Temperate 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 adaptations of animals in temperate 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.

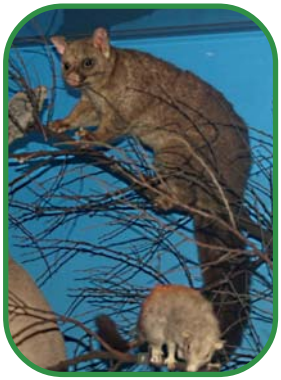
Please ensure students have their own paper to write on.

Find the possums

Climbing

The Ringtail Possum has a pouch for her young. But when her babies get big they make climbing difficult. So then she lets them ride on her back instead.

In this display you can see many more adaptations that make animals good climbers. The Brushtail Possum, for example, can wrap its tail around branches for extra support. The underside of its furry tail is hairless – no doubt to give a better grip.



Look for other climbing adaptations in the animals in this display. Which three does your group consider to be the most important or interesting?

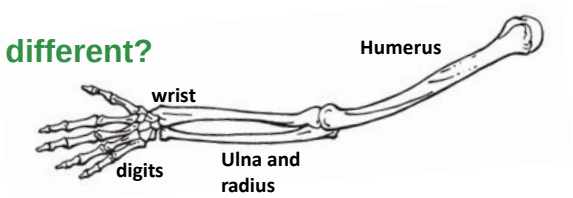
Forest at night.

Flying

Bats are the only mammals (furry animals) that have evolved the ability to fly. Their wings have evolved from arm and leg bones. You can see some of the bats' bones through the skin of their wings.

Sketch the bones you can see in a bat's wing.
In what ways are they similar to the bones in your arm?

In what ways are they different?



Gliding

Although bats are the only mammals that can really fly, some other mammals are excellent gliders. There are six kinds of possum that can glide. The smallest of these is the Feathertail Glider. It uses the stiff hairs on its tail to steer when it is in the air.

Find the Feathertail Glider and make a list of all the adaptations you can see it has for living in trees.

Find the Yabby in the *Wetland*

Protection

A yabby has a hard outside covering, but its armour does not grow. So when the yabby gets bigger it splits and sheds its old skin. The new skin underneath is soft and will stretch until it hardens.

What other animals in this display case have tough coverings? (Look for very small animals as well as larger ones.)

Name three animals that have hard coverings.
[If they have numbers you can look up their proper names on the computers. If they do not have numbers just write down what kind of animal they are.]

Find a frog in the *Wetland*

Frogs' eggs

You can see a Spotted Marsh Frog in the display. These frogs make a bubble raft for their eggs by splashing air into a jelly around them.

The tadpoles hatch in the raft, and drop into the water as the raft slowly falls apart.

A bubble raft is not in the display but you might see one if you look carefully along the edge of a creek in spring.

What do frogs and turtles both have that help them live in water? (If you talk about this in your group, you might find more than one answer.)

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Find this *Temperate Forest* exhibit.

Camouflage

Some animals hunt using sight. Animals that are hard to see are more likely to survive.

Sketch the animal in this display, which has the best camouflage?

Sleepy possum

The tall spike in this display case is the flower spike of a Yakka plant. Many tiny flowers on the spike provide food for the small Pygmy Possum climbing on the Yakka's leaves. Can you see it?

Sometimes, especially in winter, these possums go into a deep, deep sleep for days at a time. In this special sleep, called torpor, their heart beats very slowly, they breathe very slowly and their body temperature drops very low.

Discuss how torpor might be useful to the Pygmy Possum and write down the best idea your group can think of?

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In the *Woodland* exhibit.

Python

Some snakes are venomous. They have poison in their fangs. Other snakes kill their prey in other ways.

For example, most pythons wrap around their prey and crush them to death. They squeeze so hard they give their victim a heart attack or burst blood vessels in its brain.

There is a python in this display wrapped around something it has caught. What sort of animal do you think the python has caught?

bird? **reptile?**

rat?

frog?

wallaby?

rabbit?

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Find the drawers of wings.

Bird flight

Wing feathers grow in a variety of shapes and sizes. The biggest and strongest are the primary flight feathers connected to the bird's body.

Wings also come in a variety of shapes and sizes. There are two drawers of wings in the exhibition. Museum scientists have sorted the wings and labelled them according to the following plan.

Wings for quick turns ——————————- labelled **Type A**
High speed wings ——————————— labelled **Type B**
Slow flight wings ——————————— labelled **Type C**
Soaring wings ——————————— labelled **Type D**

Sketch two of the different types of wings and note if they are good for soaring, slow fight, fast flight or quick turns.

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Find the birds in the *Woodlands* display case

Bird pairs

This display shows many birds. Some are in pairs, with male and female birds side by side.

The pair up high with dotted heads are Spotted Pardalotes. They do not make a nest, but dig a tunnel in the dirt and lay their eggs at the end of it.

The pair with the red chests are Scarlet Robins. They are standing next to their nest.

To raise a family, most birds pair up and make nests. Often the female bird chooses her partner and she may be attracted to brightly coloured males.

Look at the pairs of birds on the ground and the branches. Note the differences (if any) that you can see between males and females.

[Don't miss numbers 14, 2 & 13, 7, 4 & 12. Some differences can be seen on the computer pictures, others can seen on the actual birds.]

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Find the birds in a *Temperate Forest* display.

Beaks

Scientists have watched birds eating, and have cut open dead birds to find out what they had in their stomachs. They have noticed that birds with the same beak shapes often eat the same kind of food.

The pictures below show some of the scientists' observations.

Meat eater

Seed eater

Eats nuts and tough seed pods

Eats nectar and pollen in flowers

Catches insects and worms in holes

Ask someone in your group to pick a bird with a beak like one of the sketches above. Everyone else in your group can then work out what it might eat. When you all agree, write down the name of the bird and its food.

Take turns doing this until everyone has chosen a bird. Write down all your answers.

Just outside the green area find a white display called *What's Eating You*.

Parasites

Parasites live in, or on, other animals. They eat their hosts, or perhaps steal their food.

To answer the questions on this page your group will need to know about many of the parasites in this display. To save time it is probably best to split your group up and have each person explore a different part of the exhibit. Then discuss your findings to answer the questions.

How do parasites hang on to their hosts and what stops them falling off?

Which parasite does your group consider to be the worst? Why?

Which parasite does your group consider to be the most interesting? Why?

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

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

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

Collect • Research • Discover

Education programs at the South Australian Museum are supported by the Department for Education.

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