



THE AQUARIUM OF WESTERN AUSTRALIA

Curriculum Links | Biological Sciences Course of Study

AQWA is an amazing learning context that enables your students to study the local biology of Western Australia. AQWA excursions can also provide essential content for biological science students in the following areas:

Communities and Ecosystems:

Biodiversity and sustainability

AQWA's entertaining and informative presentation 'Fishy Affairs' provides your students with an understanding of **reproductive biodiversity** under the ocean by covering the diverse range of reproductive strategies used by marine animals.

Individuals and Species

Classification and evolution

AQWA's presentation "Weird Relations" is specifically designed to help your students understand the meaning of **relatedness between organisms** and appreciate the **key structural features used for classification**. This presentation showcases animals that your students can observe at AQWA and uses fun facts to reveal which animals are related to each other and why.

AQWA's excursion activity sheet 'Touch Pool Classification' further cements this understanding. It provides the features used to classify animals at the phylum and class levels of classification. Students use these features to identify an animal in the touch pool. They then use observations to create a list of other features and characteristics to identify a particular species.

This content area is further explored in the excursion activity sheet 'Competing Corals' in which students use the signage at AQWA to discover the similarities and differences between animals in the phylum cnidaria.

Structure and function

As a visit to AQWA is a journey along the coastline of Western Australia, it provides the ultimate opportunity for your students to **compare and contrast the structure and functions** of common features (such as fins on a fish) across the following **range of marine environments**:

- Great southern - cool waters, waves, granite shores,
- Shipwreck coast - temperate waters, open ocean
- Perth coast - coastal reefs, sandy seabeds
- Far north coast - tropical waters, coral reefs,
- Coral Reef Exhibit - coral reefs, deep sea

AQWA's DANGERzone exhibit enables students to explore the adaptations of a variety marine life, and discover what makes them dangerous to us.



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The concept of adaptations can be explored by your students through our excursion activity sheet 'Defence'. In this sheet students use observations and signage to determine adaptations, used by 7 different animals, for defence and then classify these adaptations as structural, behavioural or physiological.

AQWA's living exhibits enable students to compare a comprehensive range of **vertebrate and invertebrate animals** via observations, as well as interact with them in our touch pool.

Comparisons between the reproductive strategies (**sexual and non sexual reproduction**) of a diverse range of marine animals are covered in AQWA's 'Fishy Affairs' presentation.

Cells

Reproduction, genetics and biotechnology.

AQWA's presentation "Ocean Origins" gives your students and insight into the world of marine biotechnology by providing up to date examples of how the unique adaptations of marine life are leading scientists to cures for diseases, enabling them to study the DNA of living cells and have created new and improved everyday products such as bathers, ice-cream and glue.

Working as a biologist

Designing and conducting ethical biological research

AQWA offers the opportunity for students to conduct behaviour observations of an extensive range of marine life. There is also the opportunity to apply biological methods and skills by participating in the additional activity 'Beach Detective' or by completing work sheets such as 'population estimates' and 'marine researcher'.

Communicating and working as a biologist

AQWA's excursion activity sheet 'underwater dictionary' introduces students to the technical language of science while they observe the marine life of Western Australia.

Students can analyse the signage at AQWA to see the style in which we present biological information to our visitors. Booking an Ocean Safari can also give students an insight into work as a biologist.