

ADELAIDE  
ZOO



# Threatened Species



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## Acknowledgements

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With support from the following people and organisations:  
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Front cover image designed by:  
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Updated Jan 2011

This Outreach Education program for schools is a partnership between Zoos SA and the Department of Education and Children's Services, South Australia. Outreach Education is a team of seconded teachers based in public institutions who are managed through the Open Access College.

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# For the Teacher

## General Information

Welcome to Adelaide Zoo!

The Zoo is a great place for learning. Adelaide Zoo Education aims to support student learning by providing resources to assist classes to have educational and enjoyable experiences at the Zoo.

This booklet will provide a range of activities which may be undertaken by your students during their visit to the Zoo. A map and suggested order of activities is provided to give a logical circuit to travel during the visit.

Animal species change from time to time, and sometimes animals are “off limits” or out of sight during visits, so a flexible approach to completion of activities is recommended.

In planning, please consider whether

- ◆ you would like your class to regroup for lunch, animal feeds, the Discovery Zone or at the Entrance at the end of the visit. If so, relay the times and meeting places to students or supervisors (in writing if possible.)
- ◆ you would like to see the Pandas or use the Nocturnal House: if so, book a time when making the Zoo booking so your students are not disturbed by other school groups.
- ◆ you would like a session with a Zoo Education Officer to support your study theme. Lesson requests are met wherever possible, though at busy times of the year you may need to have a few options with dates to enable a time to be negotiated. Again, this time is arranged at the time of booking your class visit.

If your class is not booked in to a program involving an Education Officer, we will attempt to meet your class at the Entrance on arrival at the Zoo. At this meeting the group will be welcomed and given some information about the Zoo to assist their visit. General behaviour expectations will also be outlined.

Specific information relating to this Zoo Trail will follow for the teachers and for adult supervisors. Please ensure that supervisors have a copy of the relevant pages **before they come to the Zoo** so they can also be mentally prepared to maximise the learning for the students in their care.

# Threatened Species Trail – Primary

## TEACHER INFORMATION

### Pre-visit ideas

- Research an animal that is a Threatened Species. Find out its natural habitat, predators, food source and why it is now threatened.
- Write letters to wildlife protection programs, local councils or newspapers.
- Design posters to make people aware of Threatened Species or local environmental issues eg. Saving water, Litter, Cats hunting at night.
- Look at the food chains of various regions and find out what happens if one of the species becomes extinct.
- Discuss the different reasons why so many animal species are now threatened.
- Find out what students can do to help the environment and to help to stop animals from becoming extinct.
- Design and implement a recycling program for the school/community/home.

The following words and terms would be useful as prior knowledge to your visit to the Zoo:

- Threatened Species
- Extinct,
- Extinct in the wild,
- Critically endangered,
- Endangered,
- Vulnerable
- Habitat, Environment
- Introduced, Native and Feral

### Post visit ideas

- Design an enclosure for a Threatened Species, considering the animals' needs and natural habitat. Construct the enclosure using recycled materials.
- Collect newspaper articles related to Threatened Species e.g.: animal smuggling, Threatened Species numbers, feral animals.
- Research what wildlife organisations and zoos are doing to help Threatened Species.

### Assessment Ideas

The questions and tasks in the trail are designed to encourage original ideas and thinking. There is not necessarily a correct answer for each question. In most cases answers should vary from group to group, indicating independent thinking.

Other ways to assess the students work on this topic could include:

- Writing a report about the visit to the Zoo.
- Giving an oral presentation on the action they have taken to help the environment.

## What do we mean by Threatened Species?

Threatened Species is a general term used to identify species that are threatened with extinction. Species are placed into the following categories according to how threatened they are:

**Extinct (EX)**- The last member of a species had died.

**Extinct in the Wild (EW)**- When a species is known only to survive in captivity or in a population well outside the past range.

**Critically Endangered (CR)**- A species facing an extremely high risk of extinction in the wild in the immediate future

**Endangered (EN)**- Not critically endangered, but facing a very high risk of extinction in the wild in the near future.

**Vulnerable (VU)**- A species that is not critically endangered or endangered, but is facing a high risk of extinction in the wild in the medium-term future.

**Lower risk (LR)**- Species that do not satisfy the criteria for any of the categories CR, EN, or VU. Species included in the Lower Risk category can be separated into 3 sub-categories:

1. Conservation Dependent
2. Near Threatened
3. Least Concern

**Data Deficient (DD)**- a species is Data Deficient when there is not enough information to make an assessment of its risk of extinction based on its distribution and/or population status.

From the list of categories above, species which are Vulnerable, Endangered or Critically Endangered are said to be "Threatened Species".

## Links to SACSA framework

### Science- Earth and space

- 2.1 Expresses ideas about changes that occur in their local environment and considers implications for sustainable environments
- 3.1 Describes the characteristics that sustain life on Earth and changes to the characteristics and their impact over time

### Science- Living systems

- 3.5 Explains the interrelationships between systems within living things and between living things in ecological systems. They relate these ideas to the health of individuals and to threats to the sustainability of ecological systems.

### Society and Environment- Place, space and environment

- 2.6 Understands that people cause changes in natural and social environments and they act together in solving problems to ensure ecological sustainability.
- 3.4 Identifies and describes significant resources, explains the threats which endanger them and suggests strategies to combat threats.

## Background notes for Teachers and Supervisors on the day.

This trail is designed for students to use individually, in pairs or in small groups.

Students visit a number of native and exotic species that are threatened with extinction. The Adelaide Zoo uses the term Threatened Species when referring to these animals. This term covers all animals that are classified as critically endangered, endangered or vulnerable.

Students are encouraged to use their observation skills, to read signs and to talk with Zoo staff. Supervisors should encourage students to discuss ideas and to express their own points of views.

### Key



Observe carefully



Discuss and share ideas with your group



Write down your thoughts

### Threatened Species at Adelaide Zoo

The Rhinoceros symbol represents an animal that belongs to a Threatened Species. This means the number of that species in the wild has dropped dramatically and there is concern for its survival. This could be due to:

- Hunting for fur, medicine, food or sport
- Destruction of their natural habitat
- Sales to the pet trade
- Competition with feral or introduced animals
- Disease

A significant number of Australian native animals have become threatened in the last 200 years, since European arrival. The main causes of this are due to land clearing for agriculture and the introduction of non-native animals.

### Yellow-footed Rock-wallabies

Yellow-footed Rock-wallabies like to sit on the rocks where they are camouflaged and protected from predators such as eagles, foxes, cats and humans.

We call animals “feral” if they are domesticated animals that have been brought to Australia by people as pets or farm animals and rather than staying in houses or farms, these animals are now living freely in the Australian bush. Eg. Feral goats and pigs.

Foxes often eat rock-wallabies and cats can eat young wallabies. Rock-wallabies like to eat grasses and other plants. They often have to compete with feral goats, rabbits and horses for this food.

You should be able to see some kangaroos in the enclosure with the rock-wallabies. The Zoo staff know it's safe to house these animals together as they often live near each other in the wild. Both species are herbivores and therefore there is no threat of them eating each other.

### **Orange-bellied Parrots**

As there are only about 200 Orange-bellied Parrots left in the wild, the entire population is at a high risk of becoming extinct. The Adelaide Zoo has successfully bred the parrots and released many out to the wild. By breeding the birds, more knowledge can be gained on the species and therefore we are able to help the wild population boost their numbers.

Orange-bellied Parrots are found in bush lands and swampy marshes in Victoria and Tasmania.

### **Golden-lion Tamarin**

As the Golden-lion Tamarins are from a small, isolated part of the rainforest it makes them more at risk than animals that have a large range. If that part of the rainforest is destroyed it is likely that most of the tamarin population will also be destroyed. If a disease is spread through that area of the rainforest it is likely to effect many of the tamarins, leaving no other communities to keep the species going.

Tamarins with babies are killed by poachers who steal the babies to sell to the illegal pet trade.

Tamarins spend nearly all of their time in the trees. This is where they sleep, find the fruits, seeds and nuts that they like to eat and also where they are safer from predators.

### **Western Swamp Tortoise**

This is Australia's smallest freshwater tortoise. Its natural habitat is wetlands, which dry out in the summer, that were once found in and around Perth.

This habitat is now almost completely gone, either beneath the expanding suburbs of Perth or having been drained for agriculture. Two swamps where these tortoises once lived are now conservation reserves surrounded by predator-proof fencing.

Perth Zoo has been breeding Western Swamp Tortoises since the 1990s, and has released over 400 back "to the wild" – to the reserves with the predator-proof fencing.

Adelaide Zoo has the only Western Swamp Tortoises outside of WA. Two are displayed in the Nocturnal House, for educational purposes, and five others are in outdoor enclosures where seasonal changes should trigger a natural breeding cycle. The aim is to establish a breeding group at Adelaide Zoo.

### **Giant Pandas**

The mountains of South West China support 12,000 plant species that includes 60 species of bamboo and are home to over 1,100 animal species. Pandas are solitary animals, in the wild spending most of their time by themselves. They can often be aggressive with each other.

Human population growth has dramatically altered Panda habitat.

3 major actions that will save Giant Pandas from extinction are, protect habitat, breed in captivity and release captive bred Pandas to the wild.

1 2 3 4 5 6 8 9 10 11 12 13 14 15 16 17 18

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

- M3 Leopard
- K4 Lion
- L11 Lyrebird
- M7 Malaysian Tapir
- P6 Mandrill
- G7, Q9 Meerkat
- E12, G6 Otter
- P5 Orangutan
- M13 Peccary
- J8 Pelican
- U13 Penguin
- H5 Pheasant
- L12 Quokka
- S9 Sealion
- K3 Serval
- K7 Squirrel Monkey
- L6 Sun Bear
- I6 Tamarin
- H9 Tasmanian Devil
- P3, M5 Tiger
- N9 White-cheeked Gibbon
- D10 Wallaby
- R9 Water Dragon
- P10 Westpac Envirodome
- G8 Wombat

- Q7 African Wild Dog
- C14 Aldabra Tortoise
- P8 Baboon
- C11 Barbary Sheep
- Q9 Binturong
- E8 Brazilian Tapir
- L9 Cassowary
- I3 Colobus
- M7 Dusky Langur
- G9 Emu
- L3 Fennec Fox
- M9 Flamingo
- I10 Giant Panda
- F7 Giraffe
- E14 Hippopotamus
- E10 Kangaroo
- H8 Koala
- F4 Lemur

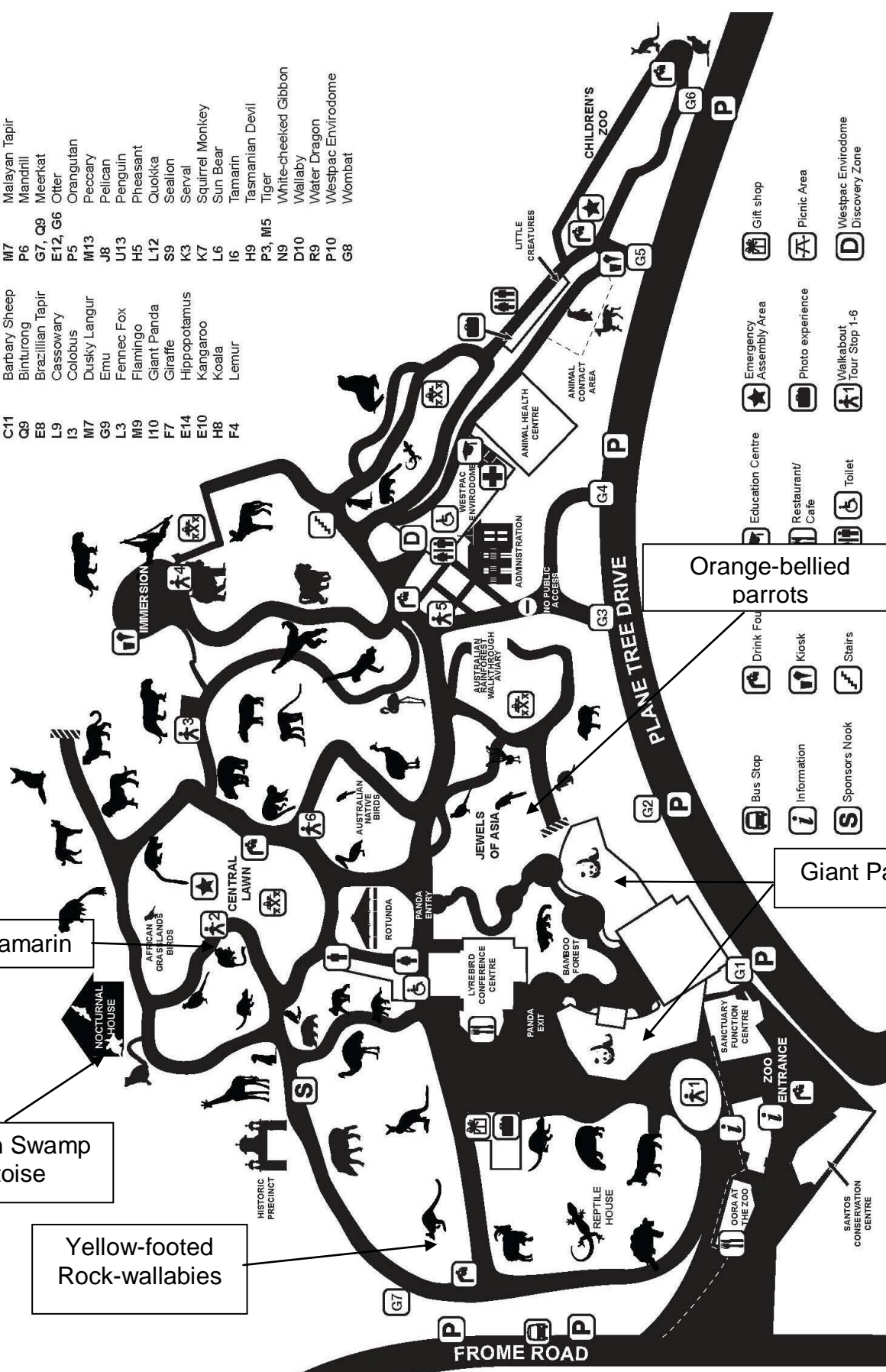
Golden-lion Tamarin

Western Swamp Tortoise

Yellow-footed Rock-wallabies

Orange-bellied parrots

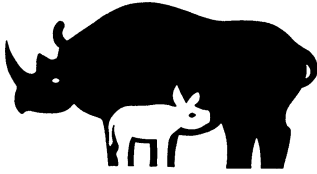
Giant Panda



FROME ROAD

SANTOS CONSERVATION CENTRE

# Threatened Species at Adelaide Zoo



When walking around the Zoo, you will see this symbol on the signs outside some of the enclosures. It tells us that this animal is a Threatened Species.

**What does this mean?**



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**List 4 reasons why animals might now be a Threatened Species?**

1.

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2.

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3.

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4.

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Some Australian Aboriginals hunt native animals for clothing, food and medicines, but many Australian animals have become extinct or threatened in the last 200 years, since European arrival.



**Why do you think this is so?**

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# Yellow-footed Rock-wallabies

## (Lower Risk)



Can you see the Yellow-footed Rock-wallabies? They are probably sitting on the rocks. The patchy colouring on their fur helps them to stay camouflaged.



What would the rock-wallabies be hiding from?



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What does it mean if an animal is feral?



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I can see \_\_\_\_\_ rock-wallabies in the enclosure!

**Compare this number with your friends. Think about why the numbers may be different.**

**Which of these introduced animals do you think would be a threat to rock-wallabies?**

- |                                 |                               |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> Rabbit | <input type="checkbox"/> Goat |
| <input type="checkbox"/> Fox    | <input type="checkbox"/> Cat  |
| <input type="checkbox"/> Horse  | <input type="checkbox"/> Rat  |



What other animals can you see in the enclosure with the rock-wallabies?



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How does the Zoo staff know it's safe to house these animals together?



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# Orange-bellied Parrots (Critically Endangered)

👁️ Look for the Orange-bellied Parrots in the Aviary. There are only about 200 of these birds left in the wild.

Which word best describes the Orange-bellied Parrots' size?



**Big**

**Small**

**Tiny**



Can you imagine a bird this size, flying all the way across Bass Straight to Tasmania?

They do fly to Tasmania and back to mainland Australia each year.



**Why do you think it is so important for the Adelaide Zoo to successfully breed Orange-bellied Parrots?**



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Draw the habitat where you would most likely find an Orange-bellied Parrot.

# Sumatran Tiger

## (Critically Endangered)

The Adelaide Zoo has three Sumatran Tigers. A male called "Tuan" and two females called "Kemiri" and "Assiqua"

**💡** If Sumatran Tigers are critically endangered, why do you think the Adelaide Zoo houses the male and female in different enclosures, making it impossible for them to breed?



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**Why do you think Sumatran Tigers are now a Threatened Species?**

Hunted for their fur



Habitat destruction

Body parts used for traditional medicines

Caught and sold on the pet trade

Competition with feral animals



**What can you see in the tiger's enclosure that makes it look like it's natural rainforest habitat?**



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# Golden-lion Tamarin

(Critically Endangered)

The Golden-lion Tamarins can be found in the building next to the “Old Head-keepers Cottage” near the Giraffe enclosure.

 Golden-lion Tamarins are found in a tiny part of the rainforests in South America.

**How could this make them more at risk than animals that are found in large areas of rainforests?**



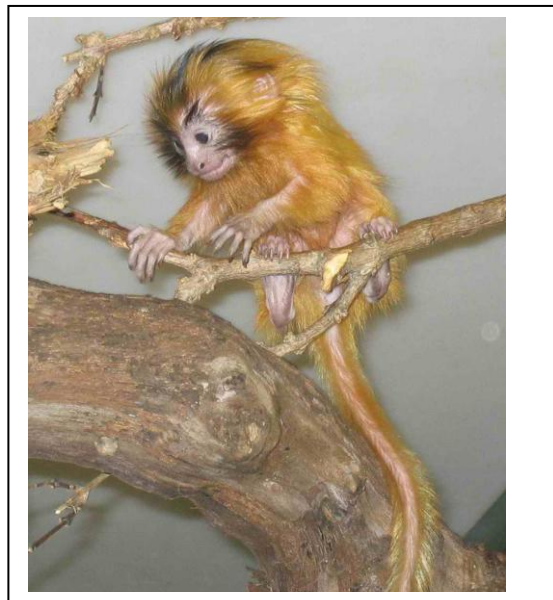
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Look closely at the tamarins. Write some words that you think of when watching them.



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Where do you think tamarins would spend most of their time?




**In the trees**

**In water**

**On the ground**

# Western Swamp Tortoise (Critically Endangered)



 Observe the Western Swamp Tortoises in the aquarium in the Nocturnal House.

Draw one in the space below, labelling eyes, nostrils, claws, mouth and shell.



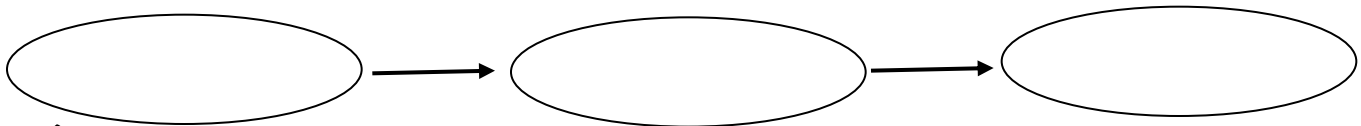
Western Swamp Tortoises are predators. What are 3 animals that they probably ate in the swamps of their natural habitat?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

What are 3 animals which would eat Western Swamp Tortoises if they got the chance.

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Create a **food chain** that starts with a plant and includes a Western Swamp Tortoise.



**In the summer, when their swamps dry out, Western Swamp Tortoises dig a tunnel up to 1 metre under the ground and have a sleep or “aestivate”.**

Why do you think they do this?

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# Giant Panda (Endangered)



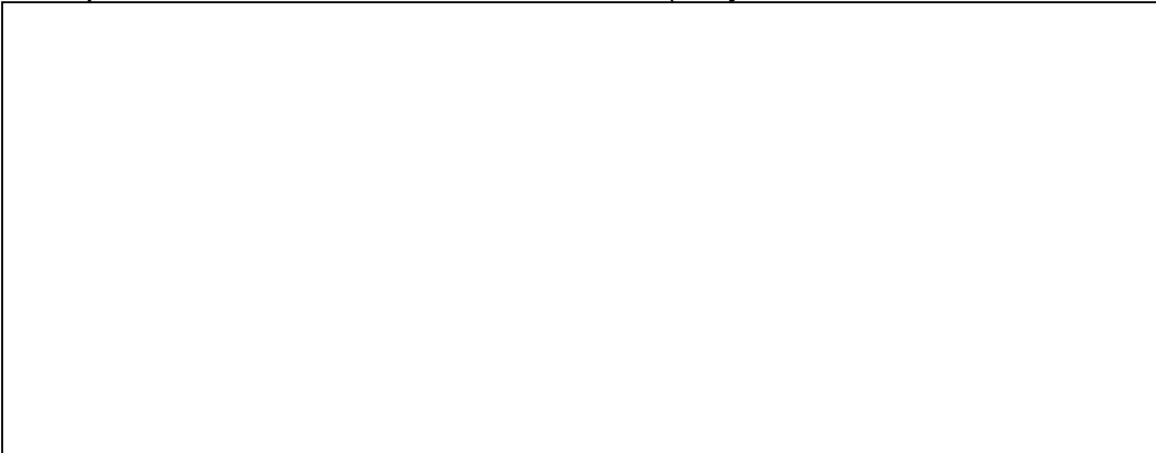
Can you see the Pandas?

Adelaide Zoo is part of the Global Conservation efforts to help Giant Pandas. The reasons for their decline that places them on the endangered species list can be linked to human activities.



Write down as many reasons you can think of as to why Giant Pandas are an Endangered Species \_\_\_\_\_

Draw a picture of one of the Giant Pandas (maybe finish the details later!)



Now add some bamboo for its habitat.

Human activity has caused many problems for Giant Pandas. Forests in China have been clear-cut for agriculture and logging and to build homes. This has resulted in loss of Panda habitat and food.

What are the 3 major actions needed to save Giant Pandas from extinction? \_\_\_\_\_

Find out what Zoos SA is doing to save Giant Pandas from extinction by using one of the touch screens!



There is often debate about what 'animal group' Giant Pandas fit into when it comes to Classification (grouping). Discuss what features they have that make it a bear and write them down below.

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Giant Pandas look like bears, having a large round head and body and their ears are similar to brown bears. Panda newborns look like bear newborns, being very small compared to mature animals and being pink and only covered with fine hair.

### What are they doing?

Giant Pandas spend about half their day eating bamboo and the other half resting, often leaning against something when they rest or eat.



There are other behaviours for you to look out for though. Tick the boxes next to the activities that you see the Giant Pandas doing.




**Eating**




**Climbing**




**Playing**




**Walking**



**Walking**

**Resting**




**Scent –  
marking**



**Are there any other behaviours you see?**

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