



Department of  
Primary Industries and  
Regional Development

2022

# Fisheries Education Metropolitan Program



The Department of Primary Industries and Regional Development offers an exciting range of fisheries education excursion activities at our research facilities in Hillarys. We invite you to learn how the Department sustainably manages Western Australia's aquatic resources to ensure there are fish for the future.

Our activities provide students from years 1-12 with hands-on learning experiences focused around the sustainability of the marine environment. Activities are based on current scientific methodology and data collection, revolving around three main themes:

- Aquatic biology and ecology
- Science behind the management
- People and communities

Our educational experiences and resources are linked to learning areas within the Western Australian Curriculum and also addresses the sustainability cross-curriculum priority.

We aim to be accommodating and welcome the opportunity to discuss the needs of individual schools. Please get in touch via **9203 0112** or **fish\_education@dpird.wa.gov.au**.



Related resources available on our Marine Waters website: [marinewaters.fish.wa.gov.au](http://marinewaters.fish.wa.gov.au)

**WA curriculum**



Science



HASS

**Senior secondary**



Biology



Earth & environmental science



Geography



Maritime & marine studies



Outdoor ed



Intergrated science

**School activities**

**Years 1-12**

**Aquatic natural resource management - Intro session**



**Free** when booked with another activity or \$5 per student (capped at \$50 per group) when run on its own.

**Primary: 15-20 minutes**

**Secondary: 20-30 minutes**

This introductory session asks students to consider how they use the marine environment and the impact they may have on it. It provides students with an overview of the role that the Department has in sustainably managing our aquatic natural resources and how they can contribute to its sustainable management.



**School activities**

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Programs in the early years allow students to develop an appreciation of the marine environment.

**Fishing for sustainability**  

\$5 per student, 1 hour

In this interactive session, students will try their hand at our simulated fishing activity and observe the effects of fishing pressure on our fish stocks. They will learn how management and science play an important role in keeping our fish stocks sustainable.

**Recommended for year 3 and above**



MW

**Bringing the beach to you** 

\$5 per student, 1 hour

This activity is the indoor version of the Beach Exploration activity. Students will handle a range of marine organisms and simply group them into plants and animals. They will also discover some fascinating facts about these organisms.



MW

**Beach exploration**  

\$5 per student, 1 hour

Explore Hillarys Beach and discover the wonders of what the Indian Ocean leaves washed up on Perth beaches. Identify different organisms and learn some fun facts about them.

**Note:** *This activity takes place on nearby Hillarys Beach.*



MW

**Scientific sand sculptures** 

\$5 per student, 1 hour

Build sandcastles with a difference! Students will create sand sculptures of some of WA's iconic fish and marine creatures, along the way learning about their external features and some fun facts.

**Note:** *This activity takes place on nearby Hillarys Beach.*



MW



Programs in middle school allow students to develop an appreciation for marine science.

Fishing for sustainability  

\$5 per student, 1 hour

In this interactive session, students will try their hand at our simulated fishing activity and observe the effects of fishing pressure on our fish stocks. They will learn how management and science play an important role in keeping our fish stocks sustainable.



MW

Bringing the beach to you 

\$5 per student, 1 hour

This activity is the indoor version of the Beach exploration. Students work in groups to investigate a range of marine organisms that are commonly found on our local beaches. They then learn how to classify and identify these organisms.



MW

Fishy features 

\$5 per student, 1 hour

You can tell a lot about a fish by the way it looks - such as where it lives, how it feeds, and how it moves through the water. Students will examine the external features of a variety of fish species, learning about their adaptations for life and survival in the marine environment.

**Recommended for year 3 and above**



MW

Beach exploration  

\$5 per student, 1 hour

Explore Hillarys Beach and discover the wonders of what the Indian Ocean leaves washed up on Perth beaches. Identify different organisms and learn some fun facts about them.

**Note:** This activity takes place on nearby Hillarys Beach.



MW



Programs for secondary students aim to foster an understanding of fisheries biology and the science behind fisheries management.

**Fisheries management**  

\$5 per student, 1 hour

This interactive session gives students an overview of some of the ways the department implements regulations to sustainably manage fish populations. Students are asked to identify, measure, record and make assessments of a variety of fishing catches.



MW

**Bringing the beach to you** 

\$5 per student, 1 hour

Students work in groups to investigate a range of marine organisms that are commonly found on our local beaches. They then learn how to classify and identify these organisms.



MW

**Fish dissection** 

\$8 per student, 1 hour -1 hour 30 minutes

Learn why fisheries scientists dissect fish and how extracting the ear bones of bony fish provides information that is used to assess the health of fish stocks. Students will work in pairs to carry out their own fish dissection, examining both the internal and external features of their fish.

**Note:** This activity has a maximum of 60 students per day.



MW

**Fishy features** 

\$5 per student, 1 hour

You can tell a lot about a fish by its external anatomy – such as where it lives, how it feeds, and how it moves through the water. Students will examine the external features of a variety of fish species, learning about their adaptations for life and survival in the marine environment.



MW



Programs for senior secondary students to develop their understanding of fisheries biology and the science behind fisheries management.

**Fisheries management**



\$5 per student, 1 hour

This interactive session gives students a 5 station overview of some of the ways the department implements regulations to manage fish populations. Students are asked to identify, measure, record and make an assessments of the fishing catch.



MW

**Fish dissection**



\$8 per student, 1-1 hour 30 minutes

Learn why fisheries scientists dissect fish and how extracting the ear bones of bony fish provides information that is used to assess the health of fish stocks. Students will carry out their own fish dissection, examining both the internal and external features of their fish.

**Note:** This activity has a maximum of 60 students per day.



MW

**Rock lobster: shake, settle and roll**



\$5 per student, 1 hour - 1 hour 30 minutes

Learn about the lifecycle of the Western rock lobster and the environmental factors that influence this valuable fishery. Students will also learn how the Department manages the fishery and what data is collected to determine the future rock lobster catch, ensuring the sustainability of the fishery.



MW

**Fish of ages**



\$5 per student, 1 hour

In this activity, students will learn how and why scientists age fish. Following a fish dissection demonstration, students will use prepared materials and microscopes to determine the ages from a sample of fish otoliths. They will then record and graph the collected data and gain an understanding of how this information assists in the sustainable management of our fisheries.



MW

**Classifying creatures**



\$5 per student, 1 hour 15 minutes

Why are sea sponges classified as animals? Why is seaweed not a true plant? How is a mussel related to a cuttlefish? In this activity students will learn the importance of scientific classification and attempt to identify and classify local marine organisms using simple dichotomous keys.



MW

**Fish dissection / Fish of ages combined**



\$8 per student, 1 hr 30 minutes

See descriptions above. Maximum of 60 students per day.

**Fishy features - adapting to their environment**   

\$5 per student, 1-1 hour 15 minutes

The Department plays an important role in sustainably managing our aquatic natural resources. But what do fish do to help themselves? Students will learn about the variety of behavioural, physiological and structural adaptations that allow fish to survive in the aquatic environment.



MW

**Reef transect**     

\$8 per student, 1 hour 30 minutes - 2 hours

As well as a variety of fish species, many common invertebrate species live close to the shore. Come and discover what is found on Perth's limestone reef and conduct an ecosystem survey using transects and quadrats.

**Note:** *This activity requires the school to transport students to and from the designated reef area. Students will be in waist deep water. It is the school's responsibility to provide staff with suitable qualifications to meet the Education Water Based Excursion requirements.*

**This activity is weather dependent and therefore may be cancelled at short notice. For the safety of participants this activity will only be scheduled in terms 1 and 4.**



MW

**Aquaculture 101**    

\$8 per student, 1 hour 30 minutes

Students gain an understanding of the importance of aquaculture in feeding the increasing global population. We discuss the type of aquaculture systems operating in WA and how DPIRD is involved in supporting these practices. Students get to experience aspects of aquaculture practice such as grading and water testing before being led on a tour of our aquaculture facilities.

**NOTE:** *Due to COVID-19 restrictions we are not currently able to conduct the tour component of this activity. Price is adjusted to \$5 and time to 1 hour.*



MW

**Science of sampling**    

\$5 per student, 1 hour 30 minutes

How does a fisheries scientist determine how many fish are in the sea? This activity demonstrates a range of scientific sampling techniques used by the Department to help better understand and sustainably manage WA's aquatic resources. Students use real data collected by themselves and/or researchers to determine the health of iconic Western Australian fisheries.



MW



**Booking:** To plan and book a fisheries education activity, please phone our education staff on **9203 0112** or email **fish\_education@dpird.wa.gov.au**. A written confirmation, itinerary and other documentation relevant to your excursion will be sent to you upon completion of your booking.

**Costs:** All costs quoted include GST. We require minimum payment for the equivalent of 10 students for all activities.

**Supervision:** It is up to the school to supply appropriate numbers of adult supervisors depending on age of students and size of group. Please consider carefully because too few or too many helpers can significantly impact student learning.

**Location:** Activities except where indicated are conducted at the WA Fisheries and Marine Research Laboratories at 39 Northside Drive, Hillarys, which is located on the northern side of Hillarys Boat Harbour. See map on back page.

**Excursion materials:** All materials required for activities will be supplied.

**Weather - outdoor activities:** In the event of inclement weather, or extreme heat, students will complete a modified or alternative activity.

**Arrival:** Plan to arrive 5–10 minutes prior to start time.

**Beach activities (non-water based):** The school's supervisory team is expected to accompany their class to and on the beach. Students are not permitted to enter the water. Please ensure students come prepared with a hat, water bottle and have applied sunscreen. Sneakers or sandals should be worn.

**Reef transect:** Please refer to the info pack emailed on booking.

**Lunches and school bags:** Space is available for storage during activities. You are welcome to use the courtyard area adjacent to the learning space during break times. Alternatively, Whitfords Nodes Park is located directly across the road from our building.

The Community Education team offers Professional Learning sessions to all teachers (including pre-service teachers) and other educators in the metropolitan area and regional WA.

Can't make it to one of our scheduled sessions? We can come to you! Get 10 or more colleagues together (they do not have to be from the same school), provide us with a venue and we will run a professional learning session tailored to your requirements on a day and time of your choice.

For further information about scheduled and tailored professional learning requests, email **fish\_education@dpird.wa.gov.au**.





# Marine Waters

Education resources to support learning about the sustainable use of the aquatic environment.

Search...



Explore...



Discover...



marinewaters.fish.wa.gov.au

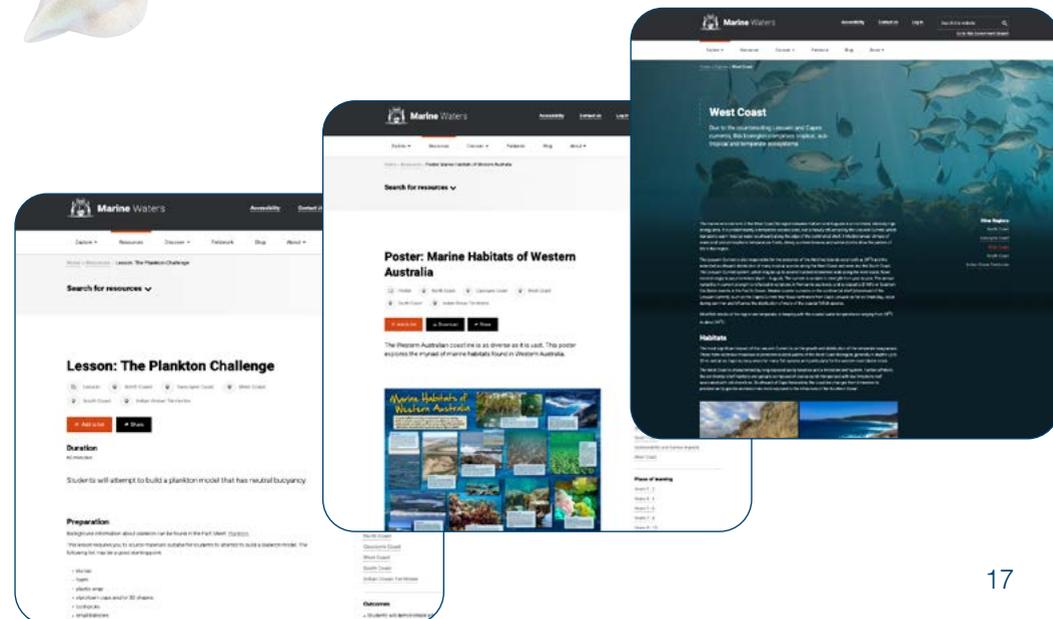
Looking for related pre and post excursion resources? Check out our Marine Waters website [marinewaters.fish.wa.gov.au](http://marinewaters.fish.wa.gov.au). It provides a range of free learning resources about the aquatic environment, with a focus on Western Australia.

## Features

- a wealth of educational resources, including lessons, fact sheets, posters, videos and more
- resources tailored to Western Australia's aquatic regions
- resources linked to the Western Australian Curriculum
- the ability to create and share resource lists specific to the classes or topics you are teaching
- a data collection interface to enable collection of real data in the field, with the ability to share this with other groups
- activities and fact sheets for kids to conduct their own learning at home or at school



Registration is not essential, however it does allow you to access additional resources and features.



Looking for other great Western Australian specific fisheries and marine education resources?



### Saltwater schools

The Marine Stewardship Council has a website dedicated to education. Explore ocean-themed resources aligned with the Australian curriculum suitable for Years 5-10, including lesson plans, videos, fact sheets, games, and activities.

[msc.org](http://msc.org)

### Fishing clinics

Recfishwest conducts several SunSmart fishing clinics in the metropolitan and regional areas for children and families.

More information can be obtained by visiting the Recfishwest website or contacting them directly on 9246 3366 [recfishwest.org.au](http://recfishwest.org.au)



### Beach clean-ups

Interested in doing a beach clean-up activity and learning more about the impacts of marine waste on the aquatic environment? Contact Keep Australia Beautiful for more info.

[kabc.wa.gov.au](http://kabc.wa.gov.au)

The Department's Community Education staff are also located in regional centres including Broome, Busselton, Albany and Esperance. Each region has a suite of different resources on offer, including incursions, loan kits and can offer support to teachers to develop their own marine based learning program.

### Northern region

Covering Kimberley and Pilbara areas

(08) 9193 8600

[Danielle.Linardopoulos@dpird.wa.gov.au](mailto:Danielle.Linardopoulos@dpird.wa.gov.au)

### Southern region

Covering Binningup to Esperance.

Binningup to Augusta

(08) 9752 2152

[fish\\_education@dpird.wa.gov.au](mailto:fish_education@dpird.wa.gov.au)

Walpole to Esperance

(08) 9083 1115

[Kimberly.Jenkins@dpird.wa.gov.au](mailto:Kimberly.Jenkins@dpird.wa.gov.au)



**Our objective:**

To conserve, sustainably develop and manage Western Australia's aquatic resources and ecosystems for the benefit of present and future generations.

**Contact us**

**(08) 9203 0112**

Email for excursion enquiries:  
**fish\_education@dpird.wa.gov.au**

Email for online resource enquiries:  
**marinewaters@dpird.wa.gov.au**

School excursion location:  
**WA Fisheries & Marine Research Laboratories**  
**39 Northside Drive, Hillarys**  
(north end of Hillarys boat harbour)

