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Nearer to Nature Schools

2020 Education Program for Years 7 to 12

Getting students Nearer to Nature

Nearer to Nature Schools provide opportunities for students of all ages to take part in hands-on, experiential learning in the natural environment. The excursions build concepts, skills, values and the ability to make environmentally responsible decisions. All excursions are linked to the State and National Curriculum.



For teachers and students we offer:

- excursions or camp activities at a variety of locations across the Perth metropolitan area and Dwellingup
- incursions at your school
- educational resources to use in the classroom
- professional learning for educators.

Contact us

Phone: 9295 2244

Email n2n@dbca.wa.gov.au

Web: dbca.wa.gov.au/nearertonature



Department of Biodiversity,
Conservation and Attractions



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Bookings

Make a booking

1. Visit our website and go to the *Book activities online* section to make an online booking enquiry at: dbca.wa.gov.au/nearer-to-nature/schools
2. Complete the online booking enquiry or contact the *Nearer to Nature* Booking Officer for assistance:
Email: n2n@dbca.wa.gov.au
Phone: 9295 2244 (Mon – Fri, 8.30 to 4.30)
3. The Booking Officer will respond to your request via email.
4. Please check the confirmation email to ensure your booking details are correct. All changes must be requested in writing.
5. For further information on your excursion and for insurance and risk management documents see the Planning your visit pages on our website.

Costs

Excursions: \$16.50 per student, with the minimum charge being for a group of 20 students. The maximum group size for our programs is 30 students.

Incursions: Perth metropolitan area, one class (up to 30 students) is \$200 per hour or part thereof, second class, \$180 per hour or part thereof.

Short programs: prices vary according to program. See details with each program description.

Packages for *Fire geography and Swan Canning river system inquiry*: excursion and incursion \$16.50 per student (min 20 students) plus \$180 per class incursion.

All prices include GST.

Timing

Excursions run from 10am – 2 pm, including breaks for morning tea and lunch. Start and finish times can be adjusted to your needs, please discuss with the booking officer when making a booking.

Payment

Credit card payment is preferred. Cheques are to be made payable to Department of Biodiversity, Conservation and Attractions.

Charges for programs will be made on a per student basis dependent upon the number of students attending, however we require a minimum payment for 20 students. Maximum class size is 30 students. Multiple classes can be accommodated.



Cancellations and changes to bookings

Please confirm any cancellation in writing at least one week before your visit; otherwise we apply a cancellation fee (note, cancellation fees do not apply due to cancellations when a severe weather warning is issued). Once confirmed, your booking can be changed (subject to availability) up to two further times. After that an administration fee of \$50 will be charged.

Adapting to suit your needs

Programs can be adapted for Education Support Units, English as an Additional Language and Dialect, Bush Rangers cadets and home school groups.

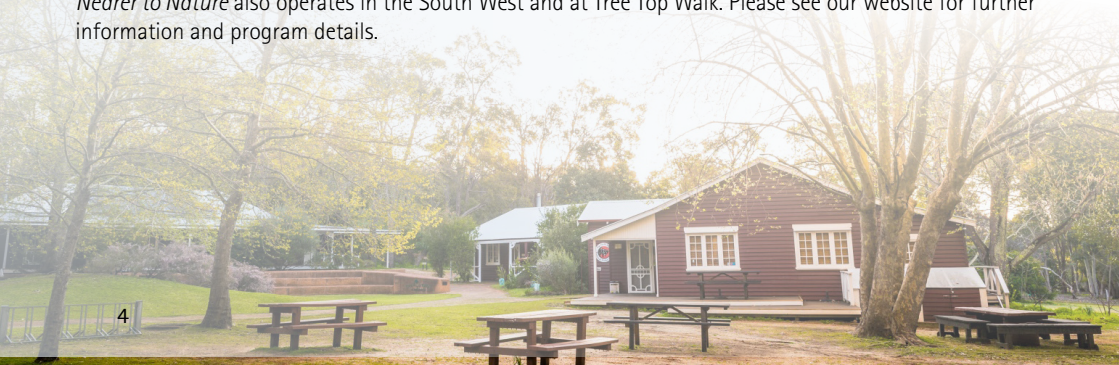
Curriculum links

Programs are designed to cover content in the WA Curriculum. However, due to the practical nature of most activities, they are suitable as enrichment activities if you do not have a particular curriculum focus. Curriculum information for specific programs are suggestions only and teachers can discuss their specific needs with a *Nearer to Nature* education officer if required.

Venue	Abbreviation
Perth Hills Discovery Centre, Mundaring	PHDC
Forest Discovery Centre, Dwellingup	FDC
Canning River Eco Education Centre, Wilson	CREEC
Piney Lakes Environmental Education Centre, Winthrop	PLEEC
Yanchep National Park	YNP
Star Swamp Bushland Reserve, North Beach	SSBR
Lake Joondalup, Joondalup	LJ
Point Walter Reserve, Bicton	PW
Riverside Gardens, Bayswater	RG

Nearer to Nature in other regions

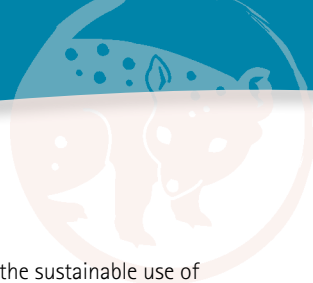
Nearer to Nature also operates in the South West and at Tree Top Walk. Please see our website for further information and program details.



Excursions Years 7 – 10

Nearer to Nature's excursion programs for Years 7 – 10 cover key environmental themes. Within each theme teachers can choose from a selection of activities to meet their needs. Your excursion can be tailored to be done with either one class or multiple classes and most can be done with either a Science or Geography focus. Our Booking Officer can give further advice on options. There are also incursions and short programs suited to this age group.





Aboriginal culture experience

Explore how the traditional practices of Indigenous Australians ensured the sustainable use of nature's resources. Engage in tool-making practices and through a forest walk, discover many uses of plants and animals. The importance of totems in conserving species and sustainable management of the forest will also be discussed.

* This program is not available during the fire season.

Venues: PHDC, FDC

Science (8-10), HASS (7,8) Priorities – A and TSI, Sust

Catchment carer's trail

Forests provide essential resources, including clean water. Through an inspiring activity-based walk to Mundaring Weir we examine the factors that influence the water cycle in nature, and how water flow in a catchment connects everything. We consider the impact of management issues such as salinity, dieback and erosion; as well as water quality, water security, and our water supply system. We then look at how our personal choices affect the sustainability of our forest and water resources. A highlight is a panoramic view from a secret spot!

This excursion is suitable for all Waterwise Schools.

The Catchment Carers' Trail resource pack is available to [download online](#)

Venue: PHDC

Science (7-8), Geography (7-8), Priorities – Sust, A and TSI



Bushfire

Fire has been a natural part of the environment in south-west WA for millions of years. This excursion enables students to investigate a range of fire-related topics. How prepared are buildings to bushfire?

What is a prescribed burn and how does it make it make the bush safer? What is in a Parks and Wildlife fire truck? How does the forest recover after a fire? You can create your own excursion for a single class up to a whole year level by choosing from these activities.

- Bushfire in the landscape
- Burn history fieldwork
- Building assessment
- Fire truck observation
- Warnings, alerts and ready for action
- Plan your response

For further information on each activity see our [Years 7-10 excursion details document](#).

Venues: PHDC, FDC

HASS (7,8) Priorities - Sust



Lower secondary

Biodiversity in the bush

Plants need animals, animals need plants. But do they need humans? On this excursion students will explore through hands-on activities and field visits the biodiversity of our forests, its inhabitants' relationships and how humans are impacting and managing forests. Create your own excursion for a single class or up to a whole year level by choosing from these activities:

- Measuring biodiversity
- Animal habitats
- Changing times – changing forests
- Protecting our threatened fauna – *Western Shield*
- Plant survival techniques
- Animal evidence
- Eco walk
- Animal encounter

For further information on each activity see our [years 7–10 excursion details document](#).

Venues: PHDC, FDC

Science (7,9), HASS (7,9,10)

The *Western Shield* action pack (Years 4–6) is available to [download online](#).



Lower secondary

River and Wetlands ecosystems

The wetland and rivers of the Swan Coastal Plain have been significantly affected by human-induced change; yet these ecosystems are still an important part of the biodiversity of the region. This excursion enables students to undertake a range of field tasks to assess the living and non-living components of these ecosystems with either a Biology or Geography focus. Students explore key concepts related to ecosystem structure and function such as feeding relationships and energy flow, ecosystem services and challenges to sustainability. You can create your own excursion by choosing from these activities:

- Plants, animals and human uses
- Water quality testing
- Macroinvertebrate sampling
- Map interpretation and field sketch
- Human impacts
- Management strategies

For further information on each activity see our [years 7 – 10 excursion details document](#).

Venues: River – PW, RG;

Wetland – LJ, HEC or a suitable wetland site near your school.

Science (7,9), HASS (7,9,10)



Excursions and packages Years 11 and 12

Aboriginal culture experience

Discover Indigenous sustainability techniques

Explore how the traditional practices of Indigenous Australians ensured the sustainable use of nature's resources. Engage in tool-making practices and through a forest walk, discover many uses of plants and animals. The importance of totems in conserving species and sustainable management of the forest will also be discussed.

* This program is not available during the fire season.

Venues: PHDC, FDC

Geography General Unit 2



Aquatic ecosystems

Investigate within a wetland ecosystem

Investigate how a wetland ecosystem functions by conducting a range of field tasks on its biotic and abiotic components. Conduct tests on water quality, sample the macroinvertebrate community and identify the ecological role of the organisms. The role of humans in modifying the ecosystem is considered and students will discuss how wetlands can be managed sustainably into the future. This excursion can be done with either a Biology or Geography focus and students are encouraged to formulate research questions, which their data collection will help answer.

Geography ATAR Unit 3, Geography General Unit 1, Biology ATAR Unit 1, Biology General Unit 4 Integrated Science ATAR Unit 2, Integrated Science General Unit 1.

Venues: LJ, CREEC Please note; excursion can be done at a wetland close to your school, subject to verification by *Nearer to Nature* staff.



Dieback – bulldozing our biodiversity

Fighting the “Biological Bulldozer”, can it be stopped?

The arrival and spread of Phytophthora dieback disease in Western Australia has been catastrophic for a number of ecosystems. More than 50% of WA's rare or endangered plants are susceptible, many of which are only found in the south-west. Through hands-on activities students will get a practical understanding of the 'biological' bulldozer'. Students will be introduced to the treatment, tools and processes used to manage the spread of the disease and undertake a stem injecting activity to help protect trees and prevent further dieback spread.

Biology ATAR Unit 4 – Geography ATAR Unit 1 – Integrated Science ATAR 2 – General Geography Unit 3

Venues: PHDC, FDC, YNP, PLEEC

Field biology

An overview of techniques for field data collection

Australia is one of the world's 17 centres of 'mega-diversity' of plants and animals. Explore a range of techniques biologists use to collect data on our plant and animal communities. For plants, students do detailed mapping of quadrats and take a range of measurements. With animals, monitoring techniques include trapping, cameras and other non-invasive techniques. An animal encounter will be investigated.

General Biology Unit 4, ATAR Integrated Science Unit 2, General Integrated Science Unit 1, ATAR Biology Unit 1.

Venues – PHDC, FDC



Fire biology

Is fire good for the environment? Let's answer this burning question.

Fire has been present in the Western Australian landscape for millions of years – since long before the arrival of humans. – and it has influenced the evolution of plants and animals. Engage in biological fieldwork to examine the impacts of fire on the environment. Discover the role fire has played in the evolution of our forests and the interdependent relationship of fire and the Australian bush. Learn about traditional burning practices and the difference in the fire behaviour between bushfire and prescribed burns.

Biology ATAR Unit 1 – ATAR Biology General Unit 4

Venues: PHDC, FDC



Fire geography Excursion/Package

Managing fire in a fire-prone environment

Bushfires are inevitable in the fire-prone landscapes of Western Australia. Long dry summers, flammable vegetation and ignition from lightning or human causes mean that bushfires occur every summer. Engage in geographic fieldwork to examine the impacts of bushfire on the ecosystem and community. Compare the effects of fire on natural and managed areas and consider how topography and land management affect fire behaviour. Discover the difference between bushfires and prescribed burning and why prescribed burns are critical for protecting life, property and the environment. Assess how we can prepare for, and mitigate the effects of bushfire.

It is highly recommended that schools undertake the *Fire geography package* (one-hour incursion before the excursion). The package is designed to prepare the students for fieldtrip by providing relevant information so we can free up as much time as possible for hands-on fieldwork whilst on the excursion.

Geography ATAR Unit 1, Geography General Unit 3,

Venues: PHDC, FDC, YNP



Flora biology

A hands-on study of local flora

The south-west of Western Australia is one of the world's 34 biodiversity 'hotspots' with some of the richest and most unique reservoirs of plant and animal life on earth. Through this excursion students will develop an understanding of our unique flora, how it has adapted to our abiotic conditions, and some of the threats to its future. Management of some critical threats will be briefly discussed. On a forest walk students will be introduced to a range of plants and how they cope with life in the Jarrah/marri forest.

Hands-on data collection covers two methods – quadrats (line and belt).

Biology ATAR Unit 1, Biology General Unit 4

Venues: PHDC, FDC, PLEEC



Upper secondary

Swan Canning River system inquiry Excursion/Package

Investigate environmental change and Management within the Swan Canning Riverpark

The Swan Canning Riverpark and the iconic rivers at its heart are the centrepiece of Perth. Blessed with diverse and resilient ecosystems, the Swan and Canning rivers are a recreational playground and a source of vibrant commercial and tourism activity. Students undertake a range of hands on tasks to understand the importance of biodiversity in the riverine ecosystem; the major threats to its health and how those threats are being managed. The excursion can be done with a Geography or Biology focus:

Geography: Engage in fieldwork to collect primary data for a investigation into how the impacts on land cover are being addressed and evaluated.

Science: Engage in fieldwork to collect primary data and monitor biodiversity of the Riverpark. It is highly recommended that schools undertake the *Swan Canning River system inquiry package* (one-hour incursion before the excursion). The package is designed to prepare the students for the field trip by providing relevant information so we free up as much time as possible for hands-on fieldwork whilst on the excursion.

Geography ATAR Unit 3, Geography General Unit 1, Biology ATAR Unit 1, Biology General Unit 4
Integrated Science ATAR Unit 2, Integrated Science General Unit 1

Venues: PW, RG. Please note excursion can be done at a river location close to your school, subject to verification by *Nearer to Nature* staff.



Upper secondary

Sustainable forestry

An approach to land cover change and biodiversity

Our native forests are important for timber production, water catchments, recreation and other uses. They are also critical to the biodiversity of the South West. After nearly 200 years of harvesting the regrowth forest of today is very different to the original forest. Find out how modern forest management can allow us to sustainably meet our timber needs whilst ensuring that forests can still support biodiversity and many other values. Engage in field techniques employed by forest managers to determine sustainable timber harvests and treatment of stands to maximise production while maintaining or enhancing biodiversity.

Geography ATAR Units 2 and 3, General Units 1 and 4; Earth and Environmental Science ATAR Unit 3; Integrated Science ATAR Unit 2

Venues: PHDC, FDC



Upper secondary

Western Shield fauna biology

Back from the brink – scientific techniques to re-establish native animals

Western Shield is one of the biggest wildlife conservation programs ever undertaken in Australia and aims to return the balance and mix of native animals in selected areas of WA's environment to levels comparable to pre-European settlement. Learn about the management of introduced animals and how native species are being re-established under the *Western Shield* program. Discover the process required to eradicate ferals and re-introduce natives. Investigate and compare a range of invasive and non-invasive fauna monitoring techniques that help determine if the program is achieving its goals.

Biology ATAR Unit 1 Biology General Unit 4,

Venues: PHDC, FDC, YNP, PLEEC, CREEC



Incursions

Catchment model

Learn about catchment land uses with our three-dimensional, hands on, interactive catchment model. Discover how pollutants get into our rivers and the impacts these have on the plants and animals that call the river home.

Saving threatened species

Get to know some of our unique fauna species and the threats to their survival. Gain valuable insight into how Parks and Wildlife's *Western Shield* program is working to save them. Through a hands-on activity explore a range of monitoring techniques used in the program and discuss how well the program is doing in saving our threatened species.

Fire Geography

Each year the Parks and Wildlife Service responds to more than 600 bushfires that occur on or near land it manages. Students will be introduced to some principals of bushfire behaviour and the systems in place to respond to these threats. Groups will engage in problem solving scenarios to apply those concepts to simulated bushfire emergencies.

Totems yarning

Discover how indigenous Australians connected to the environment and practised sustainable use of resources. Learn about totems and how they were important for the survival of species.

Note: all incursions are designed for a one hour period for one class.



Short programs

Animal Encounters

Get up close to some of our unique native animals and learn about their special adaptations to our harsh climate. Choose from the following: marsupials, reptiles, raptors, or a mix of animals.

Venues: PHDC \$8.80 (cost may vary according to animals provided)

Eco walks

Enjoy guided ecology walks through the forest, with the theme tailored to suit your needs. the duration can be varied and cost depends on your requirements.

Venues: PHDC \$7.70, FDC \$7.70, or booking with another program \$6.60

Duration: 1 hour

Night Walk

Experience the forest in darkness and chance an encounter with some of our amazing creatures of the night. What secrets will you discover as you explore the forest by torchlight?

Venues: PHDC, FDC

Duration: 1 hour

Monitoring marsupials Western Shield trapping excursion

Take part in a hands-on trapping session. mix bait and set raps in the late afternoon and return the next morning to measure and release animals. This is a great citizen project for students to be part of Western Shield research.

Please note: very limited places, early bookings essential; only available with Biology related excursions.

It is highly recommended the schools also undertakes the *Western Shield* Fauna biology excursion prior to trapping to maximise and consolidate learning outcomes.

Venues: PHDC (three locations), FDC

Cost: Excursion only - \$14/student (min 20 students) Extra cost for *Western Shield* Fauna Biology

Bush tucker

Explore seasonal native bush foods and discover how they were traditionally used by Aboriginal people. make and eat damper and kangaroo supper.

Please note the food is a sampler only not a full meal.

Venues: PHDC \$14, FDC \$14

Duration: 2 hours



Venue locations

Venue	Street address
Perth Hills Discovery Centre	380 Allen Road, Mundaring 6073
Forest Discovery Centre	1 Acacia Rd, Dwellingup 6213
Piney Lakes Environmental Education Centre	Leach Hwy and Murdoch Dr, Winthrop 6155
Canning River Eco Education Centre	Cnr Kent St and Queens Park Rd, Wilson 6107
Yanchep National Park	Yanchep Beach Rd and Indian Ocean Drive, Yanchep 6035
Star Swamp Bushland Reserve, Henderson Environment Centre	End of, Groat St, North Beach 6020
Lake Joondalup, Neil Hawkins Park	200 Boas Ave, Joondalup 6027
Point Walter Reserve	5 Honour Ave, Bicton 6157
Riverside Gardens	118 Milne St, Bayswater 6053



Venue locations

