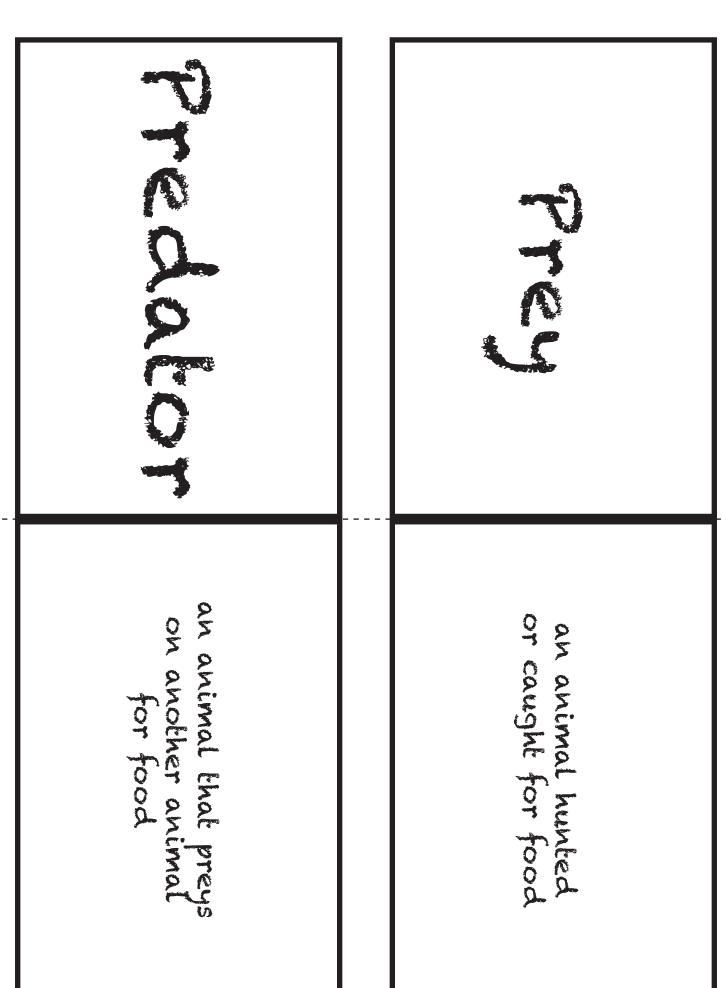




a mammal that gives birth to underdeveloped young which grow outside the mother, often in a pouch.

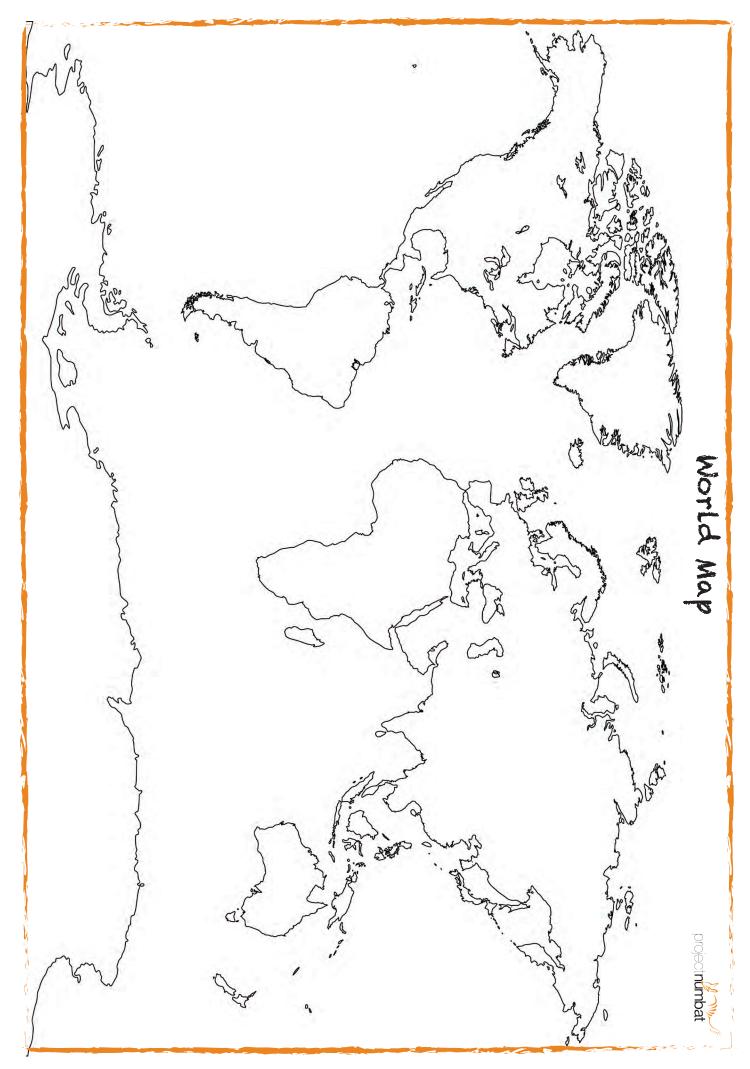
special group of animals, grouped by a covering of hair over the skin. Females produce milk to feed young







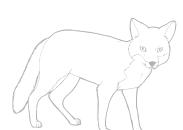
active during the day	the environment where an animal lives





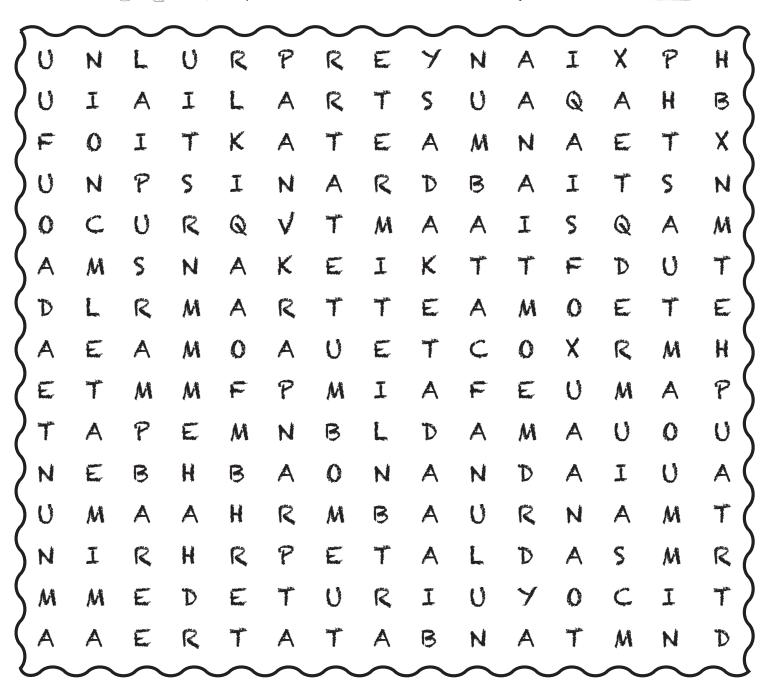
Word Find

Can you find these words in the word steuth below? They can appear up, down, left, right, backwards or diagonal.

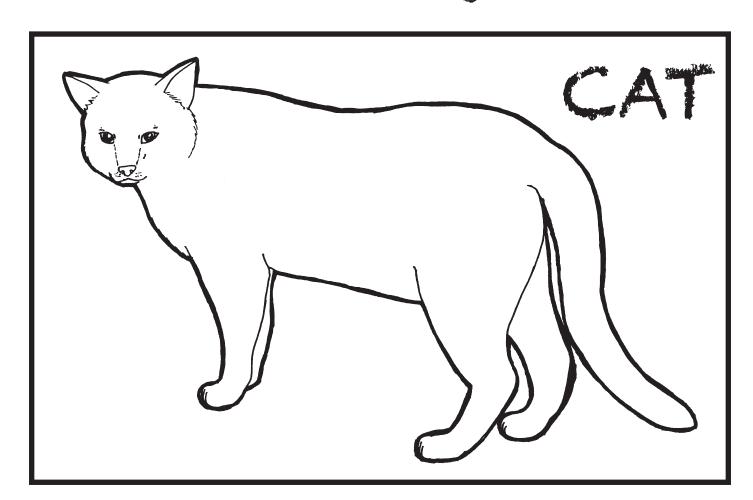


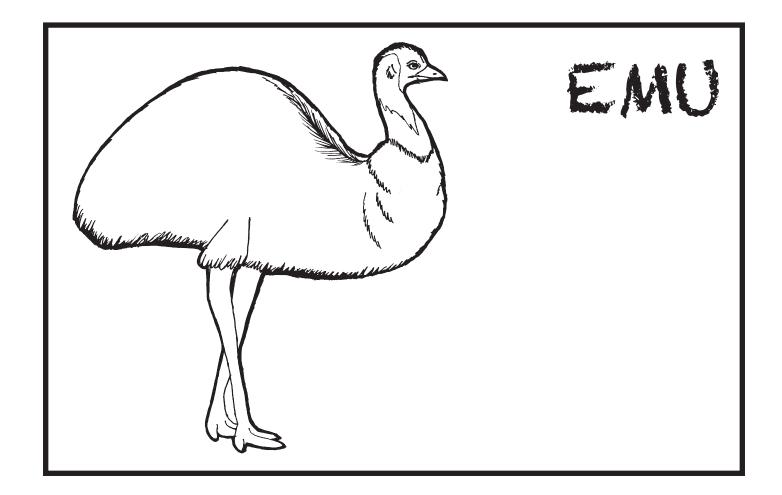
AUSTRALIA
CAT
FOOD
FOX
HABITAT
MAMMAL
MARSUPIAL

NATIVE NUMBAT PREDATOR PREY SNAKE TERMITE UNIQUE

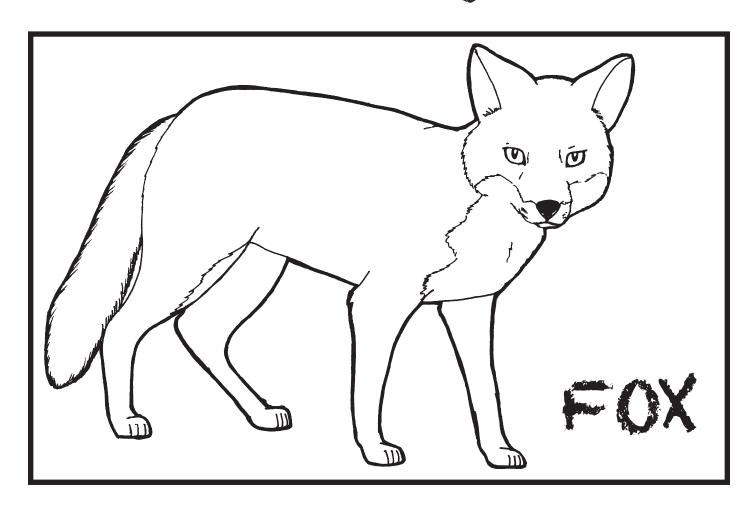


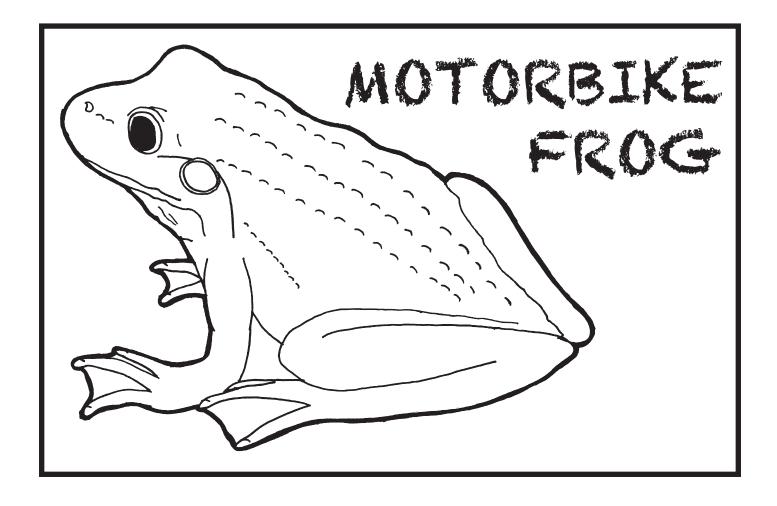




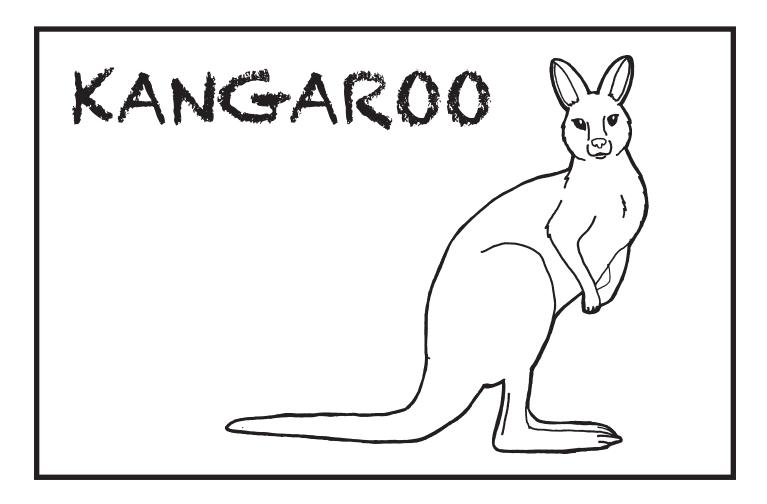


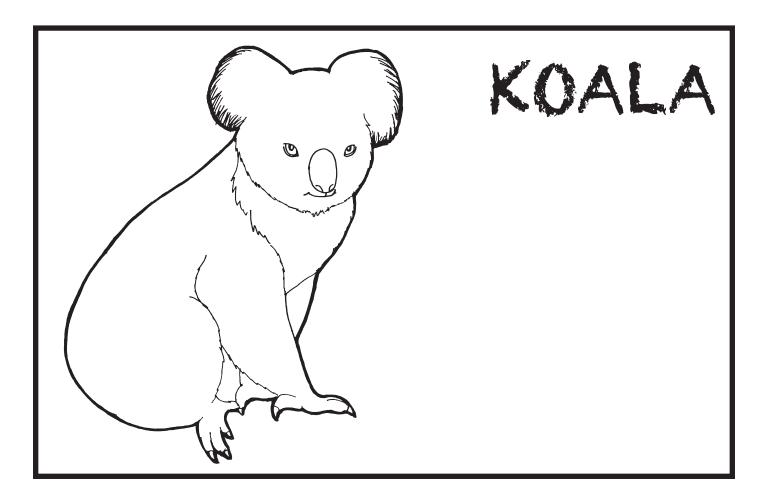




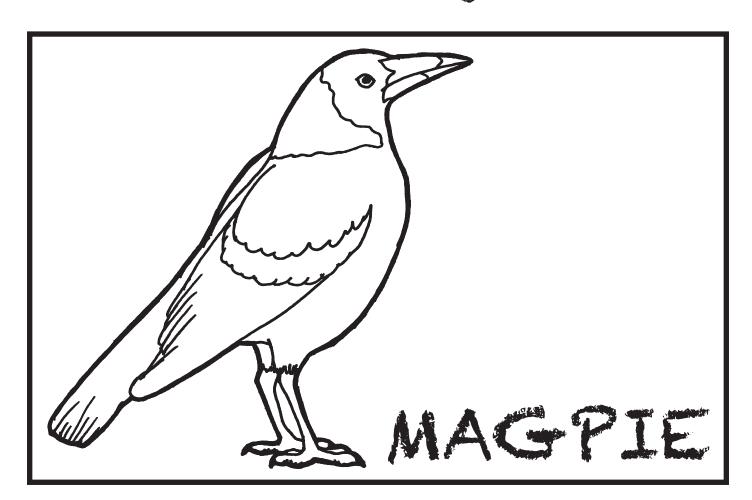


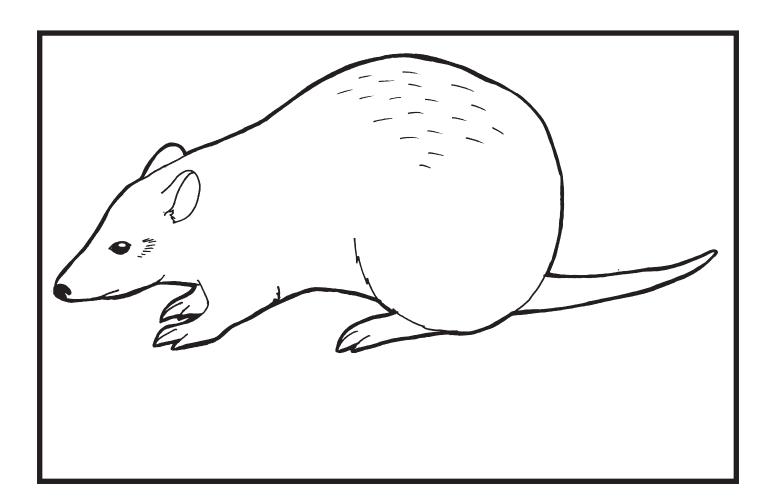




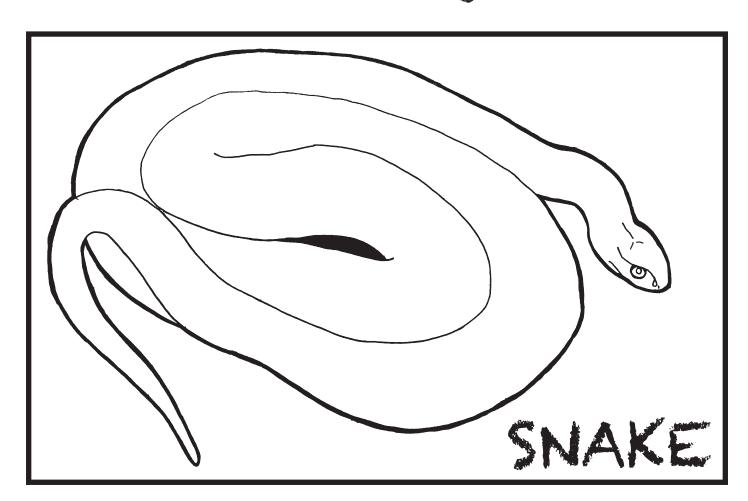


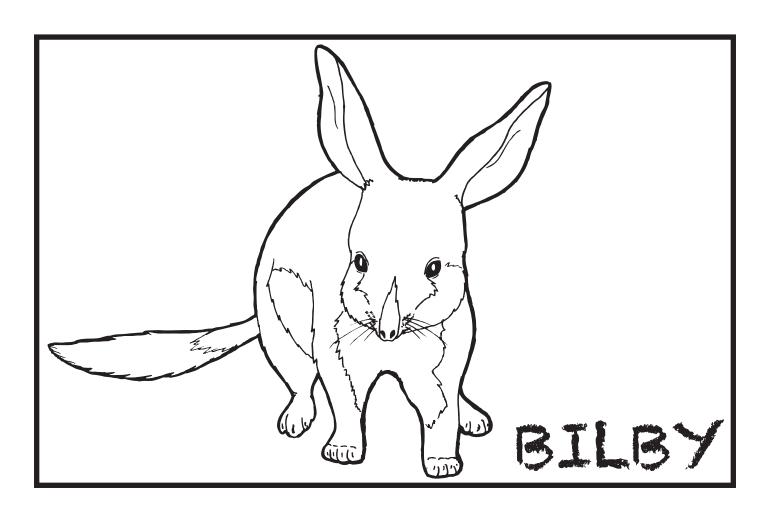




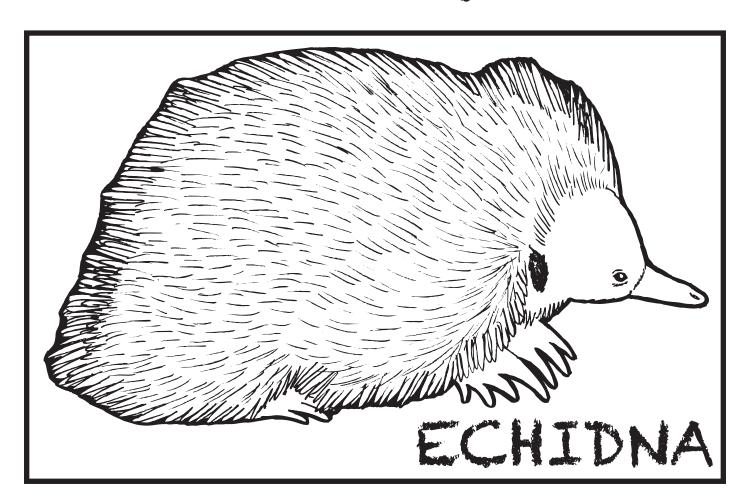


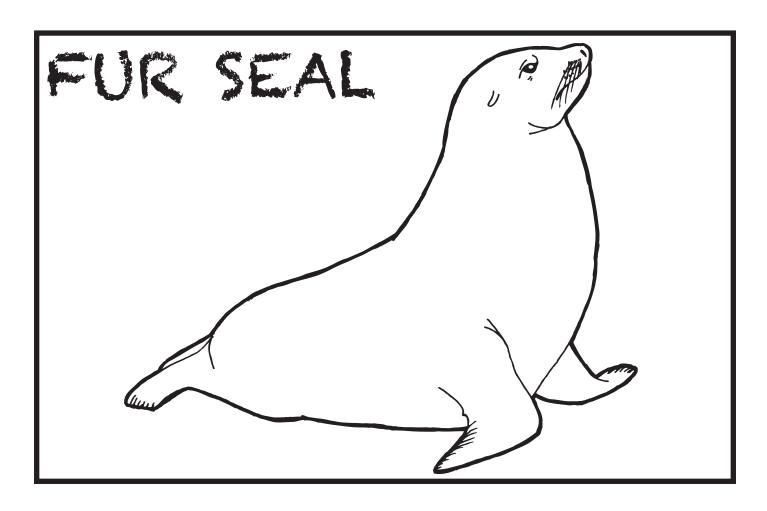




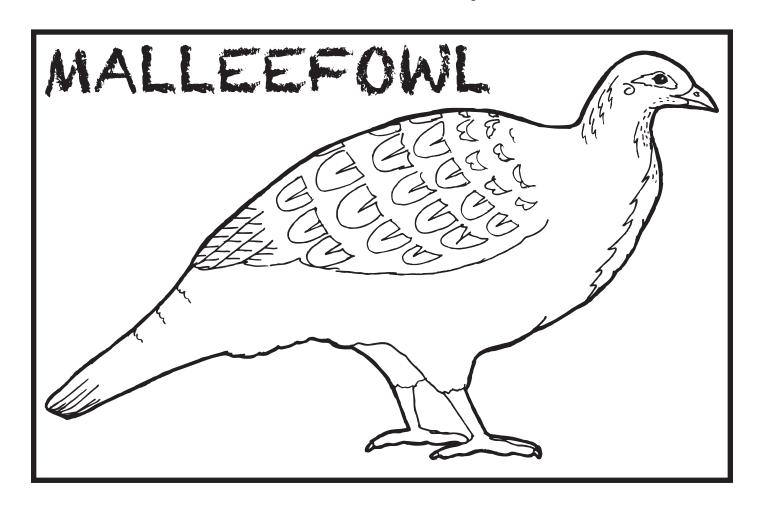


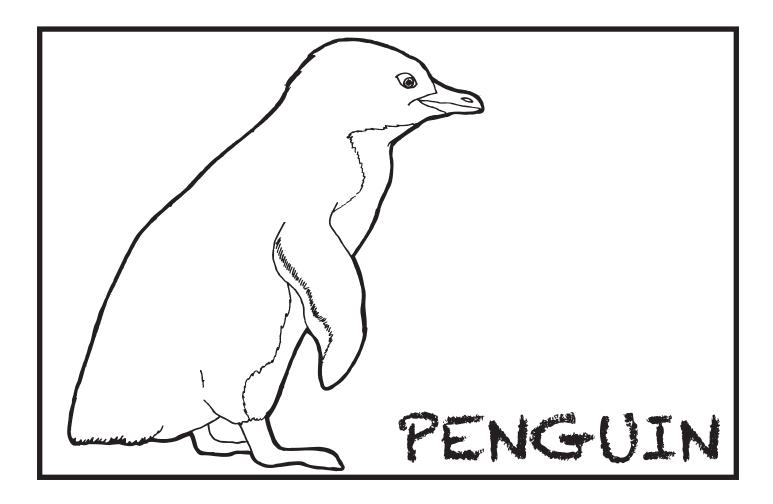




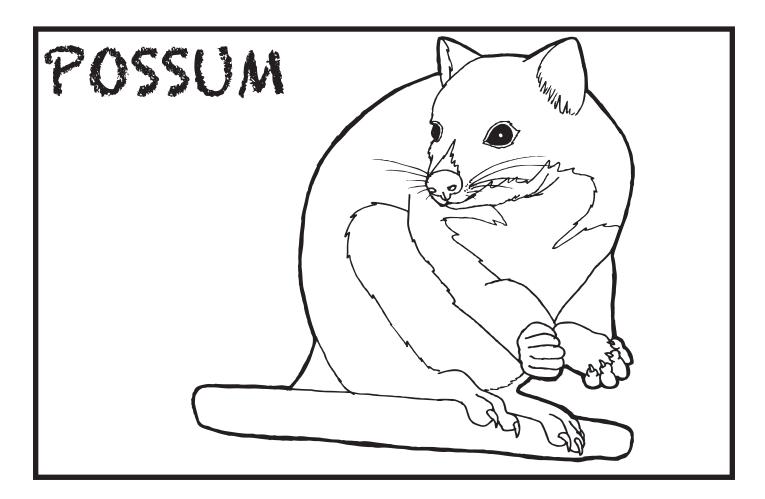


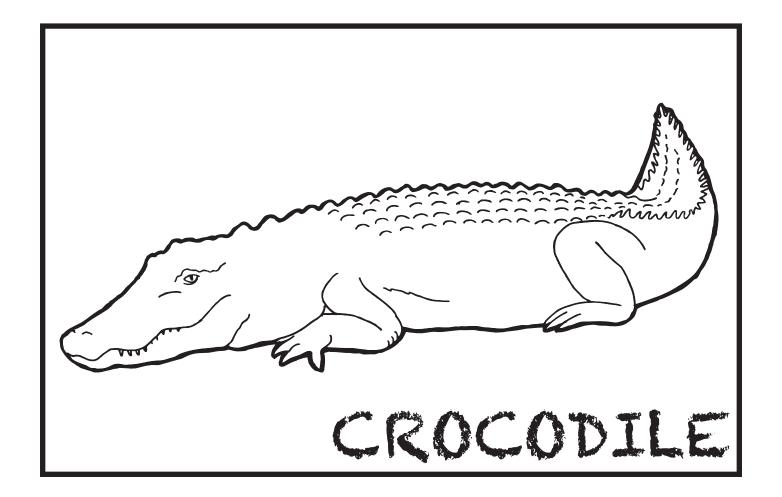












Report

What is the animal's name?

Describe or draw the animal.

What does it eat?

How does it move?

Where does it live?

What special features does it have?

Launch Date for Marketing Campaign:

(Individuals working within the marketing team)

Unique Western Australian Celebrities



Marketing Agency: (Name of marketing agency representing this animal Including company logo)	Client:	(Name of WA animal celebrity)
	Marketing Agency:	(Name of marketing agency representing this animal Including company l

Client DetailsBackground Research – Knowing the Client



Brainstorm of Potential Marketing Strategies



might not be so good will help your group decide which strategy is most effective overall. You may even chose to select more than one strategy. Some Things to Think About: Each strategy will have positives and negatives. Brainstorming these ideas and exploring what is good about them and what

member can have a role to spread the load, more creative/attention grabbing etc. Pluses: Consider why a particular strategy may be more effective to use eg. audience reach wider, easy to organise and implement, each marketing

Minuses: Consider why a particular strategy may not be so effective to use eg. too elaborate, impractical, not interesting enough, limited in audience reach etc.

Martketing Strategy Pluses/Minuses Martketing Strategy Pluses/Minuses	<eting strategy<="" td=""><td>Pluses/Minuses</td></eting>	Pluses/Minuses

Action to be taken and by whom	Marketing Strategies:
	Launch Date of Marketing Campaign:
	Goal:
project numbat	Marketing Plan for

What improvements could be made and why?	What worked well with your marketing campaign and why?
keting Strategies	Evaluation of Marketing



Scenario Cards

FIRE

Scenario

Camping is so much fun! You and a group of friends have headed off to a campsite deep within a national park in the south-west of Western Australia. It is a lovely hot, dry day so the weather is perfect, although you are aware that the wind is beginning to pick up a little.

On the way to the campsite you notice a sign that clearly says that fire hazard conditions are high and think to yourself that it is a shame you won't be able to toast your marshmallows on the campfire.

Once you get to the campsite you notice that another group of campers has already lit a fire that seems to be quite large. You and your friends set up your tents and before you know it, the other group of campers comes running over asking for your help as the fire has now spread and it is out of control.

Guiding Questions

- 1. What would you do next?
- 2. How will this affect the Numbats and other wildlife in the area?
- 3. What were the things that made you aware that you should not be lighting a camp fire?

LAND CLEARING (HOLLOW LOGS FOR FIREWOOD)

Scenario

Winter is fast approaching and your family are keen to get the wood fire burning to keep the house warm over the coming months. Before the rain sets in dad decides it is time to go and collect some firewood.

As you head into the bush along a small track that leads to the national park, your dad asks you to keep an eye out for some good firewood. Rather than cutting trees down, he decides it is better to take dry wood that has already fallen.

Each time you see some great firewood, you, your dad and your trusty pet dog jump out of the car to cut it up and collect it. By the end of the day, a car-full of wood has been collected to keep you and your family warm over winter.

Guiding Questions

- 1. Are you allowed to take wood from national parks?
- 2. How will taking this dry, fallen wood affect the Numbats?
- 3. Where else could you get firewood from?



Scenario Cards

HABITAT LOSS (MINING)

Scenario

You live in a small town in an area where captive born Numbats are going to be released. The whole town is very excited to have been chosen as a suitable area for the release.

After school each day you and your friends go wandering in the bush to see if you can spot any Numbats. One day you walk into an area that you have not explored before and see a big sign that has the name of a local mining company on it. You go home and look the mining company up on the internet where you see that they have recently found a very big deposit of coal in the area.

The website tells you that they will be clearing a lot of land in the area to mine this resource and how good it will be for local industry and jobs. The website says that the project was approved nearly two years ago and they will start clearing the land in one month's time.

Guiding Questions

- 1. How will clearing the land to mine coal affect the Numbats?
- 2. How could the mining company lessen the impact on the animals and land?
- 3. Coal is mined to generate power. What are some other ways power can be generated without clearing land?

LAND CLEARING (LACK OF TERMITES)

Scenario

Termites are a problem in the city and can cause great damage to houses. In the natural bush termites are an important part of the ecosystem as they eat decomposing dead wood.

You are a university student studying termites in the south-west of Western Australia. You go out into the bush on a regular basis to assess the termites, where they live, what they eat and how many there are in a given area.

You go to an area of forest where Numbats live and find that there are very low numbers of termites found. Further study shows that the natural populations have been wiped out. You are very concerned and decide to monitor the area more closely over the following weeks.

Guiding Questions

- 1. What do you think are some of the reasons behind the termites disappearing from the area?
- 2. What other consequences could result if termites have disappeared from the area?
- 3. How could termites be encouraged back to the area?



Scenario Cards

INTRODUCED PREDATORS (FOX)

Scenario

Foxes in the wild are widespread across Australia. They were introduced at the time of European settlement. You live on a farm next to a pristine forest and have seen foxes in the area.

Recently you read an article in the local paper about the increase of fox numbers with a request to farmers to closely monitor the numbers on their properties.

You and your dad go out in the truck every night for a week and count the foxes. You spot lots and lots of them over the seven-day period. What worries you most are the ones that you see on the forest side of the fencing.

Guiding Questions

- 1. Why are foxes a threat to Numbats and other wildlife?
- 2. What can be done and is being done to keep fox numbers down?
- 3. What should you do if you see a fox in the city?

ABANDONED PETS IN NATIONAL PARKS (CATS)

Scenario

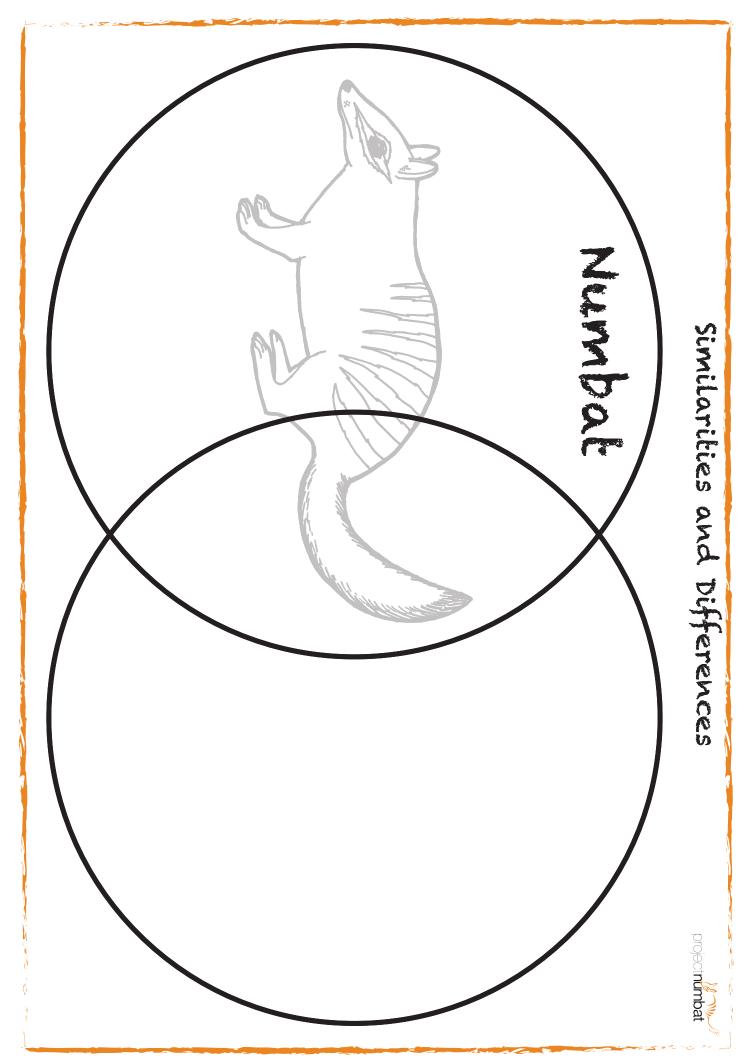
You love cats and have three of them at home, two female and one male. You love watching them play in the garden and climb trees like cats do. One of the female cats always stays out all night and only sometimes comes back in the morning to get her breakfast.

One morning she returns from her adventures and you give her a little cuddle, only to notice that she is a little bigger than usual. Your mum tells you she is going to have kittens. You are very excited but when then kittens arrive it seems that everyone around you already has a pet and doesn't want another one so you are stuck with this litter of kittens.

You can't possibly keep them all, so one weekend you decide that because the kittens' mum liked being out in the forest for days at a time, you would take the kittens there and leave them to live in the forest by themselves where they can play and climb all the trees that they want.

Guiding Questions

- 1. How could this situation have been avoided?
- 2. How would cats in the forest affect numbers of Numbats and other animals in the forest?
- 3. Where else could you have taken the kittens?
- 4. Can you legally take cats or dogs into the state forests?





WANTED

For:

Description:

Last Seen:

Contact:

More or Less



Match the estimated population sizes at the bottom of this sheet with the correct animal to determine how many are left in the wild today.

- 1. Humans
- 2. Numbats
- 3. Giant Pandas
- 4. Koalas
- 5. Blue Whales
- 6. Asian Elephants
- 7. Tasmanian Devil
- 8. Tigers
- 9. Gilbert's Potoroos
- 10. African Lions
- 11. Sumatran Orangutans

4,000	23,000	45,000	2,500
6,300	1,000	70	80,000
10,000	14,000	6,000	,000,000

More or Less Answer Sheet

Match the estimated population sizes at the bottom of this sheet with the correct animal to determine how many are left in the wild today.

1. Humans: 6,000,000,000

2. Numbats: 1,000

3. Giant Pandas: 2,500

4. Koalas: 80,000

5. Blue Whales: 14,000

6. Asian Elephants: 23,000

7. Tasmanian Devil: 45,000

8. Tigers: 4,000

9. Gilbert's Potoroos: 50

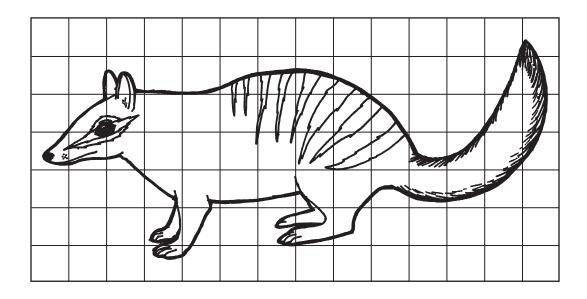
10. African Lions: 10,000

11. Sumatran Orangutans: 6,300

4,000	23,000	XXXX	2,500
6,300	1,000	50	80,000
10,000	14,000	6,000	0,000,000



A Question of Scale

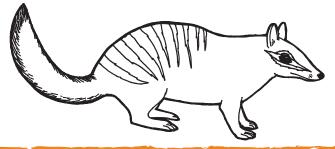


Numbat Bingo



Fill in the bingo boxes below by asking your peers for the answers. Record the answer in the appropriate box and also write the name of the person who share this with you. You have achieved BINGO when you have completed the grid below with all of the correct answers, each given to you by a different peer.

What can you do to help the Numbat?	A distinctive physical feature of the Numbat is	The average length of a full grown Numbat is	Is the Numbat found all across Australia?
The Numbat's conservation status is	The length of a Numbat's tail is	Numbats are active during	Numbats only eat
Numbats need these for shelter and protection.	Name a natural predator of the Numbat.	One place where you can see a Numbat is	The Numbat belongs to a special group of mammals called
How big are baby Numbats at birth?	How long is the Numbat's tongue?	The Numbat's gestation period is	Name one introduced threat to the Numbat.



Numbat Fact or Fiction

Read	the statements below and write down if you think each one is true (T) or false (F).
	Numbats are strictly diurnal.
	Numbats use their claws to dig into termite mounds.
	Numbats could live in Perth and feed on termites in our house.
	Numbats may live for 10 years or more.
	The scientific name for the Numbat means "banded ant-eater".
	Numbats have sharp teeth.
	Numbats use leaf litter, grass and flowers to make a nest in the burrow.
	Numbats only eat termites, nothing else.
	Numbat babies are born with fur and legs just like adults.
	Termites can bite like ants.
	Numbats find termites using their sense of smell.
	Female Numbats have a pouch like a kangaroo.
	Numbats forage together in groups.
	Numbats weigh less than 1 kg.
	Numbats are under threat from foxes and cats in the wild.
	Cats kill Numbats in the bush.
	Numbats are good climbers and can climb trees.
	Numbats are closely related to squirrels and meerkats.
	Numbats live in the rainforest.
	Numbats are insectivores.
	Termites live underground and in logs and trees.
	Goannas and snakes eat baby numbats.
	Numbats are always looking out for birds of prey in the sky.
	Numbat babies like to sunbake.
	Numbats need to drink water every day.

Numbat Fact or Fiction - Answer Sheet

Numbats are strictly diurnal. True

Numbats need to be up when termites are active which is only when the sun is out

Numbats use their claws to dig into termite mounds. False

Numbat claws aren't stronger enough to break into the mounds, they dig in the ground to find the underground pathways – called "galleries"

Numbats could live in Perth and feed on termites in our house. False

Termites in the city feed on treated wood and are often sprayed for pest control. These termites wouldn't be good for Numbats to eat.

Numbats may live for 10 years or more. False

Numbats rarely live longer than 5 years.

The scientific name for the Numbat means "banded ant-eater". True

"Myrmecobius" means ant-eater and "fasciatus" means striped.

Numbats have sharp teeth. False

Numbat teeth are reduced to little pegs because they don't chew their food so they don't really need sharp teeth.

Numbats use leaf litter, grass and flowers to make a nest in their burrows. True

They collect these things from the woodland floor and carry them back to the nest in their mouths. They shred them and make a very well padded nest.

Numbats only eat termites, nothing else. True

Numbats will not even eat ants.

Numbat babies are born with fur and legs just like adults. False

Numbats are marsupials, which means they are born very under-developed. They are furless, and their back legs are like little stumps. They develop more while attached to their mother's teats.

Termites can bite like ants. True

Termites have nippers like ants and can give a painful bite.

Numbats find termites using their sense of smell. True

Numbats have a long pointed nose to help them sniff out termites. They also can sense the movements of the termites underground.

Female Numbats have a pouch like a kangaroo. False

Kangaroos have a pouch like a pocket. Numbats don't. They have skin folds that act like a pouch, like the Tasmanian Devil and the Chuditch.

Numbats forage together in groups. False

Numbats are solitary, which means they live on their own.

Numbats weigh less than 1 kg. True

Numbats normally weigh 450-600g.



Numbats are under threat from foxes and cats in the wild. True

Foxes and cats prey on Numbats and Numbats are often too slow to get away in time. They have not evolved with these predators to know they are dangerous.

Cats kill Numbats in the bush. True

Cats are carnivores and they prey on lots of small mammals including Numbats if they live in the area.

Numbats are good climbers and can climb trees. True

Numbats are light and have strong arms. They climb up trees a short way to get to their nests if they are in the tree hollow.

Numbats are closely related to squirrels and meerkats. False

The closest relatives of Numbats are other marsupials like Tasmanian Devils and Quolls. Squirrels and Meerkats aren't Marsupials, they are Eutherians like dogs, horses and humans.

Numbats live in the rainforest. False

Rainforests are too wet and there isn't enough sunlight on the forest floor to warm up the termites. Therefore, Numbats would not survive in the rainforest.

Numbats are insectivores. True

Insectivores eat only insects and termites are insects.

Termites live underground and in logs and trees. True

Termites live, work, breed, and travel under the cover of the ground or in logs and trees.

Goannas and snakes eat baby Numbats. True

Goannas and snakes prey on baby Numbats by venturing down into the burrows where the babies are resting and sleeping.

Numbats are always looking out for birds of prey in the sky. True

Numbats evolved with native birds of prey and they know by instinct to look in the sky for these predators.

Numbat babies like to sunbake. True

All Numbats like the sun to warm their bodies, and baby Numbats will sit outside the nest during the day and sunbake, once they are big enough to walk.

Numbats need to drink water every day. False

Numbats get all the water they need from the termites they eat.



All About the Numbat

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It is a	a unique	found only in	small isolated pock	ets of south-west		
	. Here	they live in Eucalypt	woodlands where o	ld and fallen trees	provide hollow	
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1063			aging opportunites.	•		
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	nites.		C	<u> </u>		
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grou	nd. They dig sm	all holes in the grou	nd to uncover the pa	assageways (called	"galleries") tha	at
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	escaping	predators	threatens	eyes		
	shelter	colour	Western	pointed		



Fact or Opinion

Read the news article below then re-read it but this time pay close attention to how the journalist has used persuasive writing skills to influence the reader. A journalist uses such skills to support a particular position or stance taken on a topic. This may involve the use of facts and/or opinions to persuade a reader to adopt a particular perspective.

Highlight the facts in **blue**. Highlight the opinions in **yellow**. Highlight any clues in **red** that you have used to help you determine whether the information is fact or opinion.

Cats threaten native species in wildlife reserves across State

It may be cute and cuddly as a household pet, but the humble tabby cat is threatening the survival of native Australian marsupials, warn environmental scientists and government agencies.

While the introduced Red Fox (Vulpes vulpes) has long been recognised as a threat to native birds and mammals, the threat posed by cats is still often underestimated by most people in the wider community.

Many native species are preyed upon by cats, both in the city where they are household pets and in country and desert areas where there are cats that are officially classified as feral.

Feral cats (*Felis catus*) live without human contact and can also spread diseases to native animals, livestock and humans.

They are found widely across Australia and New Zealand and are very hard to control.

Feral cats have been successfully eradicated on islands off the mainland of Australia and New Zealand, allowing native birds and mammals to re-establish.

Fencing can be done on the mainland as well but reserves often have to be carefully managed and well-funded to keep foxes and cats out.

Clarissa Barnes, a spokes-

person for Cats are Cuddly Inc. admits that cats can kill birds and small mammals but argues that, if locked up at night they do not threaten local wildlife in the city.

"There is a big difference between a domestic cat and feral cats. If owners de-sex their cats and do not let them wander at night, they are unlikely to be a problem," Barnes said.

But RSPCA Chief Scientist, Dr Bidda Jones, says that further action is required.

"It can also mean taking responsibility for stray cats in your community either by bringing them into your family or taking them to the RSPCA," Jones said.

"A lot of people think they're doing a nice thing by feeding stray cats but they are inadvertently contributing to this problem."

Predation by cats is listed nationally as a Key Threatening Process under the Biodiversity Conservation and Environment Protection Act 1999.

Thirty-five vulnerable and endangered bird species, 36 mammal species, seven reptile species and three amphibian species are thought to be adversely affected by feral cats.

Conservation plans for the Bilby (*Macrotis lagotis*), Numbat (*Myrmecobius fasciatus*) and Mal-

leefowl (*Leipoa ocellata*) all list feral cats as a major threat to their survival.

However, a local farmer from the Narrogin region in south-west Western Australia, denies that farm cats pose a threat to local wildlife.

He argues that his cats are well fed and do not venture further than his property to hunt.

"They catch the occasional rat around the farm, which is great for us. But, I've never seen them come back with anything else.

"Even if they did take one numbat a year, it's not likely to make a big difference to the population in the long term."

Cats are believed to have been brought over from Europe in the 18th and 19th centuries to help control rabbits, rats and mice.

Research has shown that they can breed at 12 months of age and females can produce eight kittens per year.

The Invasive Animals Cooperative Research Centre advocates large-scale research and control programs for feral cats.

According to the Centre, there are millions of stray and feral cats in Australia, and not only do they predate on many animals, they also compete with them for food, water and shelter.

References: Invasive Animals Cooperative Research Centre Media Release, Tuesday 23 February 2010 "Report reveals Australia's feline folly" available at www.invasiveanimals.com



Fact or Opinion - Answer Sheet

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Thirty-five vulnerable and endangered bird species, 36 mammal species, seven reptile species and three amphibian species are thought to be adversely affected by feral cats.

Conservation plans for the Bilby (Macrotis lagotis), Numbat (Myrmecobius fasciatus) and

Malleefowl (*Leipoa ocellata*) all list feral cats as a major threat to their survival.

However, a local farmer from the Narrogin region in south-west Western Australia, **denies** that farm cats pose a threat to local wildlife.

He argues that his cats are well fed and do not venture further than his property to hunt.

"They catch the occasional rat around the farm, which is great for us. But, I've never seen them come back with anything else.

"Even if they did take one numbat a year, it's not likely to make a big difference to the population in the long term."

Cats are believed to have been brought over from Europe in the 18th and 19th centuries to help control rabbits, rats and mice.

Research has shown that they can breed at 12 months of age and females can produce eight kittens per year.

The Invasive Animals Cooperative Research Centre advocates large-scale research and control programs for feral cats.

According to the Centre, there are millions of stray and feral cats in Australia, and not only do they predate on many animals, they also compete with them for food, water and shelter.

References: Invasive Animals Cooperative Research Centre Media Release, Tuesday 23 February 2010 "Report reveals Australia's feline folly" available at www.invasiveanimals.com

Who Eats What?



Choose a name from the list of animal feeder types below and match it to the correct description. Then find three examples of each feeder.

Feeder Types

Herbivore Carnivore Omnivore Frugivore Folivore
Nectarivore Fungivore Piscivore Insectivore
an animal that feeds on nectar from flowers
an animal that eats both plants and animals
a herbivore that specialises in eating leaves
an animal that eats fish
an animal that feeds solely on plant matter
an animal that feeds on fungus
an animal that preys on and eats other animals
an animal that feeds on insects
an animal that feeds on fruit

Who Eats What? Answer Key



Choose a name from the list of animal feeder types below and match it to the correct description. Then find three examples of each feeder.

Feeder Types

Herbivore Carnivore Omnivore Frugivore Folivore Nectarivore Fungivore Piscivore Insectivore

Nectarivore an animal that feeds on nectar from flowers Examples: Feathertail Glider, Honey Possum, butterflies

Omnivore an animal that eats both plants and animals Examples: Blue-tongue Lizard, Magpie, Loggerhead Turtle, Human

Folivore a herbivore that specialises in eating leaves Examples: Koala, Giraffe, Howler Monkey

Piscivore an animal that eats fish Examples: Little Penguin, Sea lion, Cormorant (sea bird)

Herbivore an animal that feeds solely on plant matter Examples: Kangaroo, Giant Panda, Horse

Fungivore an animal that feeds on fungus Examples: Wombat, Woylie (Brush-tailed Bettong), Northern Flying Squirrel

Carnivore an animal that preys on and eats other animals Examples: Tasmanian Devil, Boa Constrictor, Wedgetail Eagle

Insectivore an animal that feeds on insects
Examples: Numbat, Echidna, Green Tree Frog, Anteater

Frugivore an animal that feeds on fruit Examples: Fruit Bat, Cassowary, Orangutan