

# Mogo Zoo Curriculum-based Program for School Excursion

## Stage 4: Adaptations



MOGO  
ZOO

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## Stage 4: Adaptations

### For Teachers:

This document contains a series of worksheets that relate to the following NSW Board of Studies Science Syllabus Years 7-10 for Stage 4:

<b>Prescribed Focus Area: Outcome 4.2</b> (a) evaluate the role of creativity, curiosity, objectivity and logical reasoning in describing phenomena, carrying out investigations and in the devising and testing of hypotheses & (g) identify that the nature of observations made depends upon the understanding that the observer brings to the situation.
<b>Knowledge &amp; Understanding: Outcome 4.10:</b> (a) describe some adaptations of living things to factors in their environment
<b>Skills: Outcome 4.16:</b> (a) use a range of sources, including databases, CD-ROMs and the internet, to access information & (d) summarise information from identified oral and written secondary sources <b>Outcome 4.21:</b> (a) seek evidence to support claims & (c) produce creative solutions for problems

### How to use this document:

- This document provides a variety of worksheets that relate to topic of Adaptations.
- You may choose to use all or some of the worksheets.
- It is suggested that some worksheets be completed **prior** to your visit to Mogo Zoo. Provide background knowledge to students regarding Adaptations.
- Animal related worksheets are designed to be completed **during** your visit to Mogo Zoo.
- A suggested post-visit activity to confirm observations and findings using secondary sources.
- Depending on the reading level of the students, you may choose to read aloud the instructions on the worksheets.
- You may choose to attend the Keeper Talks beginning daily at 10:30am and 1:45pm.
- All school excursion bookings include a private zoo keeper talk about an animal of your choice from Mogo Zoo's collection. Please select from the Mogo Zoo species list (included) and notify Mogo Zoo staff of your selection at the time of booking.
- **For bookings or enquiries, contact Tim Leach on (02) 4474 4930.**

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- If you would like more background information on a specific species, please contact Tim Leach on (02) 4474 4930.

### *Suggested Activities:*

#### **Adaptations**

##### Pre-visit activity

- Students select 5 species from Mogo Zoo's collection and research the natural habitat of each of the species.
- Educate students on the terms: adaptation, structural feature, natural environment.
- Complete animal features worksheet (alternatively can be completed during visit)

##### Zoo activity

- For each animal species selected students will need to (adaptation worksheet provided):
  - Observe the animal's exhibit(s) and make a list of all items or features that can be identified in the exhibit. (i.e. ground covering, plants, furniture, etc)
  - Identify the ways in which this animal's exhibit is similar to that of its natural habitat. (based on student research)
  - Identify the ways in which it is different to the animal's natural habitat
  - Identify 3-5 structural (physical) features of the animal and suggest reasons why each feature helps the animal to survive in its natural environment (outside of the zoo).
  - Read about what the animal eats listed on the exhibit sign and suggest what adaptations help the animals to gather/forage/catch and consume their food.
- Students complete animal features worksheet (alternatively can be completed before visit)

##### Post-visit activity

- Students conduct research using valid secondary sources to confirm their suggestions

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### List of Species At Mogo Zoo

- Red-Tail Boa Constrictor – *Boa constrictor constrictor*
- Burmese Python – *Python molurus bivittatus*
- Carpet Python - *Morelia spilota mcdowelli*
- Green Iguana – *Iguana iguana*
- Rhinoceros Iguana – *Cyclura cornuta*
- Red Panda – *Ailurus fulgens*
- Serval – *Leptailurus serval*
- Oriental Small-Clawed Otter – *Aonyx cinerea*
- Pygmy Marmoset – *Calithrix pygmaea*
- Cotton-Top Tamarin – *Saguinus Oedipus*
- Golden-Lion Tamarin – *Leontopithecus rosalia*
- Fennec Fox – *Vulpes zerda*
- Meerkat – *Suricata suricatta*
- Emperor Tamarin – *Saguinus imperator*
- Snow Leopard – *Uncia uncia*
- Sumatran Tiger – *Panthera tigris sumatrae*
- African Lion – *Panther Leo*
- Lar Gibbon – *Hylobates lar*
- De Brazza's Monkey – *Cercopithecus neglectus*
- Silvery Gibbon – *Hylobates mooch*
- Fallow Deer – *Dama Dama*
- Eastern Grey Kangaroo – *Macropus giganteus*
- White Lion – *Panthera Leo*
- Giraffe – *Giraffa camelopardalis*
- Plains Zebra – *Equus quagga*
- Ostrich – *Struthio camelus*
- Chimpanzee – *Pan troglodytes*
- Brazilian Tapir – *Tapirus terrestris*
- Ring-Tailed Lemur – *Lemur catta*
- Black and White Ruffed Lemur – *Varecia variegata variegata*
- Spider Monkey – *Ateles geoffroyi*
- Siamang – *Hylobates syndactylus*
- Green Tree Frog (Dumpy treefrog) – *Litoria caerulea*
- Yellow-and-blue poison dart Frog – *Dendrobates tinctorus*
- White-lipped Tree Frog (Giant Tree Frog) – *Litoria intrafrenata*

## Task Instructions For Mogo Zoo Excursion

Student Name:

Date:

Pre-visit activity:

- Select 5 species from Mogo Zoo's collection and research the natural habitat of each of the species.

During your visit:

- For each animal species selected, you will need to:
  1. Observe the animal's exhibit(s) and make a list of all items or features that can be identified in the exhibit. (I.e. ground covering, plants, furniture, etc).
  2. Identify the ways in which this animal's exhibit is similar to that of its natural habitat (based on your research).
  3. Identify the ways in which it is different to the animal's natural habitat.
  4. Identify 3-5 structural (physical) features of the animal and suggest reasons why each feature helps the animal to survive in its natural environment (outside of the zoo).
  5. Read about what the animal eats listed on the exhibit sign and suggest what adaptations help the animals to gather/forage/catch and consume their food.
- You will need one worksheet for each animal.

Post-visit activity:

- Conduct research using valid sources to confirm your suggestions.

Syllabus outcomes:

**Prescribed Focus Area: Outcome 4.2** (a) evaluate the role of creativity, curiosity, objectivity and logical reasoning in describing phenomena, carrying out investigations and in the devising and testing of hypotheses & (g) identify that the nature of observations made depends upon the understanding that the observer brings to the situation.

**Knowledge & Understanding: Outcome 4.10:** (a) describe some adaptations of living things to factors in their environment

**Skills: Outcome 4.16:** (a) use a range of sources, including databases, CD-ROMs and the internet, to access information & (d) summarise information from identified oral and written secondary sources

**Outcome 4.21:** (a) seek evidence to support claims & (c) produce creative solutions for problems

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**To be completed during your visit to Mogo Zoo.**

\*You will need 5 copies of this worksheet. One for each animal.

Student Name:

Date:

Animal:

Observe the animal's exhibit(s) and make a list of all items or features that can be identified in the exhibit. (I.e. ground covering, plants, furniture, etc):

Identify the ways in which this animal's exhibit is similar to that of its natural habitat (based on your research):

Identify the ways in which the exhibit is different to the animal's natural habitat:

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Identify 3-5 structural (physical) features of the animal and suggest reasons why each feature helps the animal to survive in its natural environment (outside of the zoo):

Read about what the animal eats listed on the exhibit sign and suggest what adaptations help the animals to gather/forage/catch and consume their food:

### Animal Features Worksheet:

For each feature, write a reason how this would help the animal to survive in the wild.

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

#### Sumatran Tiger

Stripe pattern: \_\_\_\_\_

Long tail: \_\_\_\_\_



Strong jaws/sharp teeth: \_\_\_\_\_

Claws: \_\_\_\_\_

#### Oriental Small-clawed Otter

Thick fur: \_\_\_\_\_

Long, flat tail: \_\_\_\_\_



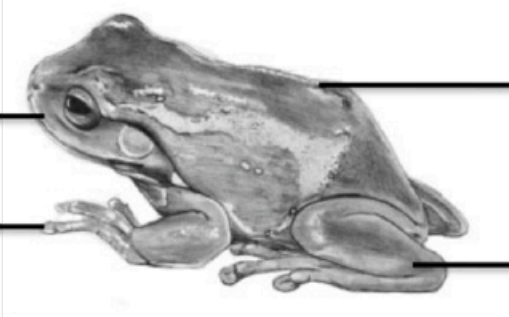
Whiskers: \_\_\_\_\_

Webbed feet: \_\_\_\_\_

#### Green Tree Frog

Sticky tongue: \_\_\_\_\_

Toe pads: \_\_\_\_\_



Permeable skin: \_\_\_\_\_

Powerful legs: \_\_\_\_\_

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Animal Features Worksheet: **ANSWER KEY**

For each feature, write a reason how this would help the animal to survive in the wild.

Sumatran Tiger

Stripe pattern: **camouflage in the forest**

Long tail: **balance when pouncing**

Crushing prey/tearing flesh

Strong jaws/sharp teeth:

catching prey

Claws:

Oriental Small-clawed Otter

Thick fur: **warmth in water/waterproofing**

Long, flat tail: **direction when swimming/rudder**

sense obstacles/ prey under water

Whiskers:

propulsion under water

Webbed feet:

Green Tree Frog

Sticky tongue: **catch prey**

Toe pads: **grip onto trees/plants**

allow breathing (absorption of oxygen) through skin

Permeable skin:

jumping great heights

Powerful legs: