



# Animal Adaptations

Years 7-10

Please complete this section during your session with a Zoo Education Officer

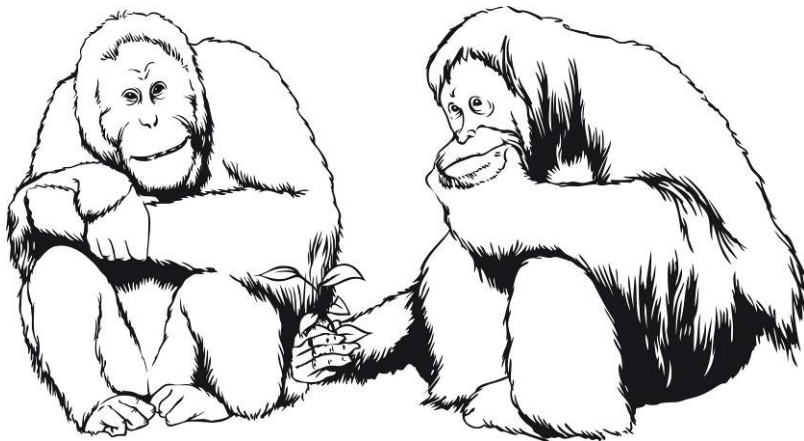
5. Animals are adapted to suit the environment in which they live. List some of the abiotic (non-living) and biotic (living) components that may be found in Perth in the Year 2100 based on predictions of climate change.

Abiotic (non-living)	Biotic (living)

6. Adaptations for survival take a long time to change in response to changes in the environment. It is a great concern that human impact is changing the earth's ecosystems faster than species can adapt to them, resulting in mass extinction.

List some actions that we can take to slow down the current rate of environmental change on earth.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

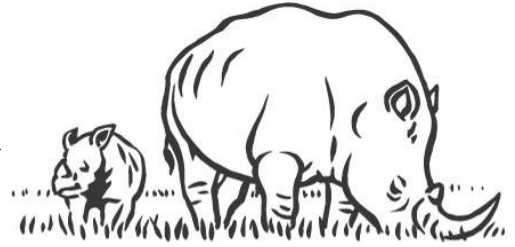


## Activity Sheet A - Under Pressure

Visit the African Savannah and select a mammal to study.

Common Name: \_\_\_\_\_

Scientific Name: \_\_\_\_\_



List three **environmental pressures** (abiotic and biotic) that could effect the survival of your species in the wild.

Abiotic:

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Biotic:

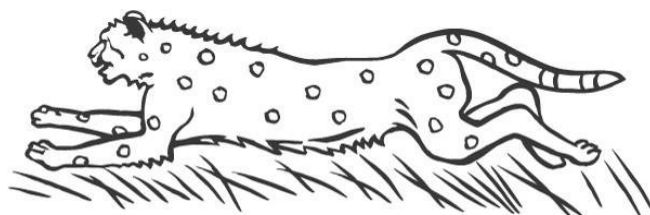
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Carefully observe your species. Choose three of the environmental pressures faced by your species. Using the table below, describe the adaptation (either structural, behavioural or physiological) and how this has enabled your species to survive in its habitat.

	Environmental Pressure 1: _____	Environmental Pressure 2: _____	Environmental Pressure 3: _____
Structural Adaptation			
Behavioural Adaptation			
Physiological Adaptation			



## Activity Sheet B - Feeding Frenzy

Nature has produced an enormous variety of adaptations to help animals find and obtain food.

Locate the following animals around the Zoo and identify adaptations that they possess to assist them in their daily quest for food. Classify these adaptations as either structural, behavioural or physiological.



	Diet in the wild	Structural	Behavioural	Physiological
Echidna				
Koala				
Freshwater Crocodile				
Giraffe				
Oriental Small-clawed Otter				
Sun Bear				

\*Use the signage and your own observations to complete the table. Some additional research might be need to be carried out back at school.



## Activity Sheet C - Fact or Fallacy

Visit the Asian Elephants. Describe their natural **environment** in the wild. Include reference to the type of vegetation and climate.

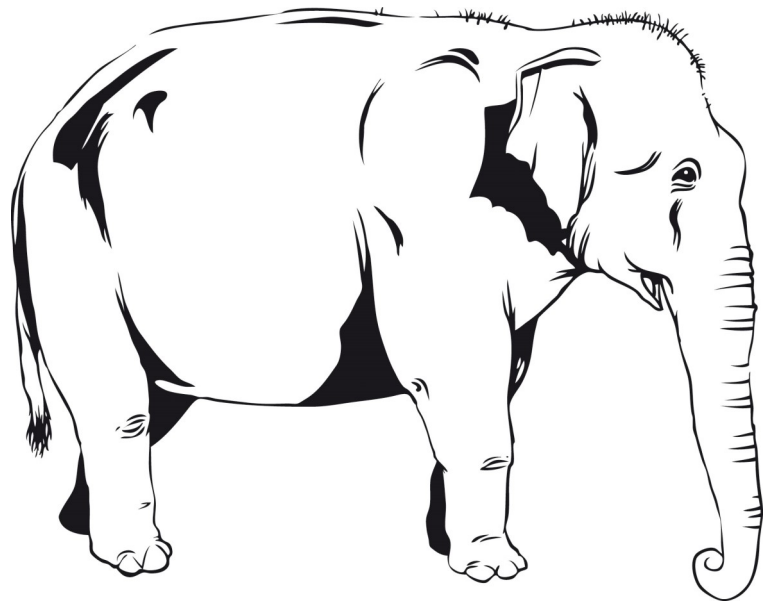
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Use the elephant signage to decide if the following statements are 'true' or 'false'.

Feature	True	False
Live in groups called herds which are usually led by the oldest female.		
Ears smaller than African Elephants.		
Body is larger in size compared to an African Elephant.		
Tip of trunk ends in a semi-prehensile 'finger'.		
Both males and females have large tusks.		
Male elephants are solitary and fight over females during breeding season.		



How have the habitats affected the selection of structural characteristics such as ear and body size in Asian and African Elephants?

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What is the advantage of living in a large group such as a herd?

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What is the **genetic advantage** of the social behaviour of males (bulls) fighting over females (cows) during breeding season?

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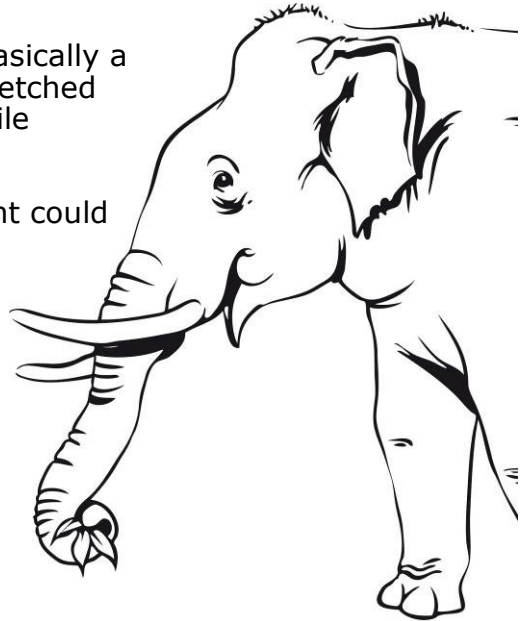


## Activity Sheet C - Terrific

An elephant's trunk is truly an amazing structure! It is basically a nose and upper lip that has been joined together and stretched out to become the elephant's most important and versatile appendage.

Work as a group to come up with **five things** an elephant could use its trunk for and write them into the table below.

Now spend **five minutes observing** the **Asian Elephants** and see how many of your ideas are used in this time.



What do I think an elephant could use its trunk for?	Did it do it today? (Yes or No)
1.	
2.	
3.	
4.	
5.	

According to some zoologists, the elephant's trunk is said to 'have over forty thousand individual muscles in it, making it sensitive enough to pick up a single blade of grass, yet strong enough to rip the branches off a tree'.



## Activity Sheet D - Amphibian Adaptations

Frogs have special adaptations to help them survive in their environment. Find other animals in the Zoo that have similar adaptations to help them survive in their habitats.

Find another animal with great camouflage. Draw it here.

Find another animal with eyes on the top of their head. Draw it here.

**Frogs have thin, moist skin. Some frogs have excellent camouflage; their skin colour helps them to blend into their environment.**

**The eyes of frogs are on top of their head. This helps them to see all around while hiding their bodies under water.**

**Strong and powerful hind legs help frogs to jump great distances.**

**Frogs feet are specially adapted to where they live. Tree frogs have feet and toes that help them to climb up plants.**

Find another animal with strong back legs. Draw it here.

Find another animal with specially adapted feet. Draw it here.

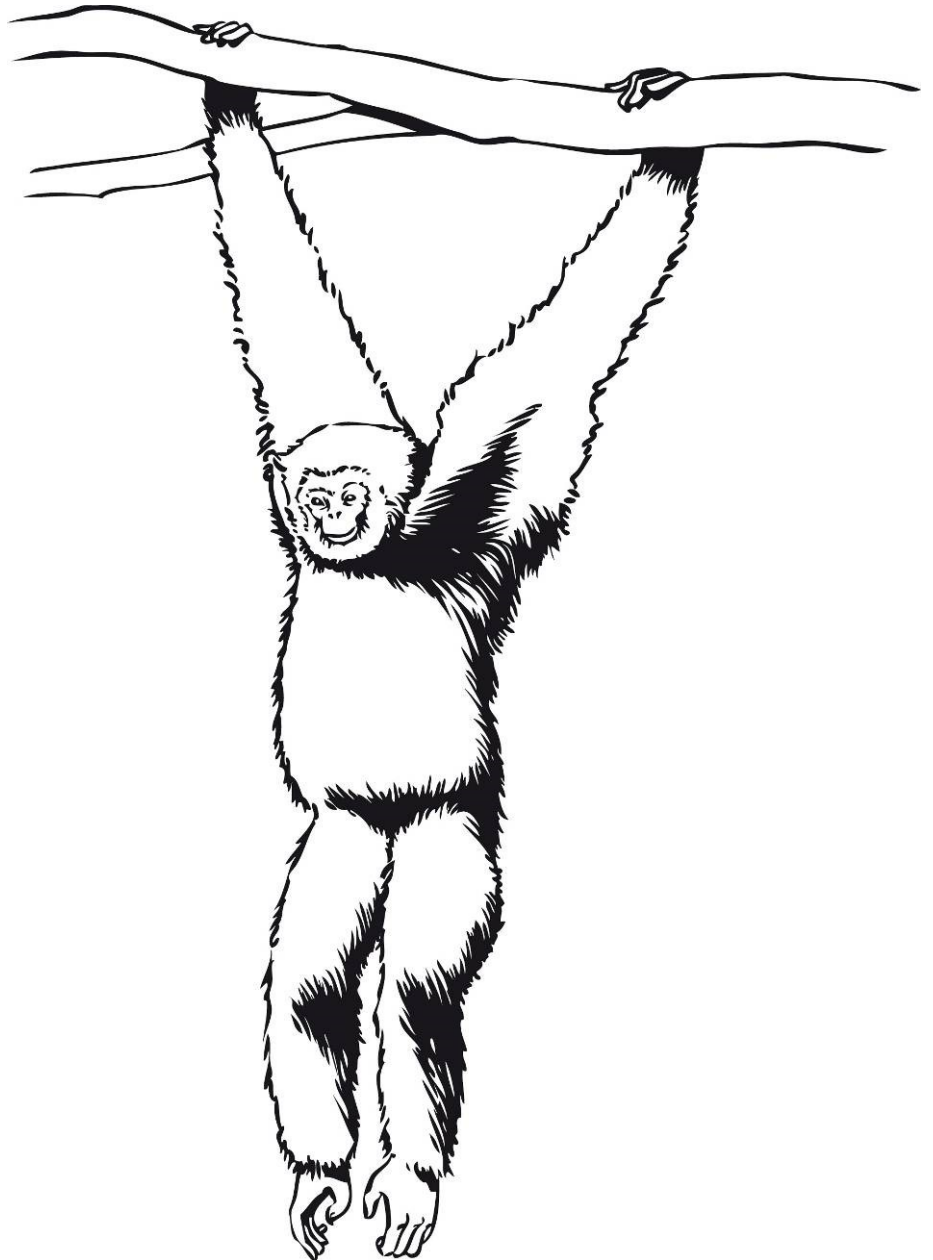


## Appendix 1

### Learn the Lingo

Several terms and phrases are commonly used when discussing animal adaptations. Find out the meaning of the following terms and phrases to expand on your biological vocabulary.

- abiotic factors
- adaptation
- behavioural adaptation
- biotic factors
- camouflage
- carnivore
- dentition
- ecosystem
- environment
- environmental pressure
- genetic advantage
- herbivore
- omnivore
- physiological adaptation
- prehensile
- structural adaptation
- thermoregulation





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Create a make-believe creature of your own.  
Indicate the type of environment it lives in and how the adaptations that you have chosen help it to survive.

