof skin and lives near water, what adaptations might it have?
7. Can you think of how a plant might adapt to survive in a very dry habitat?

Look up "Australia's amazing animals" online with your child — incredible videos about thorny devils collecting dew through their skin, bilbies navigating in complete darkness, and barramundi changing sex. The real stories of adaptation are more fascinating than anything you could make up!

Key words to know:

Adaptation	A feature or behaviour that helps a living thing survive in its environment
Structural feature	A physical body part that helps an animal survive — e.g. claws, fur, ears, pouch
Behaviour	Something an animal does to survive — e.g. being nocturnal, migrating, burrowing
Habitat	The natural place where an animal or plant lives — e.g. desert, tropical river, ocean
Camouflage	Colours or patterns that help an animal blend into its surroundings to hide
Nocturnal	Active at night rather than during the day — a common adaptation to heat and predators
Natural selection	The process where animals with helpful features are more likely to survive and pass those features on

Key words to look up

Adaptation · Structural feature · Behaviour · Habitat · Camouflage · Nocturnal · Natural selection

What school will check

By the end of Year 5, your child needs to describe structural features and behaviours as adaptations, explain how they help living things survive, and connect specific adaptations to specific environments.

Try it at home!

Next time you see a local animal — a bird, lizard, insect or even a plant — ask together: what adaptations does it have? What does each feature help it do? You might be surprised how much your family already knows from living on Country!

