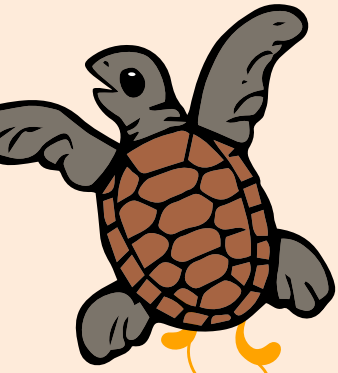
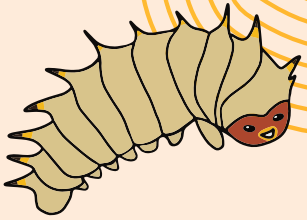


QUEENSLAND'S

Threatened Species

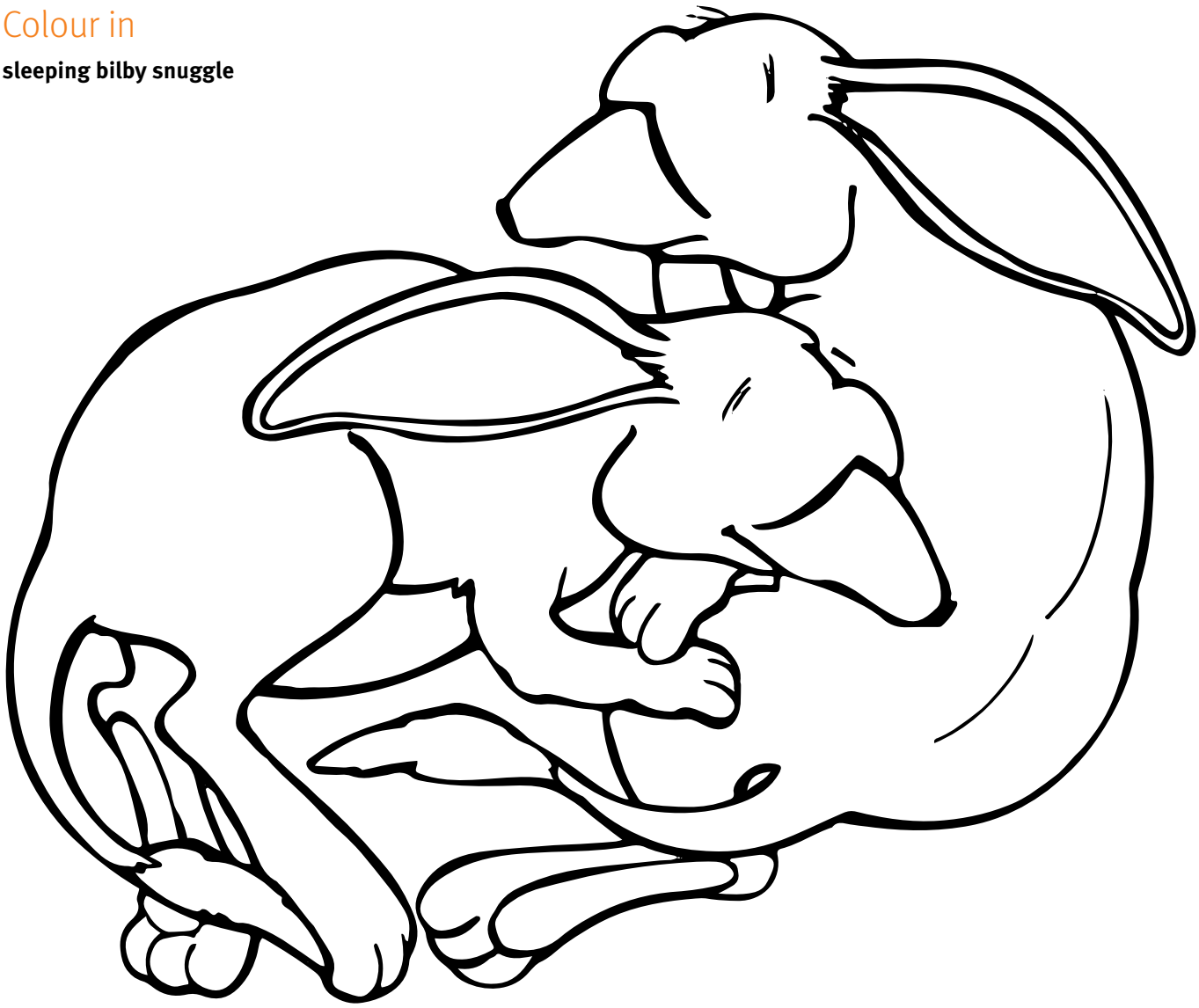
ACTIVITY BOOK



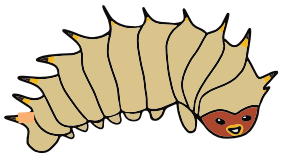
Queensland Government

Colour in

sleeping bilby snuggle



Bilbies don’t have very good eyesight and rely on their hearing and sense of smell to find food and to sense danger.



Queensland's threatened species

Australia is home to more than 500,000 plant and animal species (many of these in Queensland), which must be protected because once they become extinct, they are gone forever.

All species are important because they each play an important and unique ecological role. They help maintain a healthy and diverse natural environment, contribute to our health and wellbeing by filtering water and providing clean air and contribute to our economy (through supporting our agriculture and tourism industries).

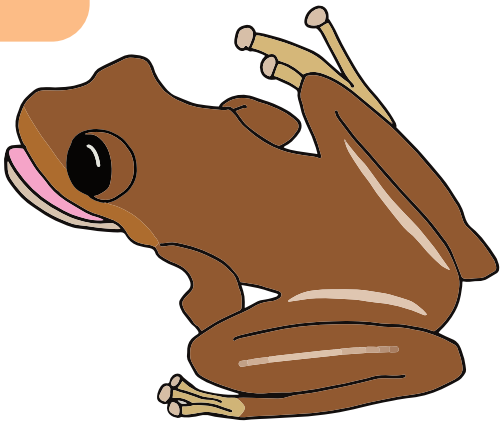
Threatened species are also culturally significant to First Nations people. For many, these threatened species have been part of their history and culture for thousands of generations and provide an important connection to Country.

In Queensland threatened species are listed under the *Nature Conservation Act 1992* in the following wildlife classes:

- **EX** Extinct
- **EW** Extinct in the wild
- **CR** Critically endangered
- **EN** Endangered
- **VU** Vulnerable.

Species can also be classed as near threatened if they are at risk of becoming threatened soon.

There are over 1000 threatened species in Queensland.



There are many threats that impact our flora and fauna species, which can reduce their numbers to where there is a danger of them becoming extinct. Scientists use special criteria to assess how badly the species has been impacted, and what wildlife class it should be listed as under the *Nature Conservation Act 1992*.

National Threatened Species Day

National Threatened Species Day is commemorated nationally on 7 September each year to help raise awareness of plants and animals at risk of extinction.

It is a chance to celebrate species success stories and acknowledge the vital ongoing recovery work being undertaken to protect our wildlife, while continuing to raise awareness about the role everyone can play to help protect threatened plants and animals into the future.

Working together to manage the threats and conserve the habitat of our animals and plants is essential to ensuring they can survive and thrive. Everyone can play a part in protecting our threatened species, including you!

Understanding threats

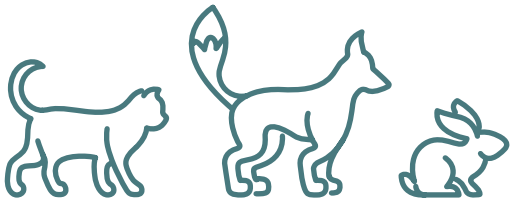
There are many threats that impact on species and contribute to their risk of extinction. Threats can be caused by people such as clearing of habitat, pollution, overharvesting, introduced species, or random natural events such as cyclones, floods, droughts, and fire.

Threatening processes are practices that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem and its wildlife.

The most common threats to Queensland wildlife include:

- Changing habitats—including loss, degradation or fragmentation of habitats.

- Introduced pests—including wild dogs, feral cats, foxes, rabbits, cattle and invasive plants.



- Litter—including marine debris and single use plastics

- Natural weather events such as cyclones, floods, droughts, and bushfire.

Habitat loss

Habitat is a plant or animal's home. It is where they seek shelter, safety, food and water. Land clearing for agriculture, and development of cities and towns can threaten native wildlife and their habitat. Land clearing causes habitat loss and speeds up other threatening processes.

Queensland is the country's most diverse environment and contains five climate zones on land ranging from temperate to tropical humid, and two climate zones in the ocean—tropical and subtropical. It also has five World Heritage Areas:

- Great Barrier Reef
- Wet Tropics
- Gondwana Rainforests
- Fraser Island
- Riversleigh fossil site.

World Heritage areas are locations that are considered outstanding examples of the world's natural or cultural heritage. The World Heritage Areas of Queensland are not only significant for these reasons, they also provide habitat for many plants and animals, including our threatened species.

Invasive plants and animals

Plants and animals that aren't native to Queensland have been introduced to areas where they do not naturally occur. In addition, some native plant species have been introduced outside their natural range and have become pests. This process, together with habitat destruction, has been a major cause of extinction of Australian native species in the past two hundred years. Invasive species cause harm to the environment, human health or crop production and Queensland law prevents them from spread.

Invasive species include:

- introduced aquatic pests
- diseases, fungi and parasites
- invasive animals plants and animals.

Introduced pest species compete for space and food and can become parasites or predators to our native plants and wildlife. While some impacts have been well documented, the true impact of invasive animals on Queensland's environment is unknown and difficult to quantify.

Find the threats!

Words travel forwards, backards, up, down, diagonal.

Litter
Climate change
Cyclone
Flood
Drought
Fire
Habitat
Clearing
Pollution
Disease
Introduced
Dog
Cat
Fox
Rabbit
Cattle
Sheep

C	S	P	O	L	L	U	T	I	O	N	Y	M	K	Z
L	N	A	I	P	S	A	P	S	H	E	E	P	A	D
E	X	F	E	N	I	F	U	H	W	A	P	E	T	G
A	K	L	I	T	T	E	R	A	H	I	G	F	I	D
R	C	O	K	I	N	D	A	R	J	N	T	L	E	E
I	D	O	G	K	N	P	Q	U	A	A	R	Y	S	C
N	B	D	D	R	O	U	G	H	T	F	E	N	Q	U
G	O	K	W	H	Y	M	C	I	A	U	C	N	U	D
O	I	F	N	O	T	E	B	P	C	R	A	I	R	O
R	A	B	B	I	T	A	X	H	B	Y	T	O	I	R
Y	E	A	H	A	H	V	P	O	I	Y	T	W	V	T
N	A	H	M	E	H	F	O	X	S	B	L	M	A	N
O	K	I	H	M	M	I	S	V	H	B	E	O	Z	I
Y	L	F	O	V	L	R	Y	C	Y	C	T	T	U	B
C	Y	C	L	O	N	E	B	D	I	S	E	A	S	E

Richmond birdwing butterfly

VU

Common name Richmond birdwing

Scientific name *Ornithoptera richmondia*

Conservation status

This species is listed as Vulnerable in Queensland (*Queensland Nature Conservation Act 1992*).

Key threats

- Habitat loss and fragmentation.
- Inbreeding because of colonies becoming isolated.
- Occurrence of the invasive and toxic Dutchman's pipe (*Aristolochia elegans*) vine whose leaves are toxic and kill the larvae when they are eaten.

Working together to take action

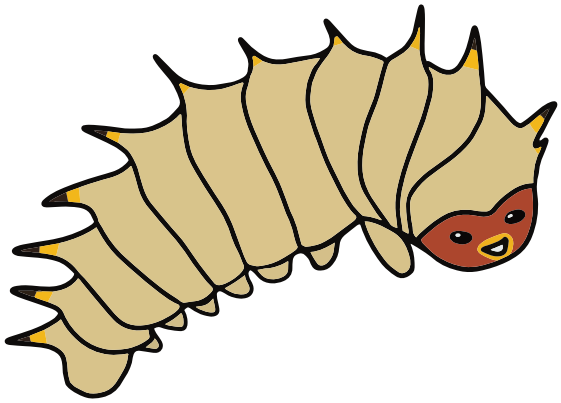
How are we working to help protect and conserve the Richmond birdwing butterfly?

The Queensland Government is working with a wide range of partners to help conserve the Richmond birdwing butterfly through:

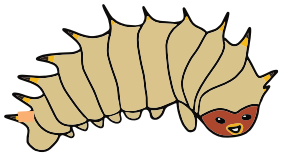
- Captive breeding and release programs
- Planting of the native Richmond birdwing butterfly vine (*Pararistolochia praevenosa*) that the butterfly larvae relies on
- Removal of Dutchman's pipe
- Mapping of the current distribution of the Richmond birdwing butterfly.

What you can do to help protect and conserve the Richmond birdwing butterfly?

- Join the Richmond Birdwing Conservation Network (RBCN)
- Join one of the Citizen Science projects aimed at Richmond birdwing butterfly recovery.
- If your property falls within the Richmond birdwing's habitat corridor, plant a birdwing butterfly vine.



The Richmond birdwing is one of Australia's largest butterflies, with a wingspan of up to 16cm in females and 13cm in males.



Which vine is which?

Look at these images of the introduced Dutchmans pipe vine and the native Richmond birdwing butterfly vine, draw a line from the features listed below to the vine they match.

Dutchmans pipe

Richmond birdwing butterfly vine

native plant

introduced plant

butterfly food

butterfly poison

heart shaped leaves

long, narrow leaves

Answers:

Dutchman's pipe: introduced plant, butterfly poison, heart shaped leaves

Richmond birdwing butterfly vine: native plant, butterfly food, long, narrow leaves

Litter and marine debris

Littering pollutes our environment and reduces the enjoyment and value of our public places—making our communities appear dirty and uncared for, unpleasant to be in, and less likely to be used and enjoyed. Litter dropped in streets, along the side of the road, or in bushland can become marine debris when it is washed or blown into creeks and rivers, polluting land, waterways and ocean environments.

Plastic enters waterways through littering and waste left behind from fishing and boating. In the marine environment, plastic can harm marine animals when it is caught around their bodies or swallowed. When plastics break down, they stay in the environment as microplastics and can build up in the stomachs of marine animals as they think they are food, or indirectly through the food chain. Plastic residues have been found in many species such as sea turtles, seals, whales, birds, fish and shellfish. Plastic can also enter the human food chain through eating seafood.

Some plastic pollution, such as fishing nets, can cause damage on a large scale. Abandoned and unattended fishing nets, traps, pots and lines end up catching threatened and protected species, as well as commercial fishing species. When caught on a reef, nets not only catch fish, turtles, crustaceans, birds or marine mammals, but they also destroy hard and soft corals, damaging entire ecosystems. Worldwide, hundreds of kilometres of nets are lost each year. This is a global issue, with 95 per cent of the nets that wash ashore in Australia coming from overseas.

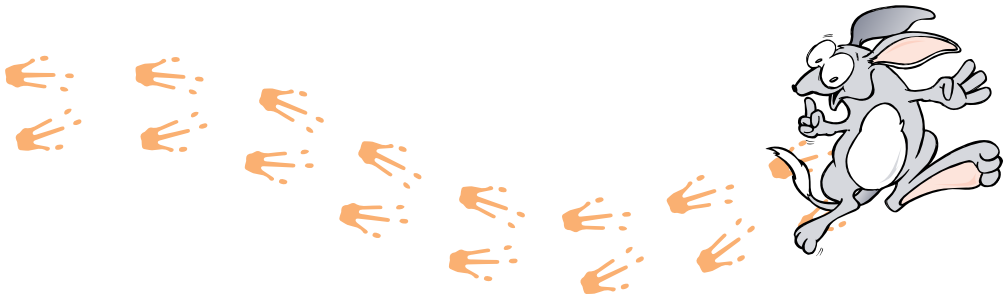
Marine debris is harmful to marine life including to protected species of birds, sharks, turtles and marine mammals. Marine debris may cause injury or death through drowning, injury through entanglement and internal injuries, or starvation when swallowed.

True or false?

Circle your answer

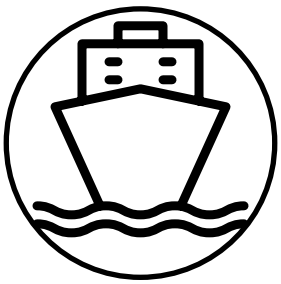
Plastics do not enter waterways as a result of street litter.	TRUE	FALSE
Marine debris is only harmful to turtles.	TRUE	FALSE
Abandoned fishing nets can damage entire marine ecosystems.	TRUE	FALSE
Over 75% of rubbish that is removed from Australian beaches is made of paper.	TRUE	FALSE
Plastic can also enter the human food chain through eating seafood.	TRUE	FALSE
The amount of plastic waste produced every year is almost equivalent to the weight of the entire human population.	TRUE	FALSE
The amount of plastics that leak into the ocean is equivalent to dumping more than 170 wheelie bins of plastic into the ocean every minute.	TRUE	FALSE

Answers: FALSE, FALSE, TRUE, FALSE, TRUE, TRUE, TRUE

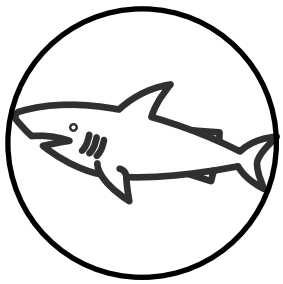


Test your marine debris knowledge

Colour or highlight the pictures that show a possible source of marine debris.



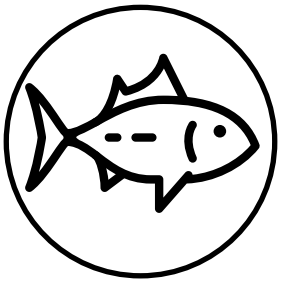
A cruise ship



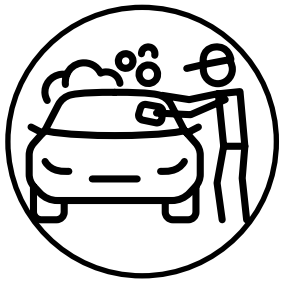
A shark

Picnickers

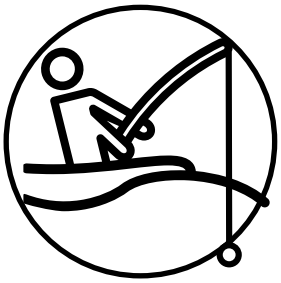
A beachgoer



A fish



Washing a car



People fishing

A seagull

1. What do the pictures you've coloured or highlighted all have in common?

_____

2. Marine debris is a huge problem. In what ways can marine debris harm our marine wildlife?

_____

_____

_____

3. Plastic never really goes away. It just breaks up into tiny pieces that can get into the food chain. What do we call these tiny pieces of plastic?

_____

Answer: A cruise ship, Picnickers, A beachgoer, Washing a car, People fishing

Answers: 1. They all include ways that plastics can enter our waterways through littering and waste left behind from fishing and boating.
2. Marine debris may cause injury or death to our marine wildlife through drowning, injury through entanglement and internal injuries, or starvation when swallowed.
3. Microplastics

Turtles

Healthy marine turtle populations are important for Queensland's biodiversity, cultural and social values and contribute significantly to the Queensland economy through tourism. Marine turtles play an important role in the coastal environment by helping to balance marine food webs, keep seagrass beds and coral reefs healthy, and help to cycle nutrients through the ecosystem. Turtles feature prominently within the cultural beliefs and practices of many indigenous coastal communities in Queensland.

Six of the world's seven species of marine turtles have been recorded breeding and foraging in Queensland, these are:

- Flatback
- Green
- Hawksbill
- Leatherback
- Loggerhead
- Olive Ridley.

Turtles (and marine mammals and sea birds) can be severely injured or die from being tangled in marine debris, which prevents them from moving, and can cause them to starve, drown, suffocate, lose a limb or get infections. Marine species can confuse plastics including bags, rubber, balloons and food wrappers with prey and swallow them. This debris can cause a blockage in their digestive system.

Turtles are known to eat plastic bags, as they confuse them with jellyfish, one of their common foods.

Leatherback turtle

Green turtle

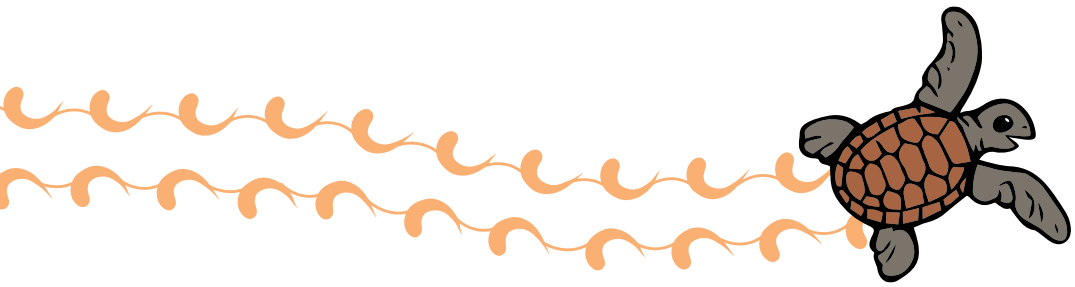
Working together to take action

How are we working to help protect and conserve turtles?

Queensland has the longest history of marine turtle conservation and management in Australia commencing in 1932. In 1968, Queensland became the first jurisdiction in the world to protect all marine turtle species within its borders and continues undertake a range of conservation and threat mitigation activities.

Conservation efforts

- Researching and monitoring turtles at key stages in their lifecycle to identify trends in population, distribution and abundance.
- Raising public awareness through educational tours at our Mon Repos Turtle Centre.
- Turtle tracking via satellite tags to gain invaluable knowledge of turtle movements offshore from the nesting beaches and their migrations to distant feeding grounds.
- The Raine Island Recovery Project—delivered in collaboration with BHP, Great Barrier Reef Marine Park Authority, Great Barrier Reef Foundation and the Traditional Owners—aims to protect and restore the island's critical habitat, which is home to the world's largest remaining green turtle nesting population.
- Indigenous Land and Sea Ranger groups, who work to reduce predators destroying turtle nests and monitoring turtle nests and populations.
- The Nest to Ocean Turtle Protection Project—delivered in collaboration with the Federal Government—which aims to protect marine turtle eggs and hatchlings from predation by feral pigs and other predators.



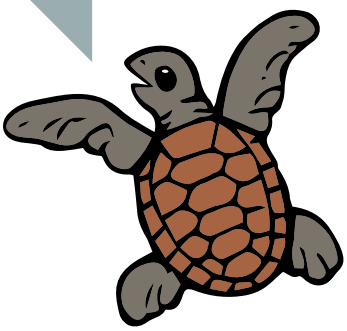
Plastic pollution reduction

Queensland's popular container refund scheme, Containers for Change, and the ban on lightweight, single-use plastic shopping bags and other items has significantly reduced the impacts of plastic waste in our environment. The ban on single-use plastic bags has helped reduce the amount of plastic bag litter in the environment by 70% and the container refund scheme has helped reduce beverage container litter by more than 40%.

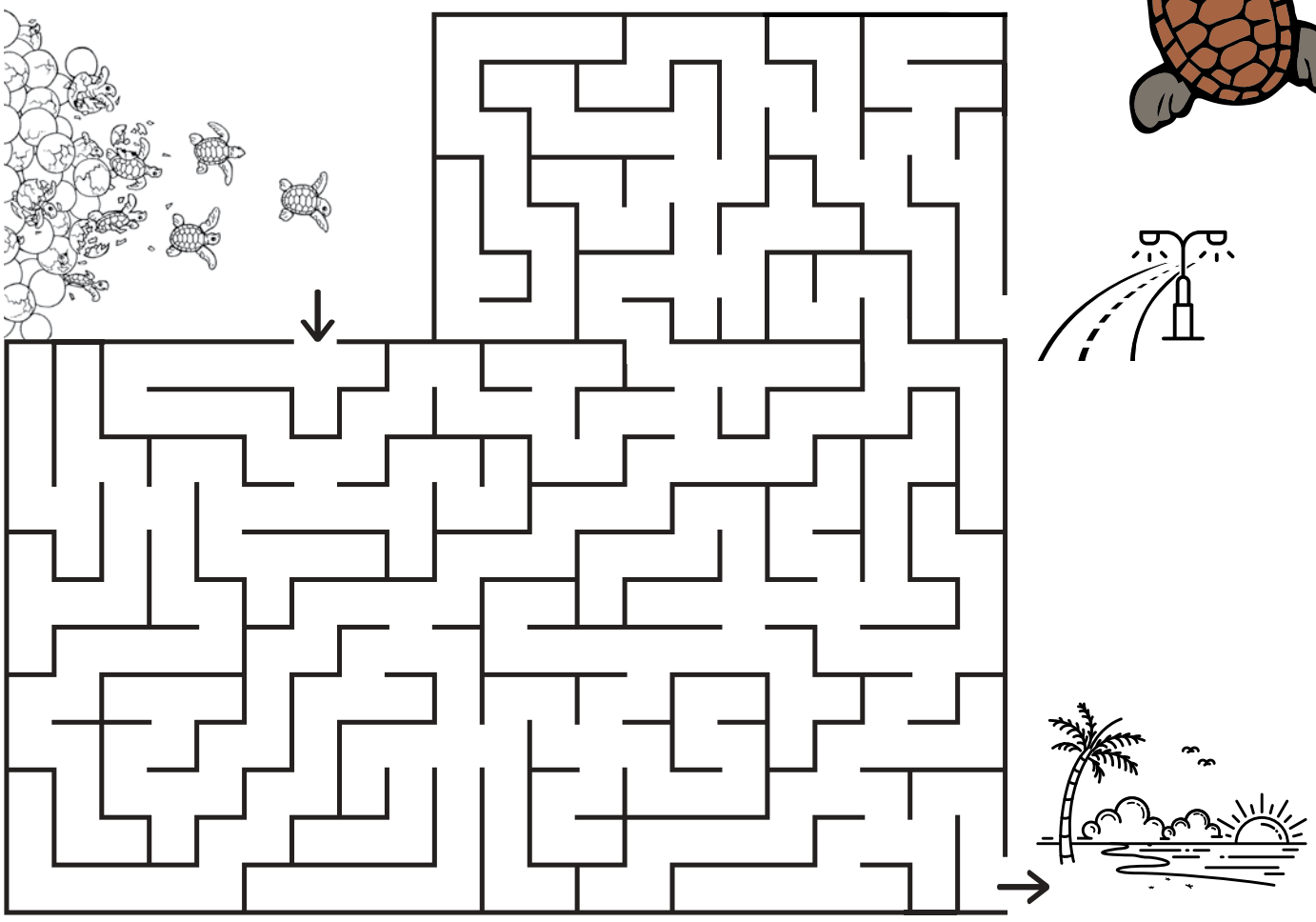
What can you do to help protect and conserve turtles?

- Always put litter in the appropriate bin and reuse or recycle when you can.
- Picking up a piece of plastic out of a creek or river could ultimately help save the life of a turtle, or other species.
- If you live within 5km of beaches in Queensland, support the 'Cut the glow to help turtles go' campaign by turning off all non-essential lighting during the summer turtle breeding season.
- Decrease your boat speed in estuaries, sandy straights and shallow inshore areas, and remember to 'go slow for those below'.
- Report sick, injured, dead and/or tagged marine turtles to the RSPCA Qld on 1300 ANIMAL (1300 264 625).

Turtle hatchlings are super cute but only around one in every thousand will survive to make it to adulthood.



Help the turtle hatchlings make it to the ocean



Greater bilby

EN

Common name Greater bilby

Scientific name *Macrotis lagotis*

Conservation status

This species is listed as Endangered in Queensland (*Queensland Nature Conservation Act 1992*).

Key threats:

- Habitat loss and fragmentation.
- Predators such as foxes and feral cats.

The greater bilby is one of Queensland's endangered marsupials. It is restricted to a few populations in the far west of the state (west of the Diamantina River) including Currawinya, Astrebla Downs and Diamantina National Parks. While there are many threats contributing to the decline of bilby populations, the most important of these is predation by introduced species.

Working together to take action

How are we working to help protect and conserve bilbies?

The Astrebla Downs and Diamantina National Parks provide important stony and clay downs habitat for the bilbies, and QPWS rangers work to educate surrounding landowners and reduce pests such as feral dogs and cats.

In 2019, together with Save the Bilby Fund captive-bred bilbies were re-introduced into Currawinya National Park in a predator-proof enclosure to reduce the threats posed by feral cats and foxes. The ongoing breeding program in partnership with Save the Bilby Fund is creating a viable population that can help restock other wild populations of bilbies.

Ongoing research provides insights into understanding how greater bilby populations are changing over time. Broad-scale, low level aerial surveys are conducted approximately every 5–10 years to assess burrow activity and ground monitoring of burrow status is conducted annually in the Diamantina area.

What can you do to help protect and conserve bilbies?

- Keep dogs and cats secured at night if you live in bilby country, to prevent them from hunting bilbies.
- Protect bush land in your community or on your land to help provide habitat for all our native animals, including the bilby.
- Contact Save the Bilby Fund to see how you can help as a citizen scientist.
- If you're in western Queensland and see a greater bilby in the wild, report the sighting to your local Queensland Parks and Wildlife Service.

The greater bilby burrows to a depth of three meters to avoid predators and to keep the burrow at a constant temperature of 23 degrees Celsius.

Reducing your ecological footprint

The measure of our individual impact on the environment is called our ecological footprint. In Australia, our collective footprint is gigantic. In fact, if the rest of the world lived like we did, we'd need over three planets to meet our total demands on nature. Over-consumption is a major contributor to global warming and climate change.

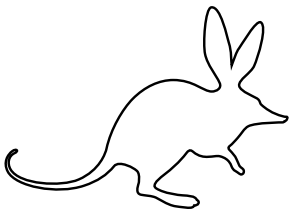
An increased ecological footprint can put more pressure on the resources our threatened species need to thrive.

Making simple changes in our daily lives—at home, in our shopping choices and even how we travel—can reduce your carbon footprint and save you money too.

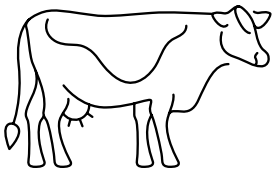
- **Be energy efficient**—switch off and unplug unused lights and appliances you could save up to 20% of your current household electricity consumption!
- **Be water efficient**—actions that conserve or use water more efficiently save water and electricity and reduce greenhouse gas emissions.
- **Waste reduction**—improving waste management practices by reducing, reusing and recycling helps to reduce waste collection costs, pollution of the natural environment and greenhouse gas emissions.
- **Transport efficiency**—choosing active travel such as walking, cycling, using a scooter or skateboard, catching a bus or a train, or carpooling, can reduce carbon emissions, improve health and increase road safety around your school.

Native animal eye spy

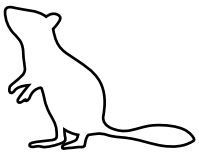
Have a look at the animals below, can you circle or colour in the ones that aren't native to Queensland?



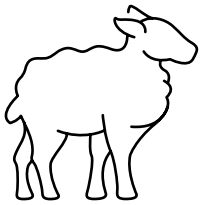
Bilby



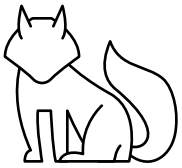
Cow



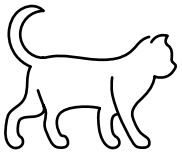
Kowari



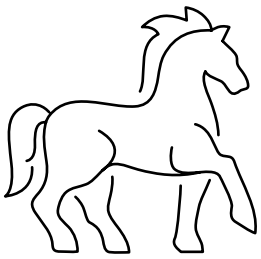
Sheep



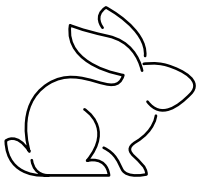
Fox



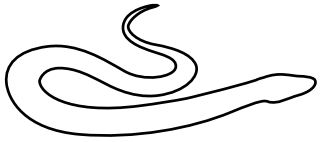
Cat



Horse



Rabbit



Western taipan

Plains wanderer

Answer: Bilby, kowari, western taipan and plains wanderer are native

Natural weather events

Queensland has a highly variable climate and often experiences extreme events such as floods, droughts, heatwaves and bushfires. Our wildlife generally adapts, but in regions where the animals' habitat are highly fragmented (or broken into many individual sections) they can find themselves with nowhere to go during one of these events or without food or shelter afterwards.

Climate change

Changes to rainfall or temperature can threaten the survival of native species and ecological communities. Climate change also interacts with other threatening processes, such as fire and invasive plants, by amplifying the impacts of these threats. In combination, these processes can significantly increase the risk of extinction of a threatened species and degrade the integrity of ecological communities.

Bushfire

Bushfires can kill plants and animals, cause loss of habitat and change the vegetation structure or composition.

Drought

Ongoing dry conditions across the state have had a devasting effect on our native wildlife. When wildlife are forced to search further for food and water, it presents unfamiliar challenges and as a result, their chance of being killed increases. These hazards include being run over while crossing roads and coming into contact with and being attacked by other animals such as domestic dogs or cats.

Cyclones

Cyclones can cause devastating damage to the natural environment. They can destroy forest canopies and the habitats within them. Trees and other debris can crush wildlife and destroy their habitats. The loss of wildlife can break the food chain causing more animals to die. When a sewage line gets damaged due to a cyclone, it can poison the environment resulting in animals dying and plant destruction. In coastal and marine environments, cyclones can erode beaches and damage coral reefs.

Word jumble

Unjumble the following weather related words

PEURATEEMRT _____

ROGUTHD _____

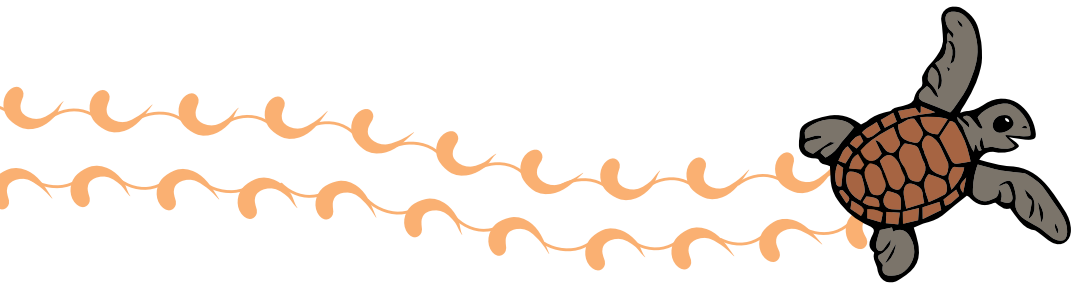
RIUSEBHF _____

OLESNCYC _____

ALINRAFL _____

VAWHEETA _____

Answers:
TEMPERATURE
BUSHFIRE
RAINFALL
DROUGHT
CYCLONES
HEATWAVE



What else can I do?

If you would like to do more or are interested in other ways you can help our threatened species take a look at some of the great ideas below!

Become a species ambassador

Find out about threatened species that live near you. Visit www.qld.gov.au/threatenedspecies and search a species that you'd like to become an ambassador for. Once you've picked your species

- Learn about its habitat and diet
- Investigate its threats
- Discover what you can do to help protect it
- Tell everyone you can and get them involved in protecting it too!

Create a wildlife friendly garden

- Plant native species in your garden to encourage local wildlife.
- Make your garden as natural as possible with ponds and vegetation layers from ground covers to trees.
- Avoid the use of pesticides as they can harm the insects that attract other native animals into your garden.
- Retain or revegetate natural bushland, especially along creeks and fence lines, so that animals can use them to move between bushland remnants.
- Establish nesting boxes for possums and birds in trees on your property.
- Leave fallen leaves and twigs on the ground, as this litter provides living places for many insects, increases nutrients in the soil, and reduces water loss.
- Choose water wise plants for the Queensland climate to save water and time spent caring for them.
- Install a rain-water tank.

Become a volunteer

Become a volunteer to help conserve threatened species and their habitat.

Find out more about how to become a QPWS Volunteer for Parks or contact your local council or local environment/ natural resource management groups to find out more about their projects and volunteer opportunities.

Be a responsible pet owner

- Register your dog or cat.
- Your dog should be 'denned' at night (where the dog is confined to its sleeping area).
- Try to restrict your cat's time outdoors.
- Be 'koala friendly' by checking to see if there are koalas on your property and keeping your dog and koalas apart.
- Train your dog not to chase other animals.
- Keep your dog on its lead when walking on the beach so it does not chase shorebirds.

Help reduce pollution and waste in your neighbourhood

- Recycle glass, paper and other household containers
- Compost your organic wastes or investigate if your local council can provide a green bin
- Minimise plastic usage by shopping with re-useable bags
- Do not let polluted water or plastics into your storm-water drains, which flow into local rivers. Plastics can be carried by rivers out to sea and become a threat to marine life
- Choose alternatives to balloons for celebrations such as reusable fabric bunting, planting a tree, flowers, pinwheels, bubbles or tissue paper pom poms.

Become a citizen scientist

Become a citizen scientist and help our scientists and researchers with real projects to protect our threatened species, contribute to scientific knowledge.

Use the Australian Citizen Science Association Project Finder to find a project in your area or visit Office of Queensland Chief Scientist website to find out more about citizen science projects relevant to Queenslanders.

Help a sick or injured animal

Report any sick or injured wildlife, or marine strandings to 1300 ANIMAL (1300 264 625).

Learn more about threatened species

Find out more about Queensland's threatened species and how you can help at www.qld.gov.au/threatenedspecies

My threatened species protection pledge

As a threatened species ambassador, I pledge to help conserve and protect our threatened species by trying to do these things. Tick at least three things from this list and talk to your family about them and/or write your own pledge on the lines provided.

- ○ I will stop using plastic straws, even when getting takeaway drinks.
- ○ I will use reusable plates and cups at parties instead of disposable ones.
- ○ I will remind my family to bring reusable bags to the supermarket.
- ○ I will think twice before buying things that have lots of plastic packaging, like individual lollies and tiny toys.
- ○ I will put rubbish in the correct bin—food waste, recycling or landfill.
- ○ I will choose alternatives to balloons for celebrations such as reusable fabric bunting, planting a tree, flowers, pinwheels, bubbles or tissue paper pom poms.
- ○ I will ask my parents or guardians to choose water wise plants for the Queensland climate to save water and time spent caring for them.
- ○ I will pick up three pieces of plastic every time I go to the beach.
- ○ I will be a responsible pet owner.
- ○ I will ask my parents or guardians to set us a compost bin or worm farm to compost organic wastes.
- ○ I will become a citizen scientist and help our scientists and researchers with real projects to protect our threatened species and contribute to scientific knowledge.
- ○ I will report any sick or injured wildlife by calling 1300 ANIMAL (1300 264 625).
- ○ I will ask my family to make this pledge too!

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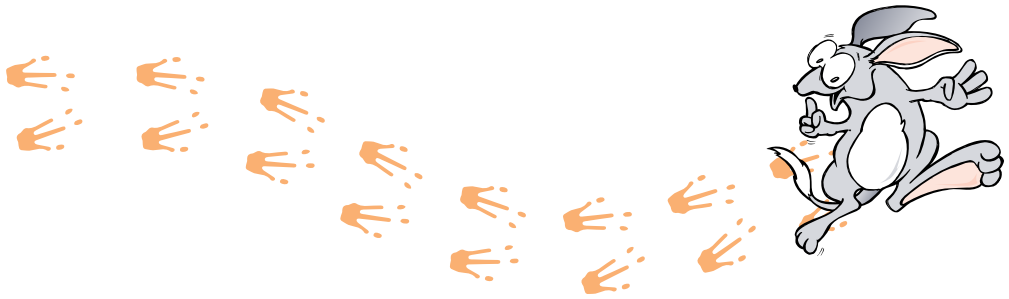
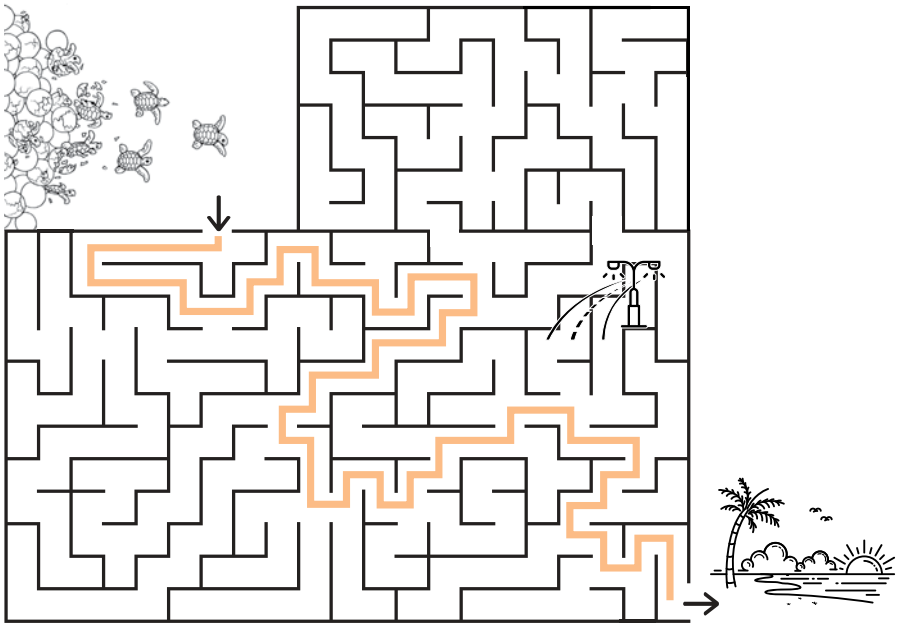


Answers

Page 5–Find the threats!

C	S	P	O	L	L	U	T	I	O	N	Y	M	K	Z
L	N	A	I	P	S	A	P	S	H	E	E	P	A	D
E	X	F	E	N	I	F	U	H	W	A	P	E	T	G
A	K	L	I	T	T	E	R	A	H	I	G	F	I	D
R	C	O	K	I	N	D	A	R	J	N	T	L	E	E
I	D	O	G	K	N	P	Q	U	A	A	R	Y	S	C
N	B	D	D	R	O	U	G	H	T	F	E	N	Q	U
G	O	K	W	H	Y	M	C	I	A	U	C	N	U	D
O	I	F	N	O	T	E	B	P	C	R	A	I	R	O
R	A	B	B	I	T	A	X	H	B	Y	T	O	I	R
Y	E	A	H	A	H	V	P	O	I	Y	T	W	V	T
N	A	H	M	E	H	F	O	X	S	B	L	M	A	N
O	K	I	H	M	M	I	S	V	H	B	E	O	Z	I
Y	L	F	O	V	L	R	Y	C	Y	C	T	T	U	B
C	Y	C	L	O	N	E	B	D	I	S	E	A	S	E

Page 11–Help the turtle hatchlings make it to the ocean



www.qld.gov.au/threatenedspecies