Arid South Australia

Explorers' Guide

This is a sample of the *type* of booklets your students can borrow and use when visiting the museum.

It contains information about animal adaptations in arid environments. However, **the students' booklets are not exactly like this one.** Their booklets come in sets. Between *all* the booklets in a set the students will have all the information available, but each individual booklet has some bits missing.

Students must collaborate with the other members of their group to get all the facts they need. Four students in each collaborative group is ideal. **Please ensure students have their own paper to write on.**

Find the *Stony Desert*

Inland Taipan

This snake is probably the deadliest snake living on land. It kills rats, mice and birds with a single bite. After biting them it waits for them to die before returning to eat them. That way the rats and other animals cannot fight back.

Animals that use poison in bites or stings are called venomous animals.

Find three more animals in any of the desert display cases that you think might be venomous and write down their names.

When you get back to school check to see if you were correct.

Find the big Kangaroo in *Desert Grasses*

Red Kangaroo

The Red Kangaroo is Australia's largest living native mammal.

Kangaroos hop rather than run. At low speeds this way of moving uses the same energy as running on all fours, but at high speeds hopping saves energy.

The muscles and tendons in the kangaroo's hind legs act like springs, bouncing the animal along.

Look in nearby displays to make a list of three adaptions other animals have to help them move.

Look at the little video screen near the kangaroos. Why is the scientist cutting open the kangaroo that has been killed by a passing car?

Look for fish living in *Desert Rivers*

Lake Eyre Callop

Lake Eyre Callop are fish that live in deserts. Luckily there are always a few waterholes in the dry desert rivers and the Callop live there.

Flooding rains are very rare in the desert, but they do happen sometimes. After heavy rain the Callop swim to new waterholes and breed. After the flood the desert rivers dry up and the Callop are stuck in their small waterholes again.

In this display there is a mammal – a furry animal.
It is also well adapted to living in water.
What body parts are adapted for living in water?
[Hint – Look it up on the screen.]

Find the Dingoes in *Desert Night-Life.*

Native dog

Dingoes came to Australia with Aboriginal people thousands of years ago. Some stayed with people and lived in their camps. Others went wild.

Dingoes are not the only hunters in this display window. Find the other hunters and for each one write down its name and an adaptation it has that helps it hunt and catch prey.

[Use the touch screens to find their names.]

Find the Marsupial Mole in the *Desert* case

[One mole is on the surface, another is under the sand.]

Burrowing

One way to escape the desert heat is to live underground. The Marsupial Mole digs through the sand but does not make a tunnel. It uses its tail to fill in the hole behind it with sand.

Look carefully at the face of the Marsupial mole. How is it suited to digging?

Does it have any other features that help it be a good digger?

Find this digger in a nearby display, at the bottom of a deep hole.

What is it called and why does it dig?
[Check a screen to find out.]

Arid South Australia

Find the small pond with the desert fishes.

[It is in the same display case as the Marsupial Moles.]

Hot fish

These fish can live in quite hot water – 40°C.
They could even live in a warm bath!

Their bodies make chemicals that don't stop working at these higher temperatures.

They need to survive the heat because the water they live in bubbles up from cracks in hot rocks deep beneath the desert.

The water forms pools called Mound Springs.

In this display case there are some other desert animals living in an even smaller pool.

What happens to these animals when their pool dries up?
[Check a screen to find out.]

Find the Prickly Grass and the large lizard in one of the *Rocky Slope* displays.

Spinifex

The prickly grass in this display is called Spinifex. In the top of the bush is a small dent, or depression. It is a bird's nest. The Spinifex prickles help keep enemies away from the nest.

Many other animals hide from their enemies in prickly bushes such as Spinifex.

Find three other animals that live in Spinifex or other prickly plants. Look in this exhibit or in other windows. Write down the animals' names.
[Use the touch screens to find the names.]

Find two other desert animals that use something other than spinifex for their protection. Write down their names and explain how they use the protection.
[Use the touch screens to find the names.]

Sand and Rock

Biggest hunting bird

The biggest hunting bird in Australia is the Wedge-tailed Eagle. It is found almost everywhere in this country.

It is a good hunter but it will also eat any dead animal it sees.

Farmers once thought these birds killed lambs and so they shot many of them. We now know they seldom attack healthy lambs and would rather eat rabbits. Farmers do not like having rabbits on their land, so now most farmers are happy to see eagles on their farms. They kill the pesky rabbits.

What would the Wedge-tailed Eagle use to kill its prey? [Take a close look.]

Find the Tiger Beetles on the White Salt Lake in the *Sand and Rock* display

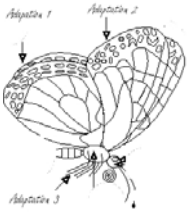
Insects in the desert

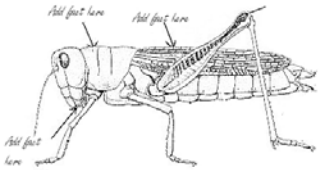
When lakes dry up in the desert, they sometimes have lots of salt left on the lake's bottom.

Salt lakes are not very good places for most animals to live, but these Tiger Beetles hunt on the salt. When other insects wander onto the salt lake or are blown on by the wind the beetles run across the salt and eat them.

Many Tiger Beetles have particularly fast-moving legs and they are amongst the fastest running insects in the world.

Find more desert insects in other displays.
Sketch one of them and use arrows to point out three adaptations it has that help it survive.





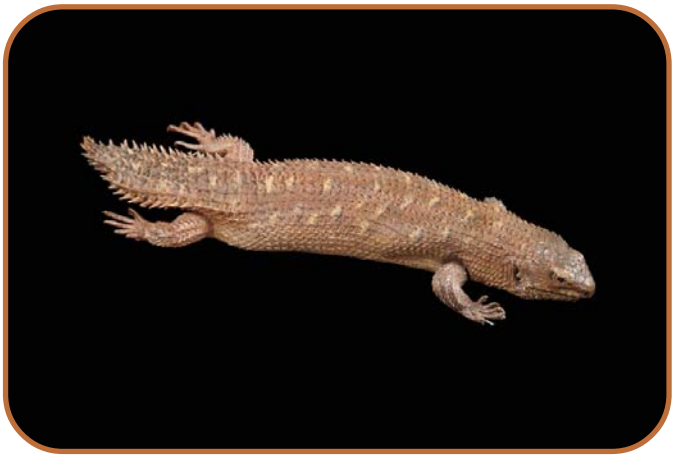
Look around the all the *Desert* exhibits

Reptiles

Reptiles are well suited to living in the desert, because they do not need as much food and water as birds and mammals. They eat less because they do not use energy from their food to keep themselves warm.

However, the desert is a dangerous place. Many animals hunt lizards and snakes. Many reptiles eat other reptiles!

Find two reptiles that protect themselves in different ways. What are the names of the reptiles and how do they protect themselves?



Arid South Australia

Record three things that you have learned about how animals survive in our deserts.

Write down the names of three animals you have not seen before.

Using what you know about how animals live in arid lands, note two ways that people can help look after these environments.

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