



Nearer to Nature Schools

Programs for 2014



www.dpaw.wa.gov.au/n2n



Department of
Parks and Wildlife



DPaW's school programs

Getting students Nearer to Nature

Nearer to Nature Schools provides opportunities for students of all ages to take part in hands-on, experiential learning in the natural environment.

Offering programs from diverse locations in the south-west and covering various ecosystems, Nearer to Nature can provide your class with a unique learning experience.

From kindy to Year 12, Nearer to Nature has a range of programs to complement and enhance your classroom teaching.

For teachers and students we offer:

- excursions or camp activities based at a variety of locations across the south-west
- incursions at your school
- educational resources to use in the classroom
- professional learning for educators.

Outcomes of Nearer to Nature programs support the Department of Parks and Wildlife's (DPaW's) mission to ensure that the nature of Western Australia is protected and conserved, for its intrinsic values and to enrich people's lives.

Australian Curriculum links

Each excursion and incursion is linked to the Australian Curriculum and the Western Australian Curriculum. Nearer to Nature Schools and EcoEducation link to many learning areas, as well as the Sustainability and Aboriginal and Torres Strait Islander Histories and Cultures cross-curricular priorities. Through experiential learning in the natural environment, excursions build concepts, skills, values and the ability to make environmentally responsible decisions. Also provided are excursions and incursions in sustainability from an Aboriginal cultural perspective. More information on what we offer and resources is available at <http://education.dpaw.wa.gov.au>.

Please note that if an excursion description sounds like exactly what you want but the year level doesn't match, we can modify excursions to suit year levels. The Australian Curriculum is changing when topics are studied and you, as teachers, are the best guides of that change.

Contents

| | | | |
|--|-----------|--|-----------|
| New opportunities in 2014 | 4 | Back from the brink – senior | 20 |
| | | Sustainable forest management | 20 |
| Early childhood | 7 | Fire biology – a force of life | 20 |
| Busy in the forest | 7 | Fire geography – a natural hazard | 21 |
| Investigating the forest | 7 | Our south-west | 21 |
| Moodjitch binar nyorps and yorgas | 8 | Sustainable forests | 22 |
| Primary | 9 | Calendar of events 2014 | 23 |
| Living with fire | 9 | Biodiversity walks and activities | 24 |
| Forest detectives trail | 10 | Big events | 26 |
| Biodiversity's base – incredible invertebrates | 11 | Incursions | 27 |
| Discovering the forest | 11 | School camps | 28 |
| Koolangars, corroborees and kaleeps | 12 | Professional learning opportunities | 29 |
| Catchment carers' trail | 12 | Professional associations | 29 |
| Back from the brink – primary | 13 | Bush Rangers WA | 30 |
| Upper primary and middle school | 14 | Bookings and enquiries | 31 |
| Six-season walkabout | 14 | Our centres | 33 |
| Ecosystem explorers | 14 | Contacts for centres | 35 |
| The Nyoongar way | 15 | | |
| Caring for places | 15 | | |
| Discover ecosystem diversity | 15 | | |
| Investigating tuart woodlands | 16 | | |
| Back from the brink – middle school | 16 | | |
| Senior school | 17 | | |
| Biology taster | 17 | | |
| Climate change – measuring baseline biodiversity | 17 | | |
| Leave no trace | 17 | | |
| Aboriginal culture experience | 18 | | |
| Catchment carers' trail for senior students | 18 | | |
| Investigating tuart woodlands | 19 | | |
| Biology | 19 | | |
| Geography | 19 | | |

New opportunities in 2014



Forest Heritage Centre, Dwellingup

In 2014 Nearer to Nature Schools is excited to offer a range of excursions, both environmental and cultural, based out of the Forest Heritage Centre at Dwellingup. Set in jarrah-marri forest, the Forest Heritage Centre provides an alternative to Mundaring and Wellington Discovery Forest for schools in Perth's extended southern corridor. The centre includes walk trails, a treetop viewing platform and the School of Fine Wood.

Excursions will be modelled on existing excursions but modified to suit the local environment.

Bookings for this venue are being managed through the online inquiry system (www.dpaw.wa.gov.au/education) or the Perth Hills Discovery Centre (phone 9295 6149).

Adjacent to the Forest Heritage Centre is comfortable accommodation at the Jarrah Forest Lodge. The lodge has 16 twin-share rooms and a family room, as well as shared kitchen, dining and bathroom facilities – ideal for school groups. Full details in the School camps section of this brochure.

Dryandra Woodland EcoEducation Centre, Narrogin

Located just two hours south-east of Perth in the western Wheatbelt within the heart of Dryandra Woodland, the Department of Parks and Wildlife's Irabina Study Centre and Barna Mia Nocturnal Animal Sanctuary offer a wide choice of excursions for school groups.

Our EcoEducation program provides a range of educational interactive and enjoyable activities for students of all ages to learn about native plants and animals, local ecology and conservation issues. All programs are guided by senior Parks and Wildlife officers with specialist experience. An important study topic is the ambitious and ongoing *Western Shield* program which is key to restoring Dryandra's fauna populations to their former habitats within the woodland.

For more information about Dryandra's unique range of educational activities visit <http://education.dpaw.wa.gov.au> and search for Dryandra.

Bookings for educational excursions are essential and managed through the Narrogin District Office on 9881 9200 or 9881 9238 or via email to Lynette Carroll at lynette.carroll@dpaw.wa.gov.au.

Within Dryandra Woodland and close to Irabina Study Centre are two accommodation options – Congelin Campground and Lions Dryandra Woodland Village.

Congelin Campground is a fee-paying camp site that offers basic facilities and availability is on a 'first in, first served' basis. For more information contact 9881 9222.

Accommodation at the Lions Dryandra Woodland Village can be booked by contacting the caretaker on 9884 5231. Due to duty of care the village is a better option for schools if doing overnight and/or extended field-study sessions.

More information on the village can be found at www.dryandravillage.org.au.



New opportunities in 2014

Online enquiry system – get information ... fast!

In July 2013 Nearer to Nature Schools launched a one-stop online enquiry system providing instant access to our suite of programs and activities offered statewide.

With just a few clicks, you can request preferred excursions dates, select a combination of programs to suit your requirements and even receive an instant approximation on cost!

For your convenience, the online enquiry system allows you to enquire 24/7 with a response guaranteed by the end of the next business day.

Check it out at <http://education.dpaw.wa.gov.au>.



NEW

Macro invertebrate studies

At the time of publication, this exciting opportunity to study aquatic macro invertebrates is being developed for implementation in 2014. Richard Olive, formerly of Ribbons of Blue, will be part of our education team in 2014 and will drive the creation and implementation of this opportunity.

Our wetlands are among the most diverse ecosystems on the planet ... and much of that life is unseen. Beneath the water's surface is a fascinating community of invertebrates of all shapes and sizes, such as insects and their larvae, worms, spiders and tiny crustaceans (not to mention leeches!). People of all ages get excited about finding and identifying these 'mini-beasts'. Students use a range of equipment such as charts, biological keys, magnifying glasses and microscopes to identify and classify these organisms.

The invertebrate community tells us a lot about the health of the ecosystem as it is a key part of the wetland food web. By analysing what they have found, students consider how human impact has affected this ecosystem and what people can do to care for it.

In addition to macro invertebrate sampling, students can investigate the non-living environment with water testing, and explore surrounding vegetation and land use with a site survey. Putting all that information together can give students a more complete picture of the wetland ecosystem and how it works.

We will post updates on our website <http://education.dpaw.wa.gov.au> as we develop this opportunity.

Early childhood



Busy in the forest (Years PP to 3)

Discover the treasures of the forest

Australian Curriculum S (F – 3), E (F – 3), H, Priorities – Sust

WA Curriculum S, S&E, E, A

Children embark on a voyage of discovery and sensory awareness in the forest or bushland with a little help from some animal and plant friends and a treasure chest. A blindfold rope trail guides them through a fun and interactive sensory encounter with nature.

* A teacher's book, *Busy in the bushland*, is available free for teachers booking this excursion.

Venues PHDC \$15, WDF \$9.80, WM \$9.80, FHC \$15

Investigating the forest (Years 2 to 5)

Uncover the amazing mysteries of the forest or bushland areas

Australian Curriculum S (2–5), E (2–5), H, Priorities – Sust

WA Curriculum S, S&E, E, A

Once your students have been 'Busy in the forest or bushland', graduate them to this investigative program. Collect clues to your mystery plant including surprising information about how they are used by humans past and present, as well as other inhabitants of the forest. On the way, explore shape and texture, sights, sounds and smells before passing the facts you have gathered on to the rest of the group.

Venues WDF \$9.80, WM \$9.80

Moodjitch binar nyorps and yorgas (Years PP to 3)

Engaging introduction to Nyoongar culture led by experienced Aboriginal leaders

Australian Curriculum S (F–3), Priorities – A&TSI, Sust

WA Curriculum LOTE, S&E, S, T&E

Students are introduced to traditional Aboriginal culture through role-playing a day in the life of an Aboriginal child, including traditional singing, dancing, face painting and jewellery making. Engage in hunting and gathering using traditional Nyoongar tools.

* *Exploring woodlands with Nyoongars* and *Sharing the Dreaming* resource packs are available online.

Venue PHDC \$15, FHC \$15





Living with fire (Years 5 and 6)

Discover the impact of bushfires on environments and communities

Australian Curriculum G (4-7), S (3-7), E (4-7), Priorities – Sust, A&TSI

WA Curriculum S&E, S, E, A

Bushfires are a natural part of our environment. They can have a major impact on our communities and the environment but they are also important in maintaining biodiversity. In this program students learn about the impacts of bushfires and how we can respond to them and mitigate their effects. Students learn when, where and why bushfires occur and the impacts they have on our native plant, animal and human communities. Students are introduced to methods of bushfire prevention, mitigation and suppression and learn the importance of being prepared. The excursion includes hands-on experience with a range of firefighting tools and equipment.

Venues WDF \$9.80, WM \$9.80, PHDC \$15





Forest detectives trail (Years 4 to 7)

Solve the mystery of the missing woylie!

Australian Curriculum S (4–7), Priorities – Sust

WA Curriculum S, S&E, E

As forest investigators for a day, gather and analyse evidence to find out what happened to our missing woylie. Students will discover signs and use scientific keys to identify footprints, scats, skin and other signs along a trail. Students will also learn about the animals of the jarrah forest and the importance of conservation efforts to their survival.

* The *Forest detective* book is available free for teachers undertaking this excursion.

Venue PHDC \$15, FHC \$15

Biodiversity's base – incredible invertebrates (Years 4 and 5)

Uncover the wonders of the underworld

Australian Curriculum S (4–5), Priorities – Sust

WA Curriculum S, S&E, E

Students will be amazed at the life going on beneath their feet as they discover the workers of the underworld. Learn why invertebrates form the base of a healthy ecosystem, their roles in the forest and their importance in maintaining biodiversity.

Venues PHDC \$15, HEC \$15, WDF \$9.80, WM \$9.80, DWEC \$9.80, FHC \$15

Discovering the forest (Years 4 to 7)

Investigate the values of the forest

**Australian Curriculum S (4–7), H (4–7),
Priorities – Sust**

WA Curriculum S, S&E, E

There is more to a forest than trees. Take part in activities to identify all the values and uses of our jarrah forests. Look at the biodiversity of the ecosystem and realise why it is important and what you can do to protect it. Also learn to identify key plant species and gain an understanding of the interdependence of forests and people.

* An online resource is available for teachers.

Venues WM \$9.80, WDF \$9.80





Koolangars, corroborees and kaleeps (Years 4 and 5)

Learn sustainable hunting and fishing methods with Aboriginal leaders

Australian Curriculum S (4–5), Priorities – A&T&SI, Sust

WA Curriculum LOTE, S&E, S, T&E

Students take a Nyoongar cultural journey through traditional language and ceremony, hunting and fishing activities. Take part in a traditional hunt, corroboree and fishing session.

**Exploring woodlands with Nyoongars and Sharing the Dreaming* resource packs are available online.

Venue PHDC \$15

Catchment carers' trail (Years 4 to 7)

Discover issues and impacts on a catchment and storage dam



Australian Curriculum S (4–7), H (4–7), Priorities – Sust

WA Curriculum ISC, EES and S, S&E, E

Water is one of our most valuable resources. Through a guided walk to Mundaring Weir students will learn about the water cycle, catchments and issues such as salinity, dieback, erosion and nature conservation. See how your personal choices affect water quality.

** An updated Catchment carers' trail book is available free for teachers undertaking this excursion.*

Venue PHDC \$14

Back from the brink – primary (Years 4 to 7)

Find out how Western Shield is saving our native fauna



Australian Curriculum S (4 – 7), Priorities – Sust

WA Curriculum S, S&E, E

The Department of Parks and Wildlife's *Western Shield* wildlife recovery program has made significant advances in native fauna recovery in WA. Learn about methods for control of introduced fauna and efforts to re-establish native species including captive breeding and the protection and enhancement of habitat. Students practice scientific methods used to monitor wildlife including trapping and data collection.

Venues HEC \$15, PHDC \$15, WM \$10.90, WDF \$10.90, FHC \$15



Upper primary and middle school



Six-season walkabout (Years 6 and 7)

Aboriginal role-play exploring our six seasons

Australian Curriculum S (6–7), Priorities – A&TSI, Sust

WA Curriculum LOTE, S&E, S, T&E

Take a journey through the forest as a clan of Aboriginal people on a six-season walk. Go on a hunt, rest at a shelter and look at how to use the land sustainably. The emphasis is on student participation.

**Exploring woodlands with Nyoongars and Sharing the Dreaming resource packs are available online*

Venue PHDC \$15, FHC \$15

Ecosystem explorers (Years 5 to 8)

Explore the processes that change our natural world

Australian Curriculum S (5–8), E (5–8), H (5–8), Priorities – Sust, A&TSI

WA Curriculum S, S&E, E

The forest is changing all the time. Some of these changes happen quickly, others may take thousands or even millions of years. Some of these changes are natural and some are caused by human activity. Explore the forest, looking for evidence of changes new and old, natural or man-made. The excursion includes a mural and local historical study, an investigation of erosion and the chance to build soils as a way of seeing some of these changes in a time capsule.

Venues TTW \$9.80, WM \$9.80, WDF \$9.80

The Nyoongar way (Years 3 to 12)

Exploring Aboriginal culture in the south-west

Australian Curriculum S (6–9), Priorities – A&TSI, Sust

WA Curriculum S&E, S, LOTE

Traditional Aboriginal culture demonstrates conservation of biodiversity through sustainable use of land and resources. Build knowledge, skills and understanding of Aboriginal culture in relation to food collection, tool making and roles played by different family members. Learn how Aboriginal people used land and resources in a seasonal and sustainable manner. The program and activities will vary depending on the age group of your class.

* *Exploring woodlands with Nyoongars* and *Sharing the Dreaming* resource packs are available online
Venue WDF \$11.90

Caring for places (Years 6 to 10)

Biodiversity and management of national parks

Australian Curriculum S (6–10), Priorities – Sust, A&TSI

WA Curriculum BIO, GEO, OED, EES and S, S&E, E

Appreciate the challenges and rewards of national park management in WA. Explore the values, threats and impacts of people on our national parks, looking at issues such as bushfires, vandalism, introduced animals, weeds, erosion and dieback disease. Evaluate your own impact on the natural environment, ways you can reduce this impact and the cost of managing national parks and reserves. Learn about the park's history and the day-to-day work of park management and, as active citizens, lend a hand to rehabilitate a degraded part of the park.

* The *Caring for places* book is available free for teachers undertaking this excursion.
Venues WM \$10.90, WDF \$10.90, PHDC \$15

Discover ecosystem diversity (Years 8 to 10)

Exploring biodiversity at the landscape level

Australian Curriculum S (8–10), H, Priorities – Sust

WA Curriculum OED, EES, GEO, S, S&E

Use scientific methods to compare three forest ecosystems and investigate the interrelationships between soils, flora and fauna. Also learn about the management of fire and its impact on different forest ecosystems.

Venue PHDC \$15, HEC \$15, LTF \$10.90



Investigating tuart woodlands (Years 8 to 10)

Find out about our majestic tuarts and the history of Wonnerup with EcoEducation and the National Trust

Australian Curriculum S (10), E (10), Priorities – Sust

WA Curriculum GEO, BIO, OED and S, S&E, E

Explore the rare and beautiful tuart woodlands, examine threats to this ecosystem and reasons for declines in forest health. Investigate the tuarts at Ludlow forest and visit the bird hide with the National Trust's Wonnerup House as a highlight.

Venue LTF \$10.90

Back from the brink – middle school (Years 8 to 10)

Find out how Western Shield is saving our native fauna



Australian Curriculum S (8–10), Priorities – Sust

WA Curriculum BIO, OED, S, S&E, E

The Department of Parks and Wildlife's *Western Shield* wildlife recovery program has made significant advances in native fauna recovery in WA. Students investigate and compare a range of invasive and non-invasive monitoring techniques. Learn about methods for control of introduced fauna and efforts to re-establish native species, including captive breeding and the protection and enhancement of habitat.

Venues PHDC \$15, HEC \$15, WDF \$10.90, WM \$10.90, FHC \$15

Senior school

Biology taster

Enrolment numbers in biology dropping? We may have a short excursion to help!

Audience – Year 10 students, preferably handpicked students that teachers feel should enrol in biology

When – during the Year 11–12 subject selection process

What is involved – this three-hour set of activities is designed to stimulate interest in biology both as a subject and as a career option. Please ring for full details.

*If geography teachers are interested in a similar taster, then let us know.

Venues PHDC \$15

Climate change – measuring baseline biodiversity (Years 9 to 12)

Contribute to a database for measuring the impacts of climate change

Australian Curriculum S (9–10), E (9–10), Priorities – Sust

WA Curriculum GEO, BIO, S, S&E, E

The impacts of climate change on our ecosystems can only be understood by comparing observations of our flora and fauna over time. Learn how to measure biodiversity and be part of a baseline study in WA. Learn about organisms' and ecosystems' resilience or response to climate change and gain the tools and knowledge to monitor changes in your local area.

Venues PHDC \$15, HEC \$15, WDF \$10.90, WM \$10.90

Leave no trace (Years 8 to 12)

Explore how to minimise your impact on the jarrah forest

Australian Curriculum S (8–10), Priorities – Sust

WA Curriculum OED, GEO, S

Minimising human impact on the natural environment helps maintain biodiversity. Engage in activities which will enable you to use Leave No Trace principles and help conserve our unique environment.

Venues PHDC \$15, WDF \$10.90, WM \$10.90, FHC \$15





Aboriginal culture experience (Years 8 to 12)

Explore Nyooongar culture, artefact making and forest use

Australian Curriculum S (8–10), Priorities – A&TSI, Sust

WA Curriculum AIS, OED, GEO Unit 2, S&E, S, LOTE, T&E, A

Take a forest walk and explore the traditional practices of Aboriginal people. Students will be engaged as they make traditional tools, discover the many uses of plants and animals and discuss the Dreaming and totems.

* This program is not available during the fire season.

Venue PHDC \$15, FHC \$15

Catchment carers' trail for senior students (Years 8 to 12)

Catchment carers' trail for senior school students



Australian Curriculum S (8–10), Priorities – Sust

WA Curriculum ISC, EES, S, S&E

Explore in depth the issues surrounding water catchments using the Mundaring Weir catchment as a study area. Undertake field studies using equipment to make measurements and collect data. Analyse impacts such as mining, erosion, salinity, dieback disease, bushfire and logging. Students examine the weir wall and can undertake an optional geological mapping study of rock type and associated vegetation.

* The *Catchment carers' trail* book is available free for teachers undertaking this excursion.

Venue PHDC \$15

Investigating tuart woodlands (Years 10 to 12)

Discover the wonders of the majestic tuarts and be a field ecologist for a day

Australian Curriculum S (10), E (10), Priorities – Sust

WA Curriculum GEO, BIO, OED and S, S&E, E

The tuart woodlands are one of the rarest ecosystems on Earth, occurring only on the Swan Coastal Plain, and are under threat from coastal urban development and possibly climate change. This excursion will introduce students to the incredible biodiversity of tuart woodlands and examine reasons for declines in forest health. Hands-on fieldwork includes a survey of biotic and abiotic components and a guided walk highlights the impact of urban development, disease and insect attack, introduced species and a changing climate on the tuart woodlands.

Venues HEC \$15, LPCP \$10.90, LTF \$10.90

Biology (Years 11 to 12)

Undertaking biodiversity and population studies, understanding conservation in our forests

WA Curriculum 2A BIO, 2B BIO, S, S&E

WA has unique flora and fauna that must be conserved for its intrinsic values and for the benefit of present and future generations. Explore the adaptations of flora and fauna in dry sclerophyllous forest and the scientific methods used to measure and monitor the recovery of threatened animal species through the *Western Shield* program. Conservation biology will be highlighted with management processes and strategies practised.

Venues PHDC \$15, HEC \$15, WDF \$10.90, WM \$10.90, FHC \$15

Geography (Years 11 to 12)

Learn about the forces which shaped our extraordinary environment

WA Curriculum GEO, S, S&E

WA is a place of ancient landscapes hosting some of the highest biodiversity in the world. Investigate the unique adaptations of the flora and fauna of the sclerophyllous forest to landforms, soils, climate and fire and examine human impacts and the management issues which arise in conserving this exceptional ecosystem. Complete a guided walk and hands-on fieldwork activities, using geographical thinking and skills to explore issues surrounding forest uses and values past, present and into the future.

Venues PHDC \$15, WDF \$10.90, WM \$10.90

Back from the brink – senior (Years 11 to 12)

Find out how Western Shield is saving our native fauna



WA Curriculum BIO, OED and S, S&E, E

The Department of Parks and Wildlife's *Western Shield* wildlife recovery program has made significant advances in native fauna recovery in WA. Discover the importance of animal ethics for all work undertaken with fauna. Learn about the control of introduced fauna and efforts to re-establish native species including captive breeding and the protection and enhancement of habitat. Students investigate and compare a range of invasive and non-invasive monitoring techniques.

Venues HEC \$15, PHDC \$15, FHC \$15

Sustainable forest management (Years 11 to 12)

How are we using and impacting our forests? Can forests be managed sustainably for future generations?

WA Curriculum GEO 2B

Gain an insight into how local forests are managed sustainably for the wide range of users wanting to access the forests. Investigate how past choices have influenced current forest use through hands-on activities. Students will visit different forest types and record a range of environmental parameters to allow comparison.

Please note students will be in the forest all day and walk about two kilometres.

Venue PHDC \$15

Fire biology – a force of life (Years 10 to 12)

Understanding the ecological consequences of fire on the environment

Australian Curriculum S (10), H (10), Priorities – Sust

WA Curriculum BIO, OED, S, and S&E

Take a guided walk and engage in biological fieldwork to examine the impacts of fire on the ecosystem. Gain an understanding of the role fire has played in the evolution of our forests and of Aboriginal burning practices to manage the environment. Learn about the difference in behaviour between bushfires and prescribed burns. Find out the importance of applying scientific learning to our understanding of fire in the environment and how fire management is not only used to protect life and property but also to protect and enhance biodiversity.

Venues PHDC \$15, WM \$10.90, WDF \$10.90, FHC \$15



Fire geography – a natural hazard (Years 10 to 12)

Understanding the importance of fire management in WA

Australian Curriculum S (10), H (10), Priorities – Sust

WA Curriculum GEO 2A, OED and S, S&E

Take a guided walk and engage in geographic fieldwork to examine the impacts of fire on the ecosystem. Gain an understanding of the role fire has played in the evolution of our forests and of Aboriginal burning practices to manage the environment. Learn about the difference in behaviour between bushfires and prescribed burning. Find out how fire management is used not only to protect life and property but also to protect and enhance biodiversity.

Venues PHDC \$15, WM \$10.90, WDF \$10.90, FHC \$15

Our south-west (Years 10 and 11)

A range of management issues impact upon the biodiversity of the south-west

Australian Curriculum S (10), Priorities – Sust, A&TSI

WA Curriculum BIO, GEO, OED and S, S&E, E

WA's geological formations and climate conditions have generated a unique sclerophyllous forest now under threat from a multitude of human activities. Carry out mapping exercises and fieldwork to investigate the biodiversity of our south-west jarrah forests. Understand the management issues arising from the impacts of introduced flora and fauna, land clearing, erosion, salinity, dieback, fertiliser and pesticides on this ecosystem.

Venues WM \$10.90, WDF \$10.90



Sustainable forests (Years 10 to 12)

Gain an insight into the principles and practices of sustainable forest management

Australian Curriculum S (10), E (10), M (10), H, Priorities – Sust, A&TSI, AAEE

WA Curriculum GEO, BIO, ISC, EES and S, S&E, E

Explore the management of forests in providing a sustainable source of timber while reducing the risk to the natural environment. Find out how we ensure that the forests can still be enjoyed for their 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.

Venues WM \$10.90, WDF \$10.90, FHC \$12.90

Calendar of events 2014

| Month | Date | Event |
|--|-------------|---|
| January | Sunday 5 | National Bird Day |
| | Sunday 26 | Australia Day |
| February | Sunday 2 | World Wetlands Day |
| | Tuesday 25 | Business Clean Up Day |
| | Friday 28 | Schools Clean Up Day |
| March | Sunday 2 | Clean Up Australia Day |
| | Friday 21 | World Forestry Day |
| | Saturday 22 | World Water Day/Earth Hour |
| April | 13–21 | Australian Heritage Week |
| | Tuesday 22 | Earth Day |
| | Saturday 10 | International Migratory Birds Day |
| May | Thursday 22 | International Day of Biological Diversity |
| June | Thursday 5 | World Environment Day |
| | Sunday 15 | Global Wind Day (Wind Energy Awareness) |
| | Tuesday 17 | World Day to Combat Desertification and Drought |
| July | 7–14 | NAIDOC Week |
| | Sunday 28 | National Tree Day |
| August | Saturday 9 | International Day of the World's Indigenous Peoples |
| | 16–24 | National Science Week |
| September National Biodiversity Month | Monday 1 | National Wattle Day |
| | Saturday 7 | National Threatened Species Day |
| | Sunday 14 | National Bilby Day |
| | Sunday 28 | World Rivers Day |
| October | Saturday 4 | World Animal Day |
| | Monday 6 | World Habitat Day |
| November | 10–16 | National Recycling Week |
| December | Thursday 11 | International Mountain Day |

Biodiversity walks and activities

These activities are held throughout the year and focus on the natural environment, plants, birds, reptiles and invertebrates.

Golden catchment walk (Years 4 to 7) – two hours

Australian Curriculum S (4–7), Priorities – Sust

WA Curriculum S, S&E, E



Go on a journey through the forest to explore the water cycle and how humans affect the forest. Finish your walk at Mundaring Weir in time for lunch.

This program links well with an exploration of the Number 1 Pump Station with National Trust staff. Bookings for the afternoon need to be made separately with the National Trust.

PHDC \$7.70

Monitoring marsupials (Western Shield trapping)

A unique opportunity for students to be part of *Western Shield* research. Students mix bait, set traps in the evening and return the next morning to measure and release animals. Less than 10 places available and filling fast!



PHDC (Year 11 and 12 only) \$11, WDF/WM (Years 5 to 12) Dates – 26–30 May and 25–29 August \$9.90

Bush tucker supper (or breakfast or lunch) (Years 5 to 11) – two hours including food

Enjoy a session with Aboriginal leaders – learn about traditional nutrition, then make and eat a damper and kangaroo supper while listening to Dreamtime stories. Please note the food is a sampler amount only and not a full meal.

PHDC \$13, FHC \$13

Night walk (Years 3 to 12) – one hour

While exploring with spotlights, students will recognise the interdependence of life as the forest comes alive after dark. This experience can be a highlight of your school camp.

PHDC \$6.60, FHC \$6.60, TTW \$15.00 (including all-day entry to the Tree Top Walk)

Animal encounters (Years 1 to 12) – one hour

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

PHDC \$7.70

Investigating the underworld (Years 1 to 7) – one hour

Students will investigate invertebrates as they take part in a hands-on search of the jarrah forest underworld. They share their findings about the lives of beetles, bugs, spiders, ants, scorpions, earwigs, mantises and many more creatures.

PHDC \$5.50

Sense-ational trail (Years 1 to 11) – one hour

Students will engage sensory skills as they explore the forest using blindfolds along a rope trail.

PHDC \$5.50

Eco walks (Years 1 to 12)

Enjoy guided ecology walks through the forest. The theme will be tailored to suit your needs. The duration and cost depends on your requirements.

PHDC \$5.50 (or if booking with another program at PHDC \$4.40), FHC \$5.50, TTW \$5.50 (or \$12 including a Tree Top Walk all-day entry)

Sense-ational night life (Years 3 to 12) – two hours

While exploring with spotlights, students will recognise the interdependence of life as the forest comes alive after dark. Students will also explore the forest blindfolded along our rope-walk trail, using the senses of smell, touch and hearing. This experience can be a highlight of your school camp.

WDF, WM \$7.70

Marvellous macro invertebrates (Years 3 to 12) – two hours

Take a close look at the aquatic invertebrates of the spring-fed stream. Students investigate the relationship between water quality and invertebrate species, and gain an understanding of the roles of invertebrates in the stream ecosystem.

WDF, WM \$7.70

Big events

Nearer to Nature Discovery Day

Big groups of up to about 300 students can experience a range of short activities in a single day. Schools choose the activities that suit their needs and a timetable for your day is developed. Cost will depend upon types of activities and number of leaders required.

Where – PHDC

World Environment Day

A range of activities from different excursions will give students and teachers a snapshot of some experiences, concepts and skills available.

Date – Thursday 5 June

Cost – \$15 per student, teachers free

Where – PHDC



Incursions

Where we come to your school

One of our experienced EcoEducation officers will come to your school. Please note not all incursions are available from all centres.

Saving threatened species – part 1 (Years 4 to 7 Science)

This incursion focuses on the Department of Parks and Wildlife's *Western Shield* threatened species recovery program. Hair tubes, Sheffield traps, measuring equipment and hands-on activities will capture the interest of the most challenging students! The content is varied according to ability of the students.

Saving threatened species – part 2 (Years 8 to 12 Science/ Biology)

This incursion focuses on the Department of Parks and Wildlife's *Western Shield* threatened species recovery program. A different suite of monitoring techniques will capture the interest of students through hands-on investigations! The concept of animal ethics will be introduced along with data analysis.

Children's curiosity in the environment (Years 1 to 3)

Think about, and then examine with lenses, a range of living things and evidence of their presence in the environment. Use cards in a hands-up game about plants and animals. Begin with ideas about classification, finish with tramping on leaf litter to see what happens to small animals when we walk in the bush.

Biodiversity quiz (Years 6 to 10)

Students are presented with a wide range of items from the jarrah forest ecosystem. They explore the meaning of biodiversity and identify living and non-living components of and threats to the ecosystem. They identify as many mystery objects as possible, then connections and adaptations are discussed, as well as the importance of maintaining biodiversity for a healthy ecosystem.

Totem yarning incursions (Years 1 to 12)

A suite of incursions have been developed to introduce students to culture and totems. The totem concept allows students to connect to the environment, sustainability and environmental responsibility. For older classes the topics are covered in more depth and more sensitive issues may be discussed – student discussion is encouraged.

Incursion costs

Please note not all incursions are available at all centres.

Perth metro cost: one class (up to 30) \$200, second class \$180

South-west cost: one class (up to 30) \$150, second class \$100 for an incursion if in proximity to Bunbury or Margaret River, contact: swecoed@dpaw.wa.gov.au.

School camps

The Perth Hills Discovery Centre campground

Students and teachers can take part in a variety of EcoEducation programs, and camp under canvas. Facilities are suitable for people with disability.

Facilities: 12 shady tent sites, plus an overflow area, a camp kitchen including electric barbecues, hot showers and toilets

Capacity: two classes with adults (maximum 60 people)

Bookings through Nearer to Nature Schools.

Other local accommodation options available upon request.

Wellington Forest Cottages

Wellington Mill is a safe venue for metropolitan and country school camps, just two hours' drive from Perth and a short distance from Wellington Dam and Bunbury. The adjacent Wellington Discovery Forest EcoEducation Centre offers a wealth of curriculum-linked programs for kindergarten to Year 12 students.

Facilities: cottages, hall for hire, public telephone, barbecues, laundry, playgrounds

Capacity: eight cottages (each accommodates eight people). The cottages are now under new management and have been extensively upgraded.

Bookings/enquiries: Wendy and Ben Perdon

Phone: 9728 3043, email: perdon@westnet.com.au, website: www.wfccc.com.au

Wharnclyffe Mill Bush Retreat

This camp is a fantastic venue for metropolitan and country school camps, especially for geography and biology students and outdoor education activities.

Facilities: bunkhouse, four self-contained cottages and camping site accommodation available, large undercover area, kitchen, barbecues, universal access ablution block (showers and toilets) and a large grassed area adjacent to the karri forest

Capacity: bunkhouse (42 beds), camping (50 people)

Bookings/enquiries:

Phone: 9758 8227, fax: 9731 6366, email: stay@wharnclyffemill.com.au

Jarrah Forest Lodge, Dwellingup

Located across the road from the Forest Heritage Centre, this bunk house style accommodation is ideal for schools wanting to experience an overnight or longer stay in Dwellingup.

Facilities: twin-share rooms, a family room, with shared kitchen, dining and bathroom facilities, ideal for school groups.

Capacity: 16 twin-share rooms (32 beds) plus family room (sleeps 4)

Bookings/enquiries:

Contact the lodge manager, Peter, at jarrahforestlodge@forestheritagecentre.com.au. Alternatively, online bookings can be made at <http://www.forestheritagecentre.com.au/bookings> or by calling 0428 148 108.

EcoEducation programs are available at or close to all of these sites.



Professional learning opportunities

Our website will have up-to-date details of PLs being offered so please check regularly. For PHDC, like Nearer to Nature on Facebook for updates. Some PLs will be jointly hosted by Nearer to Nature Schools and other education providers within the Department of Parks and Wildlife and the Department of Environment Regulation.

Contact your local centre for more details. Find contact details in the back of this brochure.



Whole school staff PL

This PL includes an overview of excursions, incursions, curriculum links and available resources. Teachers will get to try relevant activities that students would engage in. Price based on numbers and program. Call us to make arrangements.

Where: at our centres or your school

Nearer to Nature Schools works with the following groups to provide a range of resources and support for teachers.

Professional associations

Australian Sustainable Schools Initiative

The Australian Sustainable Schools Initiative (AuSSI) is a partnership of the Australian Government and states and territories that supports a whole-school approach to embracing the principles of sustainability.



In WA, the initiative (AuSSI-WA) has been developed around significant local partnerships and represents an overarching framework for 'education for sustainability' in school communities. Schools are supported to foster a culture of sustainability in their day-to-day activities, both in terms of teaching and learning (curriculum), the management of the school's resources and its activities within its local community.

The AuSSI-WA whole-school planning framework provides schools with ideal support for Australian Curriculum implementation, specifically the cross-curriculum priority of Sustainability and the General Capabilities as linked to specific learning areas.

The project website www.det.wa.edu.au/sustainableschools/ highlights and promotes case studies of schools' activity in this area, representing a 'compendium of success' of action-based learning for sustainability.

For further details regarding this initiative, please contact Howard Flinders, Project Manager, AuSSI-WA on 9402 6259 or howard.flinders@education.wa.edu.au.



STAWA

The Science Teachers' Association of Western Australia (STAWA) offers leadership in science education, promoting sustainable, quality science learning and teaching. STAWA values high professional standards and is committed to the professional learning, recognition and resourcing of teachers of science and to the credibility of the science teaching profession and STAWA.



For more information on STAWA's annual conferences for secondary and primary school teachers, professional learning days, publications and student competitions, go to www.stawa.net or follow them on Twitter @SciTeachersWA. For more information about STAWA and how they can help call the STAWA office on 9244 1987 or email admin@stawa.net.

GAWA

Geography Association Western Australia's (GAWA's) main objective is to encourage, in various ways, the advancement, education, promotion and practice of geography in WA. It does this by providing an organisation and forum for students, teachers and practitioners of geography to share knowledge, ideas, opinions and activities about geography and geographical education. One of the main ways GAWA fulfils its objectives is by providing and promoting professional learning opportunities for teachers and students. Each year GAWA conducts an annual conference and a number of evening events where teachers' knowledge and skills relating to both the natural and built environment can be enhanced. GAWA also promotes the professional learning opportunities provided by agencies, including EcoEducation. Additionally, GAWA publishes a wide range of student texts and resource materials.



Phone/fax: 9388 2656, email: gawaadmin@westnet.com.au, website: www.gawa.asn.au

Bush Rangers WA

Bush Rangers WA is a youth-based, voluntary conservation and community development program. It supports young Western Australians to take an active role in the conservation of the natural environment and better understand the mechanisms for its management.

It offers young people opportunities to undertake personal development training while developing their conservation skills and knowledge through involvement in practical nature conservation projects. Projects undertaken can be school-based or in the local community, while others take them to some amazing locations and landscapes across the state.

The program is part of the broader Cadets WA program coordinated and financially supported by the Department of Local Government and Communities with statewide coordination provided by the Department of Parks and Wildlife through the Bush Rangers Program Coordinator. It is an endorsed program of the School Curriculum and Standards Authority. Completion of Levels 1, 2 and 3 by Bush Ranger cadets in Year 10, 11 or 12 counts towards the meeting of requirements for the WA Certificate of Education (WACE).

Bush Rangers WA encourages young people to take action for positive change!

For more information visit <http://education.dpaw.wa.gov.au/bush-rangers.html>

Contact:

Bush Ranger Program Coordinator on 9295 6149



Bookings and enquiries

Costs

All costs quoted include GST.

As all programs and activities are curriculum linked the GST component can be reclaimed.

We require minimum payment for the equivalent of 20 students for all activities.

From 2013, no minimum numbers will apply to south-west programs.

Cheques are to be made payable to Department of Parks and Wildlife

Confirmations

A confirmation letter will be forwarded to you on finalising your booking.

Cancellations

Please confirm any cancellation in writing at least one week before your visit, otherwise we request a cancellation fee.

Overseas and interstate bookings

Separate charges apply for overseas and interstate students. Please contact us for more information.



Our centres

PHDC – Perth Hills Discovery Centre, Mundaring Weir

The Perth Hills Discovery Centre, on Allen Road (off Mundaring Weir Road), is set in jarrah forest two kilometres from the Mundaring Weir. The centre is located seven kilometres south of the Mundaring township. Nearer to Nature Schools offers a range of environmental education and Aboriginal cultural programs for kindergarten to Year 12 students. Demand for excursions and incursions continues to grow, with many teachers returning year after year. Please use the online enquiry system for prompt attention and book as early as possible.

Physical location – 380 Allen Road Mundaring (off Mundaring Weir Road)

HEC – Henderson Environmental Centre (Star Swamp), North Beach

Set in the Star Swamp Bushland Reserve, North Beach, the Henderson Environmental Centre is an excellent excursion venue for schools in the City of Stirling. Our programs about threatened animals, tuart woodland ecosystems, climate change/biodiversity and biology and science is offered to middle school students studying science and society and environment.

Physical location – end of Groat Street, North Beach (off North Beach Road)

WDF – Wellington Discovery Forest, Bunbury

Programs held at the Wellington Discovery Forest for kindergarten to Year 12 students are modelled on the successful programs at the Perth Hills Discovery Centre. They are available for schools in the south-west and for metropolitan school groups camping or staying at the cottages at Wellington Mill. The Wellington Discovery Centre, located in the forest, is 35 kilometres from Bunbury, close to Wellington Dam and about two-and-a-half hours' drive from Perth.



WM – Wharncliffe Mill (formerly Margaret River Eco Discovery Centre)

Programs at Wharncliffe Mill cater for kindergarten to Year 12 students and are modelled on those at the Perth Hills Discovery Centre. The Wharncliffe Mill Bush Retreat, an excellent venue for school camps, is on site and is set in magnificent karri and jarrah forest close to the Margaret River township.

DWEC – Dryandra Woodland Ecology Centre, Narrogin

The Dryandra Woodland Ecology Centre offers EcoEducation programs, which may include a fascinating visit to the nearby Barna Mia animal sanctuary. The adjacent Lions Dryandra Village, near Narrogin, provides good accommodation for school camps.

TTW – Tree Top Walk

The Valley of the Giants Tree Top Walk is located between Denmark and Walpole in the heart of the Walpole Wilderness. The Walpole Wilderness features a vast, natural and wild landscape encompassing tranquil forests, imposing granite peaks, peaceful rivers, wetlands and breathtaking beaches. It is also home to old majestic tingle forests, which occur nowhere else in the world! The Valley of the Giants Tree Top Walk features a stunning walkway positioned 40 metres above the ground amid the spectacular heights of the tingle forest canopy.

The centre offers a curriculum-linked eco education program for upper primary and early secondary students. Eco walks and night walks can be arranged to suit groups of any ages. Eco walks can be tailored to suit your group needs, choose from a range of locations within the Walpole Wilderness.



LTF – Ludlow Tuart Forest

Ludlow Tuart Forest is located near Busselton on the Tuart Tourist Drive. A new walkway includes a bird hide facing onto the adjacent wetlands, which provides a great opportunity for wildlife viewing. The heritage-listed Wonnerup House is across the road from the parking area.

FHC – Forest Heritage Centre, Dwellingup

The Forest Heritage Centre is located on Acacia Road in Dwellingup and is the newest home for a selection of environmental and cultural excursions. The FHC is closely linked to and supported by the PHDC. The centre includes walk trails, a treetop viewing platform and the School of Fine Wood.

LPCP – Leschenault Peninsula Conservation Park

Leschenault Peninsula Conservation Park is located about 25 kilometres north of Bunbury on the Old Coast Road. It comprises a range of ecosystems from coastal dunes to rich tuart forest and includes the historic Belvidere settlement.





Nearer to Nature Schools

Contacts for centres

Perth Hills Discovery Centre, Henderson Environmental Centre
(Star Swamp) and Forest Heritage Centre, Dwellingup

Phone: 9295 6149 or 9295 6300, fax: 9295 3247, email: DEC-ecoeducation@dec.wa.gov.au, visit www.dpaw.wa.gov.au/n2n or like Nearer to Nature on Facebook.

Wellington Discovery Forest, Bunbury, Margaret River Eco
Discovery Centre, Leschenault Peninsula Conservation Park,
Bunbury, Ludlow Tuart Forest, Busselton and Dwellingup Forest
Heritage Centre

Phone: 9725 4300 or 9725 5944, fax: 9725 4351, email: swecoed@dpaw.wa.gov.au

Dryandra Woodland Ecology Centre, Narrogin

Phone: 9881 9238 or 9881 9200, fax: 9881 1645, email: lynette.carroll@dpaw.wa.gov.au

Tree Top Walk

Phone: 9840 0400, fax: 9840 1251, email: claudia.simpson@dpaw.wa.gov.au



Worsley Alumina



Department of
Parks and Wildlife

