

## ***Animal Adaptations***

This worksheet complements the Animal Adaptation videos that can be viewed on our Queensland Museum website. They can be accessed through: Find Out About > Behind the Scenes > Museum Experts or directly at

<http://www.qm.qld.gov.au/Find+out+about/Behind+the+Scenes/Museum+Experts>

In these documentaries museum scientists talk about interesting adaptations of some Queensland animals.

Adaptations increase an organism's chances of survival. They can be **structural** (physical features); **functional** (how their body works); **behavioural** (what they do); or **reproductive** (how they reproduce).

These videos relate to several year levels of the **Australian Science Curriculum**:

Year 4: *Living things depend on each other and the environment to survive.*

Year 5: *Living things have structural features and adaptations that help them to survive in their environment.*

Year 6: *The growth and survival of living things are affected by the physical conditions of their environment.*

Year 8: *Multi-cellular organisms contain systems of organs that carry out specialised function that enable them to survive and reproduce.*

**Aim:** *To investigate the characteristics of living things, including their body structure and behaviours, and recognise that these characteristics help them to survive in their particular environment.*

After completing the worksheet, students could work in groups to produce their own documentary on animal adaptations. This could be in video format or as a PhotoStory using still digital images and a voice-over provided by the student. This incorporates the use of ICTs into the activity.

Instructions on how to download a free version of Microsoft PhotoStory and helpful hints on producing a digital story are provided at the following links:

<http://www.microsoft.com/photostory>

<http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/tips/firststory.msp#ERD>

Students and teachers can preview some digital stories on our Queensland Museum website in the *Wild Backyards* online resource available at:

<http://www.qm.qld.gov.au/en/Learning+Resources/Resources>

In this resource, there is a Backyard Explorer's User's Guide. On pages 27-29 are instructions on how to produce a good digital story.

As an alternative to a video or digital story, younger students could collect images from newspapers and magazines and make a poster with written explanation of the adaptations of each organism.

These documentaries also target the draft **Australian Biology Curriculum**, specifically Unit 1 – *Cells and the functioning organism*. In the Science Understanding strand, students study the structural, functional and behavioural adaptations that enhance an organism's survival, including

- environmental factors and challenges that affect the way organisms meet their requirements for life, including obtaining nutrients, water and gases; disposal of wastes; shelter; and protection
- adaptations of multicellular organisms to terrestrial and aquatic habitats

The outcome of all these activities should be an appreciation of the beauty and diversity of life on Earth.

Student Worksheet	<h1 style="margin: 0;"><i><b>Animal Adaptations</b></i></h1>
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The following activities are based on the **Animal Adaptations** videos available at the following link:

<http://www.qm.qld.gov.au/Find+out+about/Behind+the+Scenes/Museum+Experts>

**Aim:** To investigate the characteristics of living things, including their body structure and behaviours, and recognise that these characteristics help them to survive in their particular environment.

**Activities:**

1. Select one of the following groups: 1. Bee Flies; 2. Carpet Pythons; 3. Marine Mammals (feeding adaptations of the Blue whale and Crabeater seal); 4. Swimming Crabs (Blue swimmer and the Mud crab); 5. Tortoise Beetles; or 6. Velvetfish. Watch the video noting the features discussed by the museum expert.
2. In the space below, **draw** a sketch of your animal. **Label** any structural features. You may need to do further research to help you label other structural features of your chosen animal.

3. Complete the table on the next page. **Describe** each adaptation. **List** the **type** it is. Then **explain how** that feature helps the animal to survive in its environment.
4. Add any **behavioural** and **functional** adaptations mentioned in the video. You may like to do further research to help you.
5. Form a group with other students who did the same animal. Share your findings within the group.
6. Share your group’s findings with the rest of the class. A different group member can present a different adaptation.

Extension (Optional)

Make your own video on animal adaptations. Alternatively, you could collect some digital images of specific animals and make a PhotoStory. Include a voice-over discussing the adaptations. Useful websites include:

<http://www.microsoft.com/photostory>

<http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/tips/firststory.mspx#ERD>

Look at some digital stories on our Queensland Museum website in the *Wild Backyards* online resource available at: <http://www.qm.qld.gov.au/en/Learning+Resources/Resources>

Alternative: Collect images from newspapers, magazines, or Flickr (Creative Commons licence) and make a poster with written explanation of the adaptations of each organism.

Deliver your final presentation to the rest of the class.

Name of animal:		
Adaptation (Describe the feature)	Type of Adaptation (Is it structural, behavioural, functional, or reproductive?)	Explanation (How does this adaptation help the animal to survive in its environment?)