

Teacher Notes

Themes

Bushfire and Indigenous Fire
Australian Wildlife
Wildlife Habitat
Wildlife Rescue and Care

Learning Intentions

- Describe where different wildlife species live in the environment and their distribution across Australia.
- Describe how bushfires can start and behave in the landscape, including Indigenous use of fire.
- Investigate how different wildlife species move and escape from bushfire and how they recover.
- Comprehend that wildlife rescue and care is essential for wildlife recovery after bushfires.

Key curriculum areas (Tables 5 & 6)

Science: Biological Sciences, Science as a Human Endeavour, Science Inquiry Skills

English: Language, Literacy, Literature

HAAS: Inquiry and Skills, Geography,

The Arts: Visual Arts, Dance, Drama

Design and Technologies: Processes and Production Skills

Cross-curriculum Priorities: Aboriginal and Torres Strait Islander Histories and Cultures; Sustainability

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Combat Wombat to the Rescue

Gina Newton and Tiffanee Daley

About the book

'Womba-rumbaaaa! I'm Combat Wombat, Wildlife Warrior of the Bush!'

With courage, determination and sheer wombat power, Combat Wombat leads his bush buddies to safety in a race to escape a raging bushfire. Is he strong enough and clever enough to overcome all obstacles?

As well as showcasing Australia's unique wildlife, this story provides an opportunity to engage with young children on bushfires in a gentle, nature-based way. It also highlights the positive benefits of facing your fears, leadership and cooperating in a team effort – all aspects that help build resilience.

***Combat Wombat to the Rescue* is perfect for Preschool and Primary children, aged 3 – 9 years.**



About the author and illustrator

Dr Gina Newton trained as a marine biologist, zoologist and science communicator and is a multi-award-winning children's book author, including the CBCA's Eve Pownall Award for children's information books in 2017. Gina is passionate about conservation of Australia's wildlife and environment and loves to write about them.

Tiffanee Daley is an author-illustrator based in Canberra and mother of two. A self-taught artist, she started drawing as a child and found inspiration in all things fantasy. She loves to draw animals (especially unicorns) and is a member of the Society of Children's Book Writers and Illustrators.

Pre-reading activities

1. Habitat is Home

Combat Wombat and his bush buddies live in all sorts of different places across the landscape – their habitat and home. Show a selection of YouTube clips to stimulate discussion of animal habitats and where particular animals might live in the bush. For example, do they live in the tree-tops or down on the ground, or even underground?

What do students notice about the different types of animal habitats? What types of places in their habitat might the different animals call 'home'? (nests, burrows, logs, bushes, tree-top, rock crevasses, etc.)

<https://youtu.be/yCusHZ-FhXs> (Wombat burrow visited by a koala and a rabbit)

<https://www.youtube.com/watch?v=CxrlEajA398> (What is a Habitat? Preschool level)

<https://www.youtube.com/watch?v=ZrSWYE37MJs> (What is a Habitat? Primary level)

<https://www.youtube.com/watch?v=ZOtpz4h-WDA> (Australian wildlife)

https://www.youtube.com/watch?v=TkCq54_ho-A (Australian wildlife – Primary level)

Pre-reading Activity

Ask the students to bring in an Australian animal toy. Make a habitat in the classroom using furniture, boxes, and other objects. Include a variety of different places that animals would sleep in (logs, rocks, trees, burrows, etc.). Label them. Ask the students to place the various animals in their appropriate home.



2. Fire in the Bush

Think about what starts a bushfire and what conditions are needed to make a fire happen. Fire needs fuel, oxygen and heat – this is sometimes also called ‘the four friends of fire’ (fuel, dryness, spark + oxygen, and weather). Under climate change, severe wildfires are increasing due to reduced rainfall and drought, reduced soil moisture, and high temperatures.

Ask students if they think there are different types of fire or if a fire might behave differently in different situations (e.g. cool burn close to the ground versus intense hot fire in the tree canopy which can create its own winds; also there are controlled, prescribed burns by people, including Aboriginal Peoples – see below).

Brainstorm the ways that wildlife animals might know that a bushfire is coming. Discuss how the animals might escape from a fire or perhaps what happens if they cannot escape?

Show a selection of YouTube clips about fires in Australia, before or after class discussion.

<https://www.youtube.com/watch?v=yo1DsSarYdE> (The four friends of fire)

<https://www.youtube.com/watch?v=omweCEit6k8> (Bushfire in Australia)

<https://www.youtube.com/watch?v=laxc2RuRnCQ> (Bushfire in Glen Innes, Nov. 2019 – fire fighting)

<https://www.youtube.com/watch?v=rqYEiivt8Eg> (Fire Tornado, Lessons from Canberra 2003 fires; Y 3)

https://www.youtube.com/watch?v=jPpWjlcPn_Y (Australia Burning – Note: euthanasia at end, Y 2-3)


Pre-reading Activity

Ask the students to draw two pictures:

- 1) During a Bushfire: Show where the fire is burning (in the grass or undergrowth, on the tree-tops, etc.) and include some people trying to put the fire out (fire engine and fire fighters – with water or foam; helicopter bombing water with red retardant; people with hoses). Older students may use different colours for the fire to indicate how strong it is (i.e. from coolest to hottest flame is: red, orange, yellow, white, blue) and include smoke (white/grey for mild fires to brown/black/copper for severe fires).
- 2) After a Bushfire: Divide a page in two. On one side draw what the landscape looks like once the fire has passed through and has been put out. On the other side of the page draw what the same scene looks like after two or three months. Are there any leaves on the trees, or grass or ferns on the ground? Is there any food for the animals?

Aboriginal Peoples and Fire

Fire is essential to Aboriginal culture. For tens of thousands of years, Aboriginal Peoples (or First Nations Peoples) have practiced Traditional Burning (sometimes called ‘fire-stick farming’). Aboriginal Peoples used and use fire as their most important tool to manage the landscape. They used fire to encourage the growth of food plants, to grow grasses that attract animals (e.g. kangaroo and emu) for hunting, to make travelling pathways and ceremonial grounds, for signalling, and for spiritual purposes. The constant use of fire by Aboriginal Peoples as they went about their



daily lives over thousands of years, resulted in a patchwork of different vegetation types and fuel ages across the landscape. This also helped to reduce large intense bushfires nearby and encouraged biodiversity of plants and animals.

Show a selection of YouTube clips about how Aboriginal Peoples use fire, before or after class discussion.

<https://www.youtube.com/watch?v=akeB6uVKwWE> (Traditional Burning in collaboration – 9 mins)

https://www.youtube.com/watch?v=KZ_En7x8tzU (Aboriginal Peoples Burning Knowledge – 4 mins)

<https://www.youtube.com/watch?v=wQQ-vdEep80&list=TLPQMjIwODIwMjCnwPO4QcSbqQ&index=2>

(Aboriginal Peoples Burning: fighting fire with fire – house saved – 2.5 mins)

Create a concept map about the way Aboriginal Peoples use fire. Is it a cool fire close to the ground or a hot fire that gets into the trees? What might Aboriginal Peoples use fire for? What happens to the trees and vegetation on the ground after a fire? How does this help to prevent a fire? (i.e. reduces fuel loads on the ground). Do the students think the plants will grow again?

3. To the Rescue!

Some animals are rescued during or shortly after a fire. They may need lots of care. There are four main stages involved: Rescue (capturing the animal), Recovery (giving water and first aid or medical care), Rehabilitation (making sure it can eat, walk, jump or fly again and is independent of care), and Release (setting it free back into the wild in an appropriate location). We can call these stages the '4 Rs'.

Pre-reading Activity

After watching one or more of the suggested YouTube clips (below), model the construction of a flow chart. Discuss the activities and resources needed for each stage of rescue. In groups, students can create a simple flow chart showing the 4Rs. Younger students may use illustrations, while older students can label their charts with key words.

<https://www.wwf.org.au/what-we-do/bushfires> (WWF Now the fires are out – Road to Recovery; 33 secs)

<https://www.youtube.com/watch?v=s9hvSVZszw8> (WIRES – Rescue and Recovery; 3 mins)

<https://www.youtube.com/watch?v=vOc9Cmzkeg8> (Agile Project – Rescue; 3.4 mins)

<https://www.youtube.com/watch?v=LsiD5tB9yrc> (One Billion Lost – ABC Fires and Rescue; 6.4 mins)

<https://www.youtube.com/watch?v=ONDQdvX7y3g> (Fire Fighters and others Rescue; 3.15 mins)

<https://www.youtube.com/watch?v=7MURGY0Z9KA> (HSI Rescuing Koalas Kangaroo Island; 1.14 mins)

https://www.youtube.com/watch?v=Q_FicNzl_jk (Koala Centre Adelaide – 9 mins)



Questions for Discussion and Investigation

Select some of these questions for students to explore further, either as a class (for Foundation and Kindergarten) or as a class or in small groups (Years 1, 2 and 3). Answers are provided for teacher reference.

Science

1. What actual wombat features contribute to making Combat Wombat a Wildlife Warrior?

In the story, the other animals look up to Combat Wombat as a leader. His Wildlife Warrior war cry ‘Womba-rumbaaaa!’ gets everyone’s attention. Like real wombats, he is big, strong and determined, and he has a Bulldozer Bum! When defending against predators, wombats run into their burrow and block the entrance with their rump which is reinforced with cartilage (like a shield). Wombats are also smart, can run very fast (up to 40 km per hour for 150 metres), and have an excellent sense of smell. And, they can actually swim (although in the story, at first, Combat Wombat doesn’t think he can).

2. Describe the home of a Common Wombat.

Common Wombats live underground in burrows. There are up to ten single-entrance burrows, but usually only three are actively used by the wombat at any given time. Each burrow can be from 3 to 30 metres long and several metres deep. Their sleeping chamber is 2-3 metres from the entrance, which lets in a little light during the day, and is slightly elevated to prevent flooding. The entrance of an active burrow is characterised by a pile of square shaped poo on nearby logs and rocks, freshly dug soil, and scratch marks. Although they tend to live alone, wombats are sociable and often visit other wombat’s burrows.

3. Why do wombats spend so much time in their underground home? What are the benefits?

Wombats dig burrows to escape from the heat and cold, and to hide from predators like dogs and foxes. Burrows are deep underground which helps create a stable micro-climate. Wombats sleep about 16 hours a day. In summer, the wombat stays inside during the day to keep cool. This also helps it to lower its metabolism and save energy. Inside the burrow is more humid, which helps the wombat to conserve water. In winter, wombats sunbake near the burrow entrance. Inside their burrows, wombats are very protected from what is happening above ground – even from bushfires. After a fire, the wombat eats bark and roots until the grass grows back.

4. Combat Wombat’s home is a series of burrows. What are some of the places that the other animals call home?

There are 22 animals pictured in the book and they live in a variety of habitats. Within their habitat, an animal usually has a place they rest or sleep (their ‘home’, see [Table 1](#)) and a different place or area that they forage for food or look for mates. Their homes are usually in the tree-tops, on the ground, or even underground. Sometimes the animals make their home by digging a burrow or building a nest. Sometimes they use existing features of the landscape, such as piles of rocks, hollows in tree limbs, logs on the ground, or caves.



5. Other animals sometimes use wombat burrows? Why would they use them?

The Common Wombat has many burrows but only uses a few at a time - so, several are always empty. Other animals that have been observed to shelter in a wombat burrow include: wallabies, rabbits, echidnas, snakes, possums, koalas, lizards, little penguins, foxes and butterflies. These other animals may use the wombat burrow to escape from a predator, or to keep warm or cool, or they might just be curious. They may also use them to escape from a fire!

6. How do the different animals in the book move about?

There are 22 animals pictured in the book and they move in quite different ways (see Table 2). The way an animal moves can affect how it travels through its habitat and how it might catch food. The birds fly, but they can also glide, and walk on the ground. Some animals hop – like kangaroos and Mitchell’s Hopping-mouse. Most animals can walk and run, some slowly like the echidna and some fast like a wombat. Some animals can also climb or dig or swim. Some move uniquely, like the wavy motion of a slithering snake, or the slow jerky motion of a moving Numbat.

7. How do animals escape from a bushfire?

To escape a fire, animals either stay put and seek shelter, or they flee. The animals that stay are mainly those that can seek refuge in underground burrows or holes, like wombats and spiders. Deep underground, the soil is cooler, and the animals are protected from fire. Sometimes other animals will temporarily use wombat burrows to escape a fire. The safety of the animals that flee from a fire depends on how fast they can travel and how fast the fire is travelling. Larger birds can usually fly away, and larger animals like kangaroos and wallabies can hop fast to safety. (Table 3 has further information on how various wildlife responds to bushfire).

8. Australia’s wildlife lived for thousands of years with bushfire. Why is it worse for them now?

Bushfires are becoming more frequent and stronger under climate change. That’s because there is less rain, leading to droughts, and drier soil and vegetation. Temperatures are rising, and severe storms and lightning strikes are increasing. More than half of our bushfires are started by lightning strikes and many are started by burning embers spreading out from the main fire. Most of the fires started by people are accidental (like sparks from machinery, or from discarded cigarette butts).

It’s worse for wildlife now, as the fires are often catastrophic – much hotter and faster moving than they used to be. These intense wildfires can create their own weather – such as pyrocumulus clouds and tornado-like winds, and sometimes they can cause gum trees explode. Embers can be blown many kilometres ahead. The animals may not have time to escape these catastrophic conditions and their places of refuge, which may stay safe during cooler fires, may be burnt.



HASS

1. How does Combat Wombat first know there is a bushfire coming? How might this be different to how humans know there's a fire?

In the story, Combat Wombat uses three main 'wombat' senses to detect fire: smell (nose), hearing (ears) and touch (feeling vibrations with his paws through the ground). Many animals, including wombats, have an excellent sense of smell. They smell the chemicals of a fire in the air that come from the burning leaves and wood. Even animals that are in a state of torpor (similar to hibernating) will wake up from their deep sleep when they smell fire. Reptiles, such as snakes and lizards, use their tongue to 'taste' the air and this way they can smell fire from far away. Wombats also have excellent hearing, but weak eyesight.

People can smell the smoke of fire too, but not nearly as well as animals. The fire may be too close by the time people can smell it. Also, sometimes bushfire smoke is carried a very long distance away by the wind and people can smell that, but the fire is a long way away too. People are alerted about the danger of a bushfire through weather alerts and signs of fire danger ratings placed by the roadside or on websites. We also have warnings on the TV and radio if it is a 'total fire ban' day. There are Apps that tell us the location of fires (e.g. Fires Near Me NSW) and what the weather conditions are like (Bureau of Meteorology Weather).

2. What are some of the ways a bushfire could start?

About half of all bushfires are started by lightning strikes (usually positively charged) onto very dry ground and vegetation. This is often combined with very hot and windy weather. Only about 5 to 10% of lightning strikes are positively charged and these are very dangerous. [There's a good saying, 'When thunder roars, go indoors.' And, there is the 30/30 Rule (go indoors if you see lightening and cannot count to 30 before hearing thunder. Stay inside for 30 minutes after hearing the last clap of thunder).]


The other half of bushfires are caused by people. Most of these are accidental rather than deliberate (i.e. arson). Examples of accidental causes may be from sparks that escape from things such as: campfires, trains using their brakes, or equipment used outdoors like chainsaws, welders and grinders. Other examples could be: cigarette butts thrown onto the roadside from cars, and people burning-off rubbish.

3. What puts a bushfire out?

A fire needs three main things to start: oxygen, dry fuel, and heat. Therefore, to put a fire out, the fire needs to be starved of oxygen, fuel, or heat. Fire fighters put out fires with water from their fire tankers or with foam from a fire extinguisher. The big planes and helicopters that fight fires from the air use water mixed with a red chemical retardant. All these methods stop the fire from getting oxygen and take away heat. Fire fighters will also make fire-breaks within the landscape by burning off an area ahead of the fire – this is called 'back-burning'. This gets rid of fuel. Fire fighters need to wear masks while they fight a fire so that they don't breathe in harmful smoke.

4. What are the different types of fire in the bush? How does each type behave?

There are three main types of bushfire:

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- 1) *Ground fires* – these burn under the ground in peat (rich organic soils, often in wetlands) or tree roots. These fires smolder rather than having big flames. This type is rare and very difficult to put out.
 - 2) *Surface fires* – cool to hot fires that burn along the top of the ground in grass and scrub. Cool surface fires are easier for people to control.
 - 3) *Crown fires* – burn in the tree-tops (canopy) and are extremely hot and spread fast to other trees. In some cases, this type can create its own weather (or firestorm) such as pyrocumulus clouds, swirling fire-winds and lightning; and sometimes gum trees can explode.

Once a fire is burning, its behaviour is determined by three main things:

- *fuel* – the type, amount, arrangement
- *weather* – temperature, humidity, wind speed and direction
- *topography of the landscape* – slope, aspect, elevation.

Importantly, the slope of the ground and the direction it faces (aspect) significantly affects how a fire travels. Fire burns more quickly travelling uphill compared to downhill, and the steeper the slope, the faster it travels. Fire spreads by a process called heat transfer. This is when the material next to a fire gets heated up to the point where it is hot enough to ignite. Fire can also spread through burning embers being blown far away and landing on dry, unburnt areas.


5. How can people help to prevent bushfires?

The impacts of fire are long-lasting – on both the environment and on people. There are many ways to help prevent bushfires. Some of them are:

- **Knowledge** – combine and use the knowledge of both scientists and Aboriginal Peoples to manage the landscape in a better way to help prevent hot, intense wildfires.
- **Land Management Practices** - such as using cool fire burning to reduce fuel loads in certain places and at certain times of year (back-burning) when it is safe to do so. It's important to allow enough years in between burning for the biodiversity to recover. This may also include growing fire-retardant plant species in certain places and creating fire-breaks with no vegetation (fire-breaks may also help fire fighters to access the bush).
- **Education** – help make people aware of the dangers and impacts of fire and the conditions where fires can easily start. Show them how have safe campfires, and how and where to use equipment outside without sparking a fire. Encourage people not to throw burning cigarette butts out of car windows. Use programs to teach children about fire danger in schools, such as Victoria's Fire Safe Kids (<https://www.cfa.vic.gov.au/kids-schools/fire-safe-kids>) and NSW's Fire + Rescue School Programs (<https://www.fire.nsw.gov.au/page.php?id=218>).
- **Communication** – use Fire Danger Rating signs and provide alerts on the TV, radio, mobile phone Apps and internet websites.
- **Law** – enforce the law on Total Fire Bans and punish people who deliberately light fires at these times (arsonists). Advertise the law and punishments.

6. What do people do to rescue wildlife from a bushfire? How do they help the wildlife after a bushfire?

- People must wait until it is safe for them to look for the injured wildlife. When they find an injured animal, they may give it water and then cover it with a blanket or towel to catch it



and put it into some sort of carrier (like a pet cage or washing basket). The animal is then taken to a safe place to be checked by a veterinarian who provides medical treatment.

- The animal is then looked after at a shelter or by a Wildlife Carer at home, until it is well enough to be released back into the wild. It will need to be released back into the wild in a place that has familiar food and shelter.
- People also often go to the site of a recent bushfire and provide water and food, such as hay and vegetables, for the animals that survived the fire but may have nothing much to eat.
- Sometimes people may also provide shelter in the burnt areas or nearby, such as nesting boxes that can be used by birds, possums, and gliders.
- Sometimes, if the animal is too injured to recover or suffering too much, it may be put to sleep by a veterinarian (euthanised).

7. Why do people have to help animals and birds after a bushfire?


- Many animals and birds may be injured and need medical treatment.
- There may be no food for the animals, as all the vegetation and insects have been burnt. People can help by providing water and food at a bushfire site (such as hay, fruit, and vegetables).
- Many animals and birds have lost their homes and it will take a long time for the habitat to recover. Sometimes people can help by moving wildlife to other areas of similar habitat that weren't burnt.
- If an animal is very rare or is an endangered species, people may take them before the fire reaches them, and use them as part of a captive breeding program at a zoo or sanctuary.

8. How important is the role of volunteers in fighting bushfires, and in wildlife rescue and rehabilitation?

Volunteers are vital to both fire fighting, and wildlife rescue and rehabilitation in Australia.

Volunteer Fire Fighting – Australia has about 16,000 employed fire fighters (permanent and part time). However, there are more than ten times as many volunteers. As of January 2020, there were about 195,000 volunteers (including support staff) with the nation's six state and two territory bushfire services. The numbers of volunteers in each state reflect how many people live in rural and fire prone communities. NSW has the most at over 71,000 volunteers across its 2000 fire brigades, and Victoria has nearly 53,000. While many other countries also rely on large numbers of volunteers, by comparison, Australia depends on these volunteers much more highly, as the country is so big and so prone to bushfire.

All sorts of people volunteer with rural fire and emergency services. This is not their normal day job. Everyone receives training and is insured against injury, but many volunteers make personal sacrifices of their time and risk injury, and they are usually not paid. It's been estimated that fire-fighting volunteers contribute well over a billion dollars to Australia's economy. The 2019/20 fire season lasted so long and was so severe that the Prime Minister decided to pay some volunteers who were away from their jobs for long periods. Despite a trend over the past decade of volunteer numbers falling, after the Black Summer fires of 2019/2020, fire services have been flooded with applications for volunteers.



Wildlife Rescue and Rehabilitation – Thousands of people volunteer each year to rescue and look after sick, injured or orphaned wildlife. They are typically associated with one or more organisations in each state or territory, such as WIRES, Wildcare, or RSPCA Wildlife (and many others). These organisations conduct fundraising, develop guidelines, help with equipment and information, and run training sessions. All volunteers need to be trained and licensed to care for particular types of wildlife.

Typically, a rescued animal needs to be checked by a veterinarian or experienced Carer to determine if they need medical care. Some volunteers are either rescuers or carers, and some are both. Some volunteers are drivers, and pick up animals from a vet and transport them to a specialist Carer. Wildlife Carers say that seeing a kangaroo taking its first hop, or a cockatoo fly to freedom, is the most satisfying feeling in the world. These volunteers have a unique opportunity to be close to Australia's special wildlife.

The aim of a Wildlife Carer is to rehabilitate the animal to a state of health and maturity such that it can be safely and successfully released back into its natural environment. Volunteers treat the animal as 'wild' to ensure that it has the best chance to survive when it's back in nature. After a bushfire, there are many more animals to rescue and look after than normally occurs. Also, their injuries can be more severe and some may need to be hospitalised for long periods, or even euthanised if they cannot be saved and are suffering.

English

1. What was the author's purpose in writing *Combat Wombat to the Rescue*?

There are several themes in '*Combat Wombat to the Rescue*' aside from raising awareness about wildlife and fire in the bush. These include themes of the importance of cooperation, teamwork, and leadership. In the story, all of the animals had to work together to survive the fire and to overcome obstacles in their path, but they also required someone to take the lead when events became stressful.

Sustainability and wildlife care are also important themes within the story. Bushfires are on the increase under a changing climate. This means that land management (including using Aboriginal Traditional Knowledge), wildlife conservation, and bushfire prevention are also important ideas that may be stimulated by this story, particularly for older readers.

2. Most picture books contain some factual elements, or are drawn from fact, as well as pure fiction. What information in *Combat Wombat to the Rescue* is factual? What elements are fictionalised? Below are some examples of fact and fiction, but there are many more.

Facts:

- Wombats are the largest burrowing mammal in the world.
- Wombats are intelligent.
- Wombats have an excellent sense of smell and hearing (but poor eyesight).
- Wombats have short legs, sharp claws, and a reinforced rump – all great for digging.
- Wombats can run fast (for short distances at 40 km/hr for about 150 metres – this is similar to an Olympic sprinter!).
- Wombats sleep in their burrow a lot – about 16 hours a day.

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- *Wombats and many other animals can sense vibrations through the ground.*

Fiction:

- *Wombats don't talk or say 'Womba-rumbaaaa'.*
- *Wombats can't swim. (They actually can and do swim.)*
- *Wombat's don't wear a hard hat or hold rope.*
- *In nature, the other animals wouldn't necessarily follow the leader – but they may go in the same direction to escape a fire.*
- *The different wildlife species wouldn't 'play' with each other in nature.*

Cross-Curriculum Priorities – Aboriginal and Torres Strait Islander Histories and Cultures

1. Why do Aboriginal Peoples use fire?

Fire is one of the most important cultural symbols and complex land-management tools used by Aboriginal Peoples. It's been used by them for tens of thousands of years. It is part of how Aboriginal Peoples 'Care for Country'. It is much more than just hazard reduction burning and it is very labour intensive. Some examples of fire use were/are to:


- *encourage a local diversity of plants (both fire-sensitive and fire-tolerant) and animals*
- *create grasslands that attract kangaroos and wallabies for hunting*
- *encourage food-bearing plants to be where and when they need them*
- *reduce fuel loads to make it easier to control fire*
- *create pathways and access to places such as sacred sites and ceremonial grounds, or hunting grounds and fish traps*
- *use in ceremonies and for communication signals.*

2. How do Aboriginal Peoples use fire?

If you leave the land alone, and there's enough rainfall, you eventually get more trees and thick forests. Aboriginal Peoples managed the landscape so that there were some forests (where fire was not used) but there were also lots of grasslands and scrub, with trees dotted here and there. They used cool and quick fire to shape Country and create a patchwork of vegetation types across the landscape (often called 'Cultural Burning' or 'fire-stick farming'). Cool fire is low to the ground and easier to control. The fires are set in such a way as to give animals an escape route. Fires were also used to reduce fuel loads. Only certain people have the Traditional Knowledge, passed down by elders, and can use fire for 'Cultural Burning'.

3. How does the traditional Aboriginal use of fire affect animals and plants?

Fire has been used by Aboriginal Peoples across much of the Australian continent for tens of thousands of years. It has strongly influenced the ecology of the Australian landscape – both the plants and the wildlife. For example, many plants need fire for their seeds to germinate and gum trees often can regenerate after fire from epicormic buds under the bark, or from lignotuber



roots underground. Burning to create patches of different vegetation types helped to provide food and shelter for animals and supported a high biodiversity.

Since European Settlement (in 1788), traditional Aboriginal fire practices were interrupted or stopped. This has meant that the vegetation across the landscape has changed and fuel loads have built up. In recent times, governments and local councils have recognised the importance of Cultural Burning and there are many places where Aboriginal Rangers and their communities are contributing Traditional Knowledge to land management approaches, including using Cultural Burning practices.

Cross-Curriculum Priorities – Sustainability

- 1. Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments. Thinking about the story, what are some ideas that would contribute to preserving or restoring Australia's unique environments and wildlife?**
 - *Putting land aside for nature and biodiversity, such as National Parks and Reserves*
 - *Putting in place practices that limit climate change impacts (move to renewable energy, growing seaweed to feed cattle, etc.)*
 - *Combining Traditional Knowledge from Aboriginal and Torres Strait Islander Peoples with scientific knowledge to help manage the land better and prevent big, bushfires.*
 - *Improving wildlife conservation through providing care, food and shelter when it's needed*
 - *Designing even better fire fighting equipment and methods*
 - *Increasing community knowledge about fire prevention and wildlife care*
 - *Supporting volunteers and volunteer organisations to operate effectively – for both fighting fires and helping wildlife.*



Activities

1. Habitat is Home

Activity 1: Categories

Preparation: Make several sets of 'animal map-cards' using the Distribution Maps in [Figure 1](#).

Sort the animal map-cards into various categories as suggested below. After sorting, help students make a column graph for each one.

- Where they live: water, underground, on the ground, or in trees.
- The major taxa: invertebrates, fish, reptiles, birds, mammals (monotremes) and mammals (placental). [Table 1](#) provides clues.
- The state or territory of Australia where they are found. (Note: many are found in several locations throughout Australia.)

As an extension, sort animals according to how many states/territories they are found in. Some animals may be found in every state/territory, so you'll have nine categories.

Activity 2: Home in the Landscape

Preparation: Enlarge the diagram in [Figure 2](#) or scan it to show on an electronic whiteboard. Print out [Figure 3](#) and cut out all the animals. (There are 22, as illustrated in the book.)

Work with the students to place each animal on the diagram where they think its home is in the landscape. Students may also add drawings to enhance the landscape.

Alternatively, have the students copy the animal drawings, colour them in, and then draw a picture of its home next to it (use [Table 1](#) for guidance). For example, the numbat would have a log next to it; a possum would have a tree hollow; a magpie would have a nest.

Activity 3: Colour in Combat Wombat

Ask the students to colour in Combat Wombat after reading the story. Do they remember what colour his helmet is? Encourage them to use strokes to make his fur look more realistic.





2. Fire in the Bush

Activity 3: Wildlife Escape Moves and Responses to Bushfire

Table 2 explores how animals might move to escape a bushfire.

- Play '**Combat Wombat Says**'
'*Combat Wombat says escape from the bushfire. Move like a [snake/bird, etc...]*'

Table 3 explores how various animals sense and respond to a bushfire.

- Divide the 'animal map-cards' (used in Activity 1) between students who will then 'become' their given animal. Ask students to act out how they will sense the fire, how they will respond and how they will move. Ask if they will stay or flee.
- Students each select an 'animal map-card' and draw their selected animal either fleeing from a bushfire or hiding for protection.
- After reading the book, guide the class to reenact the events in *Combat Wombat to the Rescue*. Encourage them to include their new knowledge about how animals' sense, move and respond to fire.


Activity 4: Fire Alert

The pictures in Figure 4 will help students better understand fire. Use these to assist students to complete the following activities.

- What are the three main things that allow a fire to happen? Draw the **Fire Triangle**.
- Create a 'Fire' Word Wall.
- Discuss how weather conditions contribute to a fire starting or spreading. Students can brainstorm in small groups the things that might make a fire start or spread across the landscape. Ask groups to share their discussions and add these words to the Word Wall.
- The system of Fire Danger Ratings is used to trigger action by the community. Ask the students to copy and draw their own **Fire Danger Ratings Dial**. Discuss what the different colours and categories might mean. The Fire Commissioner in a particular state or territory might call for a Total Fire Ban. What does that mean?
- (Older students) Use the 'animal map cards' to categorise what season (there are five shown) the animals will be most at risk from bushfire. Will any of the animals be at risk in more than one season?

Activity 5: Aboriginal Cultural Burning

- Pretend you are a new settler to Australia in 1788 and you are observing for the first time how and why the Aboriginal Peoples are using fire. Using the shared writing approach, write a series of short diary entries describing what you see, or a letter to a family member who is



still in England. Younger students may contribute illustrations to the finished text, while older students should be able to write short paragraphs independently.

- Watch two or three of the YouTube clips on Aboriginal Traditional Burning practices and list reasons why these methods should be used more today.

3. To the Rescue!

Activity 6: Wildlife Rescue and Recovery Skit

Refer back to the flow charts of the 4Rs (Rescue, Recovery, Rehabilitate, Release) created by the students in the pre-reading activity. As a whole class, or in small cooperative groups, create a drama skit that includes each stage. Animal toys could be used to play the part of the wildlife, or child actors may take this role. Other students could be the rescuers, the drivers, the expert Carers, the veterinarians and vet nurses, fire fighters and so on.

Guide the students to make props to support the skit. For example, red or orange material could be used for flames, broomsticks and black tissue paper for burnt trees, and so on.

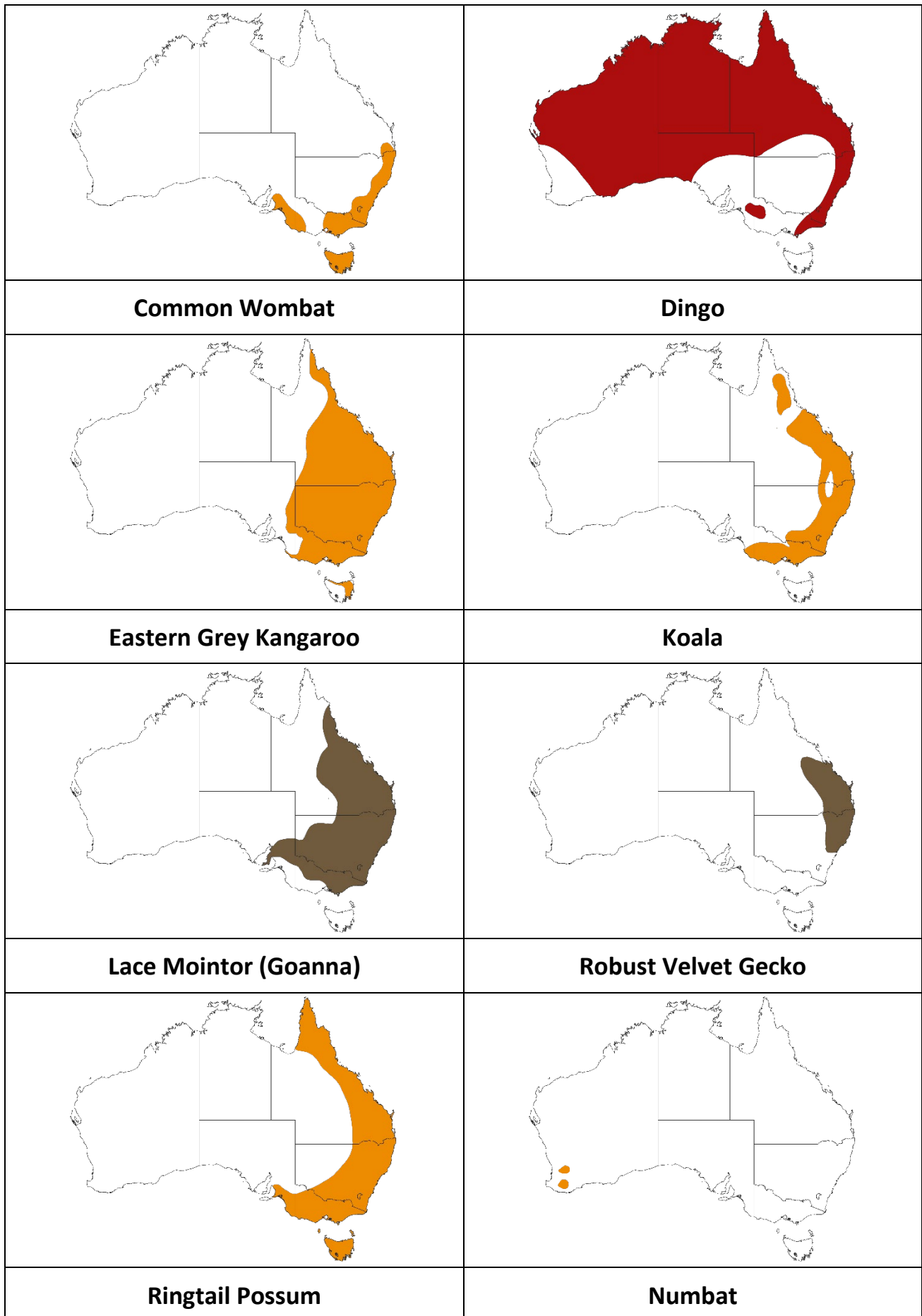
Activity 7: Link the 4Rs to Design, Make, Appraise


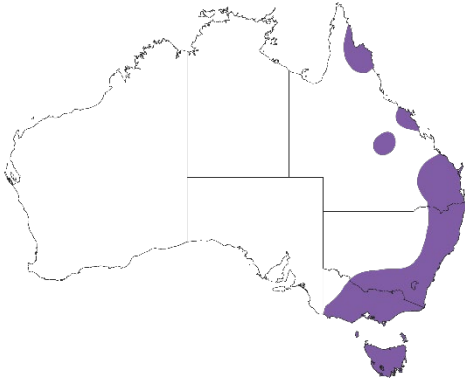
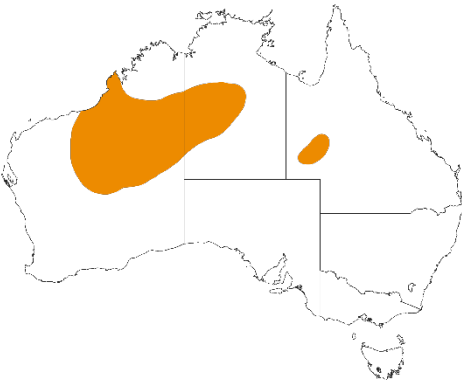
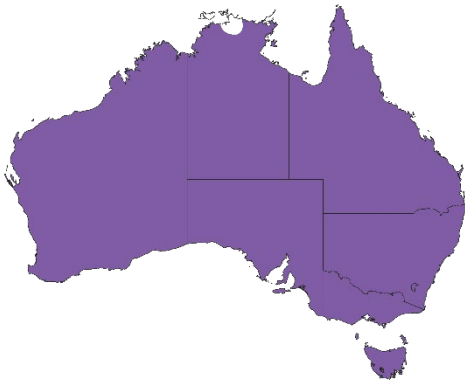
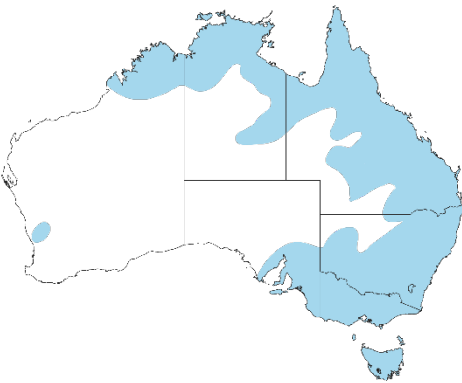
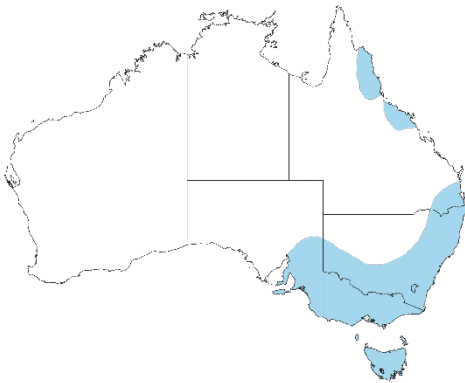
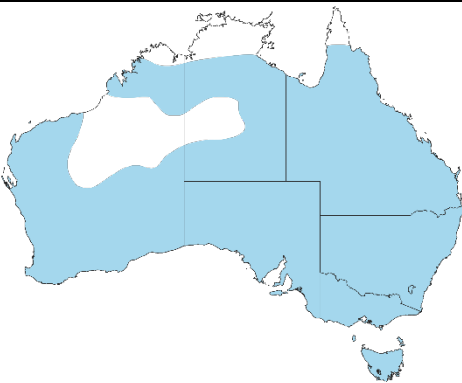
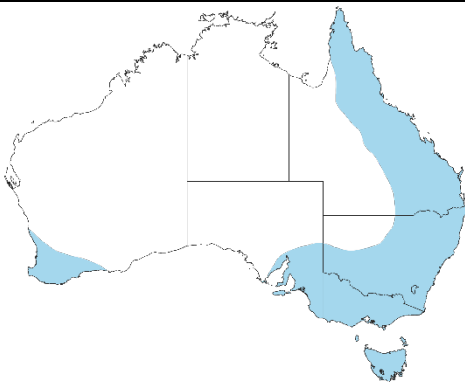
Use the 'Design, Make, Appraise' strategy to have students design and make pouches for the baby animals to use. Extend the activity to include other equipment designs to help feed and house the rescued animals while they are being cared for.

The activity could be further extended to design nesting boxes for birds and possums to use after they have been released back into nature.

Older students may consider where these should be placed in the bush and how they may function over time, and how they can be made more durable against weather or invasion by other birds or animals that don't need help.

Figure 1: Wildlife Distribution Maps



	
Eastern Brown Snake	Platypus
	
Bilby	Echidna
	
Sulphur Crested Cockatoo	Crimson Rosella
	
Magpie	Kookaburra

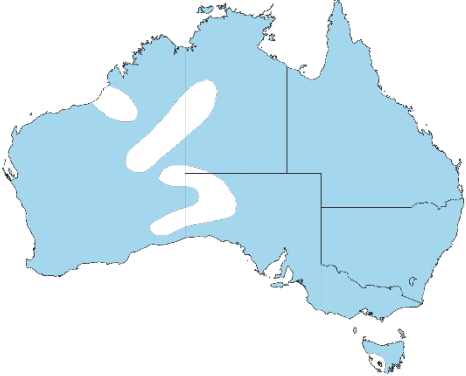
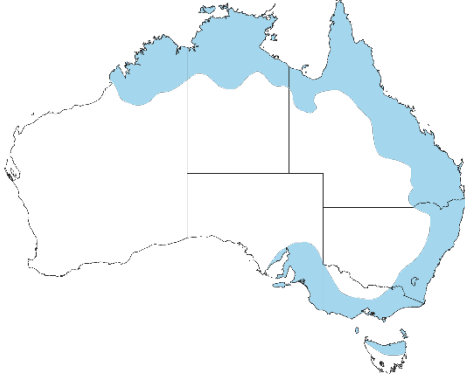
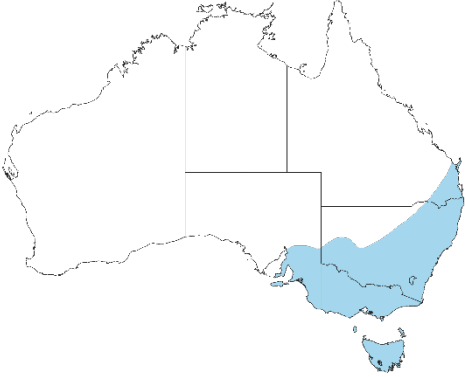
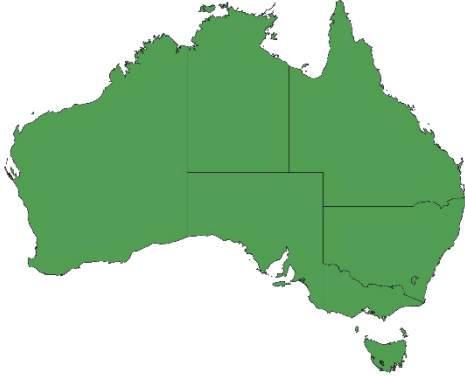
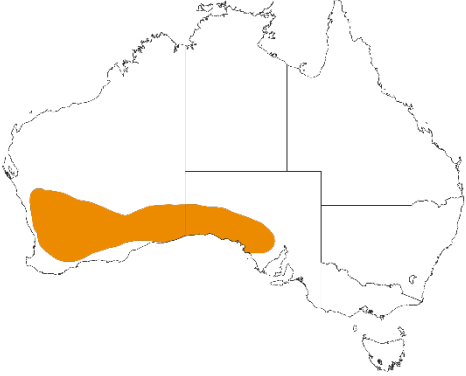
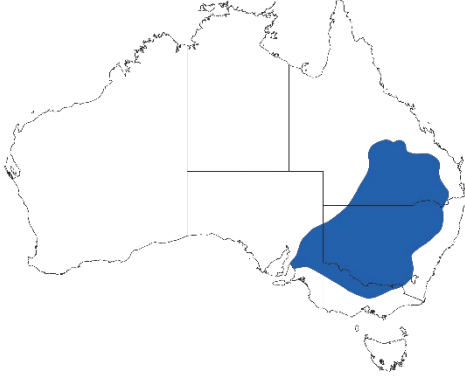
	
<p>Galah</p>	<p>Rainbow Lorikeet</p>
	
<p>Eastern Rosella</p>	<p>Huntsman Spider</p>
	
<p>Mitchell's Hopping Mouse</p>	<p>Murray Cod</p>

Table 1: Habitat is Home for Wildlife

Wildlife Animal	Home/s in Habitat
<i>Invertebrate</i>	
Huntsman Spider	under the bark of tree trunks; under rocks or in rock crevices
<i>Fish</i>	
Murray Cod	in flowing rivers and near underwater logs
<i>Reptile</i>	
Eastern Brown Snake	on the ground in: dry grassland and woodlands, hollow logs, unused burrows; or, under rocks
Robust Velvet Gecko	hollows in gum trees; under leaves or bark of woodland bushes; on rocks
Lace Monitor (Goanna)	up in large gum trees or hollows; on the ground to feed or shelter in logs
<i>Bird</i>	
Crimson Rosella	in gum trees of wetter forests and woodlands; roost in tall trees at night
Eastern Rosella	open forest and woodland; often in urban parks and gardens
Galah	tree hollows for nesting; feeding on grassland
Kookaburra	gum tree forests and woodlands; gum tree hollows for nesting;
Magpie	nest and shelter in trees but forage on the ground; often in urban gardens
Rainbow Lorikeet	tree hollows
Sulphur Crested Cockatoo	tree hollows high up; occasionally in cliff holes
<i>Monotreme</i>	
Echidna	in hollow logs or under vegetation on the ground, or in burrows
Platypus	in burrows in the banks of rivers, creeks and lakes; forage in the water
<i>Mammal - Marsupial</i>	
Bilby	spiraling burrows
Common Wombat	burrows
Eastern Grey Kangaroo	on the ground in shady bushland or woodland
Koala	fork of gum tree limbs
Mitchell's Hopping Mouse	a long burrow 1 metre underground, with several vertical shafts to surface
Numbat	in logs on the ground, or shallow burrows of 1-2 metres
Ringtail Possum	nests (called dreys) made of leaves, twigs and bark or in tree hollows
<i>Mammal - Placental</i>	
Dingo	make dens in: logs, wombat or rabbits burrows, caves, large rock crevices

Figure 2: Habitat Landscape Scene (see page 21)

Figure 3: Animals in *Combat Wombat to the Rescue* (see page 22 – 23)







Table 2: Wildlife Moves

Wildlife Animal	How they Move
<i>Invertebrate</i>	
Huntsman Spider	crawl, run, jump
<i>Fish</i>	
Murray Cod	swim, hover
<i>Reptile</i>	
Eastern Brown Snake	slithers in a wavy motion
Robust Velvet Gecko	strides and moves body in an S-shape, with adhesive feet for gripping
Lace Monitor (Goanna)	crawl, run, climb
<i>Bird</i>	
Crimson Rosella	fly, glide, climb, walk
Eastern Rosella	fly, glide, climb, walk
Galah	fly, climb, walk
Kookaburra	fly, glide
Magpie	fly, glide, walk
Rainbow Lorikeet	fly, glide, climb, walk
Sulphur Crested Cockatoo	fly, glide, climb, walk
<i>Monotreme</i>	
Echidna	walk, dig, swim
Platypus	swim, walk, dig
<i>Mammal - Marsupial</i>	
Bilby	canter with tail in air, dig
Common Wombat	walk, run, dig, swim
Eastern Grey Kangaroo	hop, swim, box
Koala	climb, walk, leap, run, swim
Mitchell's Hopping Mouse	hop, dig
Numbat	walk or trot with a slow, jerky movement
Ringtail Possum	climb, grasp, jump,
<i>Mammal - Placental</i>	
Dingo	walk, run, jump, climb, wade in water but don't swim

Table 3: How Wildlife Sense and Respond to Fire

Wildlife Animal	How they Respond
Insects	
Australian Fire Beetle	Attracted to smoke from burnt gum trees. Flock into burnt areas to breed (no predators). Have infrared receptors to detect heat, so don't burn feet when land and can lay eggs in cooler spots. Only stay for three days.
Spiders	In cool fires, ground-dwelling spiders can seek refuge in underground burrows to escape fire, or 'balloon' away on the wind by a thread of silk, or run up into a tree. But in intense hot fires, going underground is the best defence.
Fish	
Murray Cod	After a bushfire, rains may wash ash and debris into the river. This can remove oxygen from the water and may cause fish kills.
Reptiles	
Snakes, Lizards, Geckos, Goannas	They 'smell' reptile style: Reptiles flick out their tongue and bring airborne particles (like smoke) to the Jacobson's organ in their mouth.
Birds	
Birds that fly	Birds have good eyesight and can see a fire, and they can smell smoke and may feel the heat. They escape by flying high above the flames or far away.
Birds that don't fly (e.g. emu, cassowary)	Flightless birds typically have strong legs and can run very fast away from an approaching fire.
'Firehawks' (Black Kite, Whistling Kite, Brown Falcon)	A few raptor species in northern Australia spread fire to catch prey fleeing the blaze. They pick up burning sticks, fly ahead and drop them on unburnt grass.
Monotreme	
Echidna	Echidnas escape from fire by digging themselves into the ground as deep as they can into the protective cool soil. They then enter a sleep-like state (torpor – lowered metabolism and body temperature). This means they don't need to eat for a long time.
Platypus	As for fish, it is the time after a fire when rains wash ash into waterways that may cause problems for platypus. But they have the added option of seeking refuge in their borrows on land.
Mammal - Marsupials	
Burrowing – e.g. Common Wombat, Bilby	Wombats and bilby's both escape fire by going deep underground into their burrows.
Large – e.g. Kangaroos and Wallabies	Flee a fire by hopping away fast. On the coast, Kangaroos have been known to leap off cliffs into the sea to avoid fire (they can swim).
Medium sized – e.g. Koala, Numbat, Ringtail Possum	Koalas move slowly and their normal defence is to curl up in a ball in a tree top. This leaves them trapped in intense fires. In cooler fires, possums can find refuge in tree hollows and numbats seek protection in large hollow logs. In hotter fires these animals will flee.
Small sized – e.g. Mitchell's Hopping Mouse, Antechinus	May survive underground in holes or wombat burrows, or along the banks of streams where fire is less severe.
Mammal - Placental	
Dingo	Dingos can run fast to escape from a fire. Researchers have found that after a bushfire, the presence of dingos helps to save smaller wildlife. That's because dingos keep foxes and cats away that normally prey on small marsupials. Dingos hunt larger prey like kangaroos, or the foxes and cats.

Figure 4: a) The Fire Triangle



Figure 4: b) Fire Bush Profile

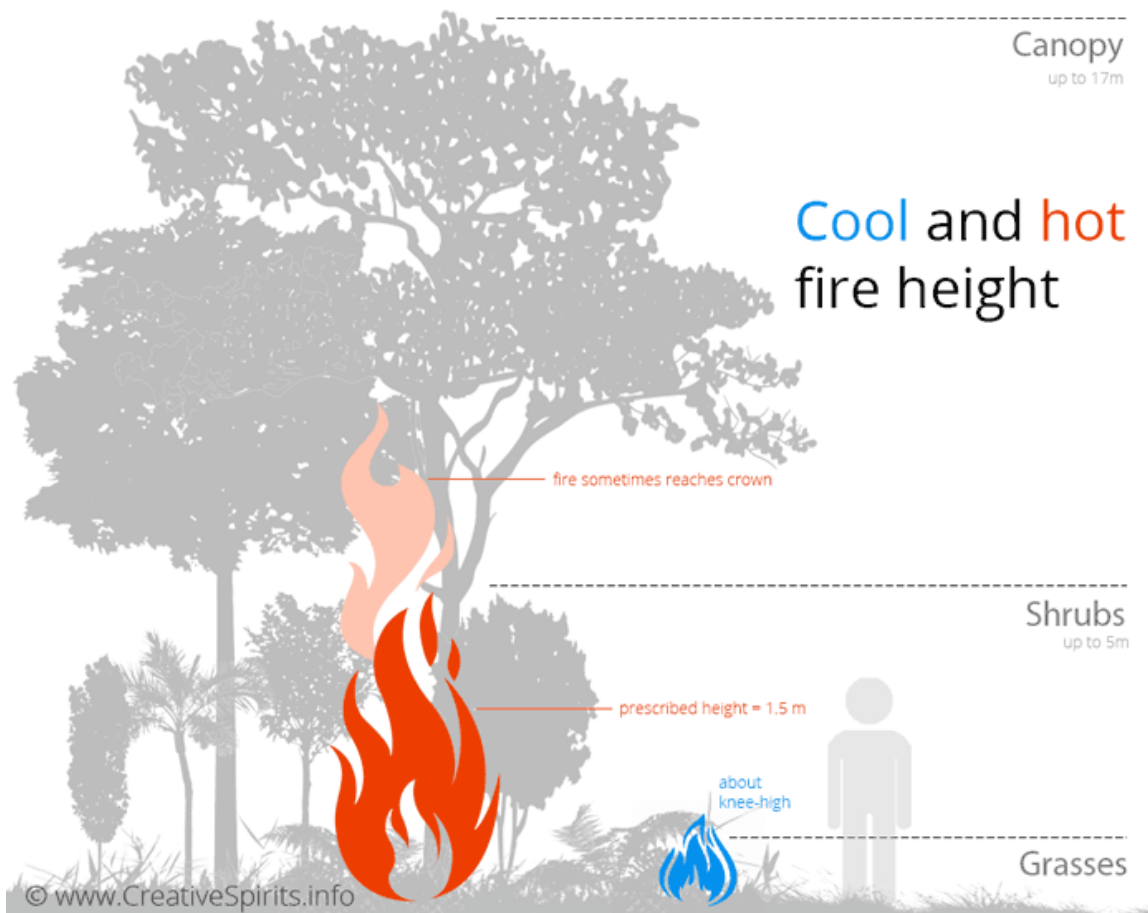


Diagram of fire height courtesy of CreativeSpirits (www.CreativeSpirits.info).

Figure 4: c) The Fire Danger Ratings Dial

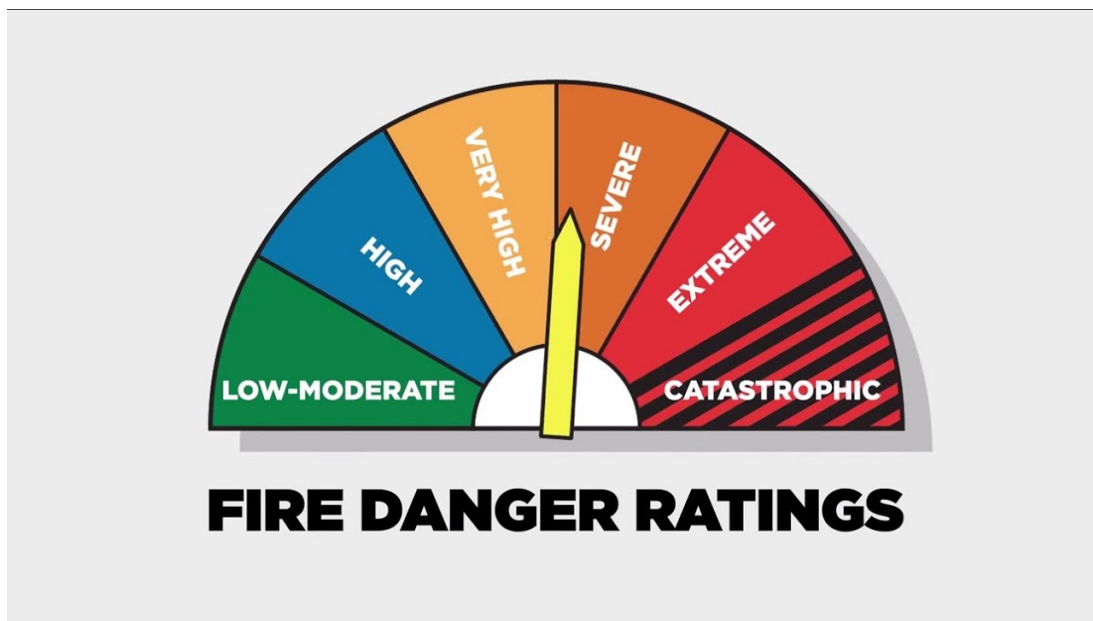
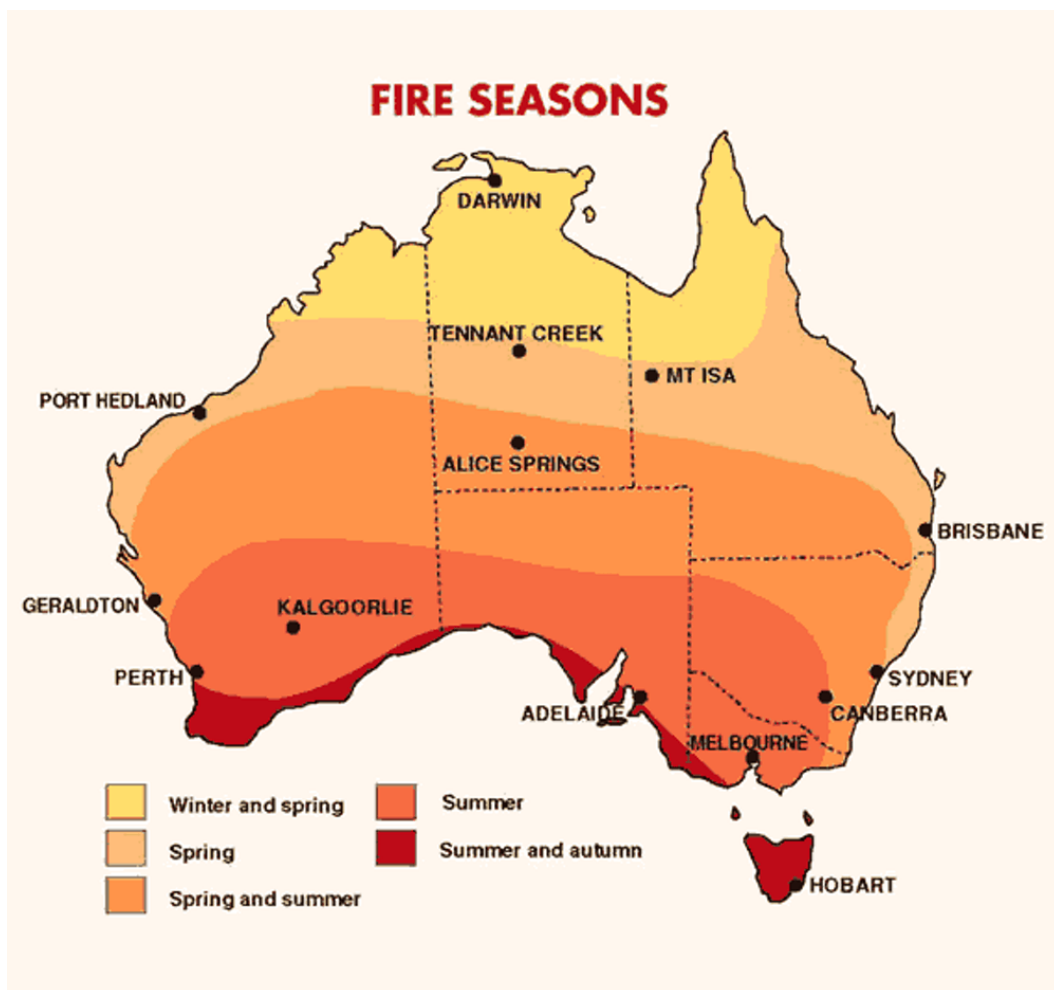


Figure 4: d) Fire Seasons in Australia



Map of Fire Seasons across Australia by the Bureau of Meteorology

Table 4: Wildlife Rescue and Care of Animals after a Bushfire
(by trained Experts)

Animal	Capture & Rescue	Care - Housing	Care - Feeding	Health & Hygiene	Time Kept	Release
WOMBAT						
Adult	cover with blanket or towel. Best done by experts as animals strong and often aggressive	zip-up soft pet cage; strong wire cage; large enclosure	grass, carrots, oats, meadow hay	Vet treats any burns; hydrate; antibiotics	least time possible	Pre-release to safe area first. After x months release to wild area. Young need to be trained and are released before two years of age.
Joey	careful removal from mother's pouch	material pouch; keep warm	special wombat formula	as above	until age 18-20 months	
KOALA						
Adult	cover with blanket or towel	zip-up soft pet cage or baby playpen	the right gum tree leaves	Vet treats any burns; hydrate; antibiotics	varies	When well enough and old enough to survive in the wild in a place with the right gum trees to eat.
Joey	careful removal from mother's pouch or back	material pouch; keep warm	special koala baby formula	as above	until old enough to be independent	
KANGAROO/WALLABY						
Adult	cover with blanket or towel. Best done by experts as animals strong and often aggressive	zip up soft pet cage; enclosure	grass	Vet treats any burns; hydrate; antibiotics	least time possible, until well	When well enough and old enough to survive in the wild; in a place with the right food away from people and near other roos or wallabies.
Joey	careful removal from mother's pouch	material pouch; keep warm	special kangaroo baby formula		until independent	
POSSUM						
Adult	large soft cloths	large cage; small aviary	native leaves; blossoms; fruit	Vet treats any burns; hydrate; antibiotics	least time possible	back to near where it was found; provide a possum box for safe housing
Joey	careful removal from mother's pouch	material pouch; keep warm	special possum baby formula	as above	until about 1 kilogram	
BIRDS						
Adult	small towel or cloth	box with holes for air; aviary as recovers	seeds; insects; suitable meat	as above	least time possible	release near where same species is found
Chick	as above	warm box	water; seeds; baby bird formula or insects or meat.		until can fly and find food	

Table 5: Australian Primary Curriculum Links

YEAR LEVEL	LEARNING AREA: SCIENCE	HASS and OTHER LEARNING AREAS
Foundation	<p>Science Understanding: Biological sciences</p> <ul style="list-style-type: none"> • Living things have basic needs, including food and water (ACSSU002) <p>Science Understanding: Earth and space</p> <ul style="list-style-type: none"> • Daily and seasonal changes in our environment affect everyday life (ACSSU004) <p>Science as a Human Endeavour: Nature and development of science</p> <ul style="list-style-type: none"> • Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013) <p>Science Inquiry Skills: Questioning and predicting</p> <ul style="list-style-type: none"> • Pose and respond to questions about familiar objects and events (ACSIS014) <p>Science Inquiry Skills: Processing and analysing data and information</p> <ul style="list-style-type: none"> • Engage in discussions about observations and represent ideas (ACSIS233) <p>Science Inquiry Skills: Communicating</p> <ul style="list-style-type: none"> • Share observations and ideas (ACSIS012) 	<p>HASS: Knowledge and Understanding -Geography</p> <ul style="list-style-type: none"> • The places people live in and belong to, their familiar features and why they are important to people (ACHASSK015) <p>HASS: Inquiry Skills - Researching</p> <ul style="list-style-type: none"> • Sequence familiar objects and events (ACHASSI004) <p>HASS: Inquiry Skills - Analysing</p> <ul style="list-style-type: none"> • Interpret data and information displayed in pictures and texts and on maps (ACHASSI007) <p>HASS: Inquiry Skills - Evaluating and reflecting</p> <ul style="list-style-type: none"> • Draw simple conclusions based on discussions, observations and information displayed in pictures and texts and on maps (ACHASSI008) <p>English: Language</p> <ul style="list-style-type: none"> • Visual language (ACELA1786) <p>English: Literature</p> <ul style="list-style-type: none"> • Expressing preferences and evaluating texts (ACELT1783) <p>English: Literacy</p> <ul style="list-style-type: none"> • Purpose and audience (ACELY1648) • Comprehension strategies (ACELY1650) <p>The Arts: Drama</p> <ul style="list-style-type: none"> • Present drama that communicates ideas, including stories from their community, to an audience (ACADRM029) <p>The Arts: Visual Arts</p> <ul style="list-style-type: none"> • Present drama that communicates ideas, including stories from their community, to an audience (ACADRM029) <p>Technologies: Design and Technologies - Process and Production Skills</p> <ul style="list-style-type: none"> • Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)
Year 1/2	<p>Science Understanding: Biological Sciences</p> <ul style="list-style-type: none"> • Living things have a variety of external features (ACSSU017) • Living things live in different places where their needs are met (ACSSU211) <p>Science Understanding: Earth and Space sciences</p> <ul style="list-style-type: none"> • Observable changes occur in the sky and landscape (ACSSU019) 	<p>HASS: Knowledge and Understanding - Geography</p> <ul style="list-style-type: none"> • The natural, managed and constructed features of places, their location, how they change and how they can be cared for (ACHASSK031, ACHASSK047) <p>HASS: Inquiry and Skills - Researching</p> <ul style="list-style-type: none"> • Sort and record information and data, including location, in tables and on plans and labelled maps (ACHASSI020, ACHASSI036) • Sequence familiar objects and events (ACHASSI021, ACHASSI037) <p>HASS: Inquiry and Skills – Analysing</p>

YEAR LEVEL	LEARNING AREA: SCIENCE	HASS and OTHER LEARNING AREAS
	<p>Science as a Human Endeavour: Use and influence of science</p> <ul style="list-style-type: none"> • People use science in their daily lives, including when caring for their environment and living things (ACSHE022, ACSHE035) <p>Science as a Human Endeavour: Nature and development</p> <ul style="list-style-type: none"> • Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE021) <p>Science Inquiry Skills: Processing and analysing data and information</p> <ul style="list-style-type: none"> • Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions (ACSIS027) <p>Science Inquiry Skills: Communicating</p> <ul style="list-style-type: none"> • Represent and communicate observations and ideas in a variety of ways (ACSIS029) 	<ul style="list-style-type: none"> • Interpret data and information displayed in pictures and texts and on maps (ACHASSI024, ACHASSI040) <p>HASS: Inquiry and Skills – Evaluating and Reflecting</p> <ul style="list-style-type: none"> • Draw simple conclusions based on discussions, observations and information displayed in pictures and texts and on maps (ACHASSI025, ACHASSI041) • Reflect on learning to propose how to care for places and sites that are important or significant (ACHASSI026, ACHASSI042) <p>English: Literacy</p> <ul style="list-style-type: none"> • Use comprehension strategies to build literal and inferred meaning (ACELY1660, ACELY1670) • Create short imaginative and informative texts (ACELY1661, ACELY 1671) <p>English: Literature</p> <ul style="list-style-type: none"> • Discuss how authors create characters using language and images (ACELT1581) <p>The Arts: Visual Arts</p> <ul style="list-style-type: none"> • Create and display artworks to communicate ideas to an audience (ACAVAM108) <p>The Arts: Dance</p> <ul style="list-style-type: none"> • Present dance that communicates ideas to an audience (ACADAM003) <p>The Arts: Drama</p> <ul style="list-style-type: none"> • Present drama that communicates ideas to an audience (ACADRM029) <p>Technologies: Design and Technologies - Process and Production Skills</p> <ul style="list-style-type: none"> • Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)
Year 3	<p>Science Understanding: Biological Sciences</p> <ul style="list-style-type: none"> • Living things can be grouped on the basis of observable features and can be distinguished from non-living things (ACSSU044) <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> • Science knowledge helps people to understand the effect of their actions (ACSHE051) <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> • Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS060) • Use a range of methods including tables and simple column graphs 	<p>HASS: Inquiry and Skills – Questioning</p> <ul style="list-style-type: none"> • Pose questions to investigate people, events, places and issues (ACHASSI052) <p>HASS: Inquiry and Skills – Researching</p> <ul style="list-style-type: none"> • Record, sort and represent data in different formats, including simple graphs, tables and maps, using discipline-appropriate conventions ACHASS1054) • Sequence information about people's lives and events (ACHASS1055) <p>HASS: Inquiry and Skills – Analysing</p> <ul style="list-style-type: none"> • Examine information to identify different points of view and distinguish facts from opinions ACHASS1056) <p>HASS: Inquiry and Skills – Evaluating and reflecting</p> <ul style="list-style-type: none"> • Reflect on learning to propose actions in response to an issue or challenge and consider possible effects of proposed actions (ACHASS1060)



YEAR LEVEL	LEARNING AREA: SCIENCE	HASS and OTHER LEARNING AREAS
	to represent data and to identify patterns and trends (ACSI5057)	<p>HASS: Inquiry and Skills – Communicating</p> <ul style="list-style-type: none">• Present ideas, findings and conclusions in texts and modes that incorporate digital and non-digital representations and discipline-specific terms (ACHASS1061) <p>HASS: Civics and Citizenship</p> <ul style="list-style-type: none">• Who makes rules, why rules are important and the consequences of rules not being followed (ACHASSK071) <p>English: Literacy</p> <ul style="list-style-type: none">• Plan, draft and publish imaginative, informative and persuasive texts (ACELY1682)• Plan and deliver short presentations, providing some key details in logical sequence (ACELY1677)• Use comprehension strategies to build literal and inferred meaning and begin to evaluate texts by drawing on a growing knowledge of context, text structures and language features (ACELY1680) <p>The Arts: Visual Arts</p> <ul style="list-style-type: none">• Present artworks and describe how they have used visual conventions to represent their ideas (ACAVAM112) <p>The Arts: Dance</p> <ul style="list-style-type: none">• Perform dances using expressive skills to communicate ideas, including telling cultural or community stories (ACADAM007) <p>The Arts: Drama</p> <ul style="list-style-type: none">• Use voice, body, movement and language to sustain role and relationships and create dramatic action with a sense of time and place (ACADRM032)• Shape and perform dramatic action using narrative structures and tension (ACADRM033) <p>Design and Technologies: Process and Production Skills</p> <ul style="list-style-type: none">• Select and use materials, components, tools, equipment and techniques and use safe work practices to make designed solutions (ACTDEP016)

Table 6: Australian Primary Cross-curriculum Priorities

Code	Organising Idea
Aboriginal and Torres Strait Islanders Histories and Cultures	
OI.2	Aboriginal and Torres Strait Islander communities maintain a special connection to and responsibility for Country/Place.
OI.5	Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing.
Sustainability	
OI.2	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
OI.3	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.
OI.6	The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.
OI.7	Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
OI.8	Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgements based on projected future economic, social and environmental impacts.
OI.9	Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.