



Habitats & Ecosystems

How Living Things Interact with Their Environment

Stage 3

NSW Stage 3 Outcomes:
ST3-4LW-S · ST3-2DP-T · GE3-1 · GE3-2 · EN3-1A · EN3-6B · MA3-18SP · CA3



WHAT DO ANIMALS NEED?



What Do Living Things Need to Survive?

All living things depend on access to:

- food (energy)
- water
- shelter
- suitable environmental conditions

These are known as survival requirements.

If one requirement becomes limited, it can affect the survival of the organism.

Which requirement is most likely to limit survival in an ecosystem? Why?



Cause & Effect

Complete:

Requirement	Impact if limited
Food	
Shelter	
Water	

Explain which requirement is most critical in a drought environment and why.

WHAT IS A HABITAT?



What Is A Habitat?



A habitat is the natural environment where a living thing lives.

It includes:

- biotic factors (living things)
- abiotic factors (non-living conditions such as temperature, water and soil)

These factors interact to support life.

How do abiotic factors influence the types of organisms that can live in a habitat?

Draw a habitat diagram and label: at least 3 biotic factors, and at least 3 abiotic factors



TYPES OF HABITATS

Different Habitats & Ecosystems

Habitats vary depending on climate, vegetation and available resources. Ecosystems are made up of interactions between living and non-living components within a habitat.

Why do ecosystems differ across Australia?

Compare two habitats

Feature	Habitat A: _____	Habitat B: _____
Climate		
Resources		
Organisms		

DISTRIBUTION OF ORGANISMS

Where organisms live

Organisms live in environments where their needs are met. Some species are widely distributed, while others are restricted to specific habitats.



What factors determine where a species can live?

Explain why one animal (e.g. koala or platypus) is found in a limited range.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. In the bottom-left corner, there is a small, detailed illustration of a bird's head, possibly a duck or goose, facing right. The bird has a dark cap and a long, pointed bill. The entire sheet is framed by a thin black border.

ANIMAL ADAPTATIONS

Adaptations & Survival

Adaptations are structural, behavioural or physiological features that improve an organism's chances of survival and reproduction.



How do adaptations develop over time?

Activity: Classify & explain

Identify:

- one structural adaptation
- one behavioural adaptation

Then explain how each supports survival.

Compare the adaptations of two animals from different habitats.



INTERACTIONS IN ECOSYSTEMS

Ecosystem interactions

Organisms in ecosystems interact in a variety of ways, including:

- feeding relationships
- competition for resources
- dependence on other species

How are organisms dependent on each other?

Activity:

Create a simple food chain using a zoo animal.

Example:

Plant → insect → animal

_____ → _____ → _____

Explain what would happen if one part of the chain were removed.



HUMAN IMPACT

Human impact on habitats

Human activities can alter ecosystems.

These include:

- habitat destruction
- pollution
- introduction of species
- climate change

Conservation aims to reduce these impacts.

Which human activity has the greatest impact on ecosystems?

Activity:

Complete:

Human activity → Ecosystem impact → Effect on animals

_____ → _____ → _____

Suggest one strategy to protect a habitat.



AT THE ZOO (OBSERVATION TASK)

Use the zoo as a real-world learning environment.

Choose one animal and record:

- **Habitat features**
- **Behaviour observed**
- **Possible adaptation**
- **Explanation**

[illegible]

ZONE: TRICKY TONGUES & TREETOPS

FEEDING RELATIONSHIPS

Animals depend on food sources within their habitat.

THINK...

How does diet affect survival?

ACTIVITY...

Create and explain a food chain including a zoo animal.

ZONE: DAINTREE RAINFOREST

RAINFOREST ECOSYSTEM

Rainforests support complex ecosystems with high biodiversity.

THINK...

Why are rainforests rich in biodiversity?

ACTIVITY

Explain how animals contribute to rainforest ecosystems.

ZONE: KANGAROO WALKABOUT

KANGAROO

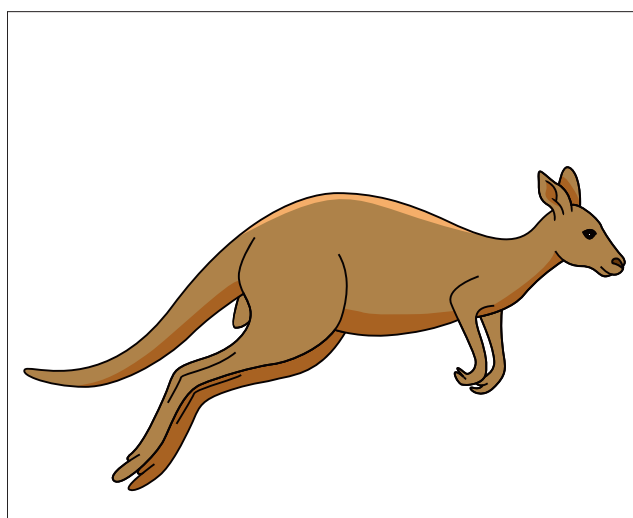
Kangaroos are adapted to open environments where movement is essential.

THINK...

Why is hopping an effective adaptation?

ACTIVITY...

Explain how the kangaroo's movement supports survival.



ZONE: NIGHTFALL

NOCTURNAL BEHAVIOUR

Nocturnal animals are active at night to improve survival.

THINK...

What advantages does nocturnal behaviour provide?

ACTIVITY...

Explain how being nocturnal reduces risk.



ZONE: CROCODILE BILLABONG

CROCODILE

Crocodiles are aquatic predators that rely on water-based ecosystems.

THINK...

How does this habitat support hunting?

EXPLAIN...

Explain how the crocodile's features make it a successful predator.



AFTER THE VISIT

Reflection Activity

Describe one animal you observed and explain:

its habitat

its adaptations

how it survives

[illegible]

DATA & ANALYSIS

Activity

Collect class data on favourite animals.

Analyse:

- Which was most common?
- Why might this animal be popular?

MY FAVOURITE ANIMAL IS _____.

EXTENDED TASK

Protecting habitats

Write a short paragraph:

“How can humans protect animal habitats?”

Include:

- one problem
- one solution
