Using the Nature Education Symposium videos for teacher professional learning

Introduction
The 10 videos available in this resource are presentations that were delivered at the Nature Education Symposium held in September 2012 at Taronga Zoo. Symposium presenters included teachers, academics and authors. The symposium was presented by the NSW National Parks and Wildlife Services and the videos produced by the NSW Department of Education and Communities.

The videos present a range of perspectives on engaging young people with nature through school and environmental education programs, pre-service teacher training, learning resources, and through experiences in the natural world.

Discussion points for teacher professional learning activities are provided.

Engaging children in nature
Richard Louv, author of Last child in the woods and The nature principle

Richard presents his theory on the importance of engaging young people with nature to maintain the connection and understanding of the natural world we rely on for life. He states that we are at a turning point where young people are becoming disconnected from the natural world and increasingly engaged in technology for communication and enjoyment. He urges teachers and schools to explore the opportunities that outdoor learning and nature education provides for students.

Teachers can include in their programs concepts or questions for students to explore including:
- If more people are living in urban areas, how can we re-design our cities to ensure we maintain a connection with our natural world?
- How can schools help young people maintain and build resilience and hope for the future?
- Do humans display more senses than the usual five senses when we are out in nature?
WilderQuest
Simon Stroud and Jodi Orcher, NSW National Parks and Wildlife Service
Duration: 19:37

Schools can meet a range of student learning outcomes, particularly in the areas of Science, Geography and Human Society and Its Environment, through visits to National Parks.

Discovery Programs provided by NSW National Parks help young people to investigate, explore and understand more about the natural world and to connect to its beauty. These programs also have a particular ability to connect people with Aboriginal culture and heritage.

WilderQuest is a suite of programs available online, on iPads and ‘in park’ that creates a virtual and then real life connection with nature for young people.

NSW National Parks also provides specific curriculum integration information for teachers on how to use the WilderQuest iPad app at: www.environment.nsw.gov.au/edresources/WilderQuest.htm

Teachers may choose to use WilderQuest to introduce your students to:
- a range of different environments we have in NSW
- animals that live in these environments
- skills and tools to investigate environments such as cameras and binoculars
- specific aspects of Aboriginal culture—Dreamtime, country, tools and weapons, survival, hunting and gathering.

The Nature of Youth
Jessica Lembryk and Matthew Leyshon, Youth at the Zoo
Duration: 08:32

Jessica and Matthew present their perspectives on the Youth at the Zoo program offered through Taronga Zoo in Sydney and Western Plains Zoo in Dubbo. The program aims to educate the young program members about wildlife and the environment, and supports them to take personal and collective action for wildlife conservation.

Teachers can use this video as a way to demonstrate steps young people can take to improve their awareness of the environment around their school and community and the actions they can take to improve it.
Wild connections for action
Paul Maguire, Zoo Education Manager, Taronga Conservation Society Australia

Duration: 24:03

Paul describes how moments in life can connect young people to nature. He provides some critical insights into the role that zoos should play in this important connection. This relationship is described in part through youth at risk programs offered by the Zoo for young people who are disadvantaged and disengaged.

Teachers can discuss how environmental experiences provide opportunity for students to connect with other living creatures and through this to their own lives. These discussion questions could include:

- How can local environmental issues, programs or projects be integrated into our student learning programs?
- How can our school use environmental programs as a bridging strategy to bring disengaged young people back into school and the community?
- What local environment groups or programs could the school partner with to expand the range and scale of environment actions the school is involved in?

Rainforest Heroes—Technology at the Zoo
Paul Maguire, Zoo Education Manager, Taronga Conservation Society Australia

Duration: 09:11

Mobile technologies provide new strategies to engage young people, including game based learning, quests and challenges. The Rainforest Heroes app engages young people in developing a report on ten animals living in the Southeast Asian rainforest exhibit by providing information on diet, habitat, threatening processes and conservation strategies.

While the Rainforest Heroes app is used in the exhibit at the Zoo, the learning experience is extended by internet-based activities away from the Zoo.
Students could create their own quest-based challenges or trail around their school or local area using QR codes and mobile devices that link them to web-based information.

Outdoor Learning in the primary years
Amanda Lloyd and Marian Crossley, St Michael’s Primary School, Nowra

Duration: 12:08

In this video two teachers describe the environmental education journey for their small south coast school. Their story of success includes: engaging students with learning difficulties, having Indigenous and environmental messages and themes in their school grounds and community participation in school improvements.

Indigenous perspective and place based learning are strongly incorporated into the programs with the objective of connecting students with the local area and building an understanding of cultural significance.

Teachers could reflect on and discuss some of the achievements and lessons learned from their schools’ journeys toward integrating sustainability education including:

- engaging the local Indigenous community and integrating local Indigenous history and culture into learning programs
- integrating environmental learning into classroom programs
- assigning environmental program responsibilities to a member of the school leadership team
- collegial support provided to teachers to ensure a high level of confidence in delivering effective environmental education.

Ecopedagogies – ways of connecting with the natural world’
Dr Tonia Gray and Carol Birrell, University of Western Sydney

Duration: 16:40

Educators now believe that environmental, sustainability and ecology-based studies require specific teaching practices or pedagogies. There is a need for these to be introduced through pre-service teacher education and in-service professional development programs to improve sustainability education practices.

A number of specific program examples are provided in this video to illustrate ecopedagogies.
Teachers could reflect on:

- their own pre-service and in-service training in the area of environmental and sustainability education
- their professional learning needs in the lead up to the introduction of the Australian Curriculum with the sustainability cross-curriculum priority
- activities for their students that support an eco-pedagogies approach or student learning using the stimulus of natural environments.

Is the outdoors becoming fossilised in the Australian curriculum?
Dr Tonia Gray, University of Western Sydney
Duration: 16:06

Learning outside the classroom is a key part of environmental and sustainability education. With the introduction of the Australian Curriculum it is vital to include outdoor education as a way to facilitate effective environmental and sustainability learning for students, building resilience in students, and developing collaboration, communication and group skills.

Teachers could reflect on:

- reviewing their teaching programs to identify additional opportunities for outdoor learning and sustainability education
- investigating suitable areas in their school or local environment that could be easily used by the school for outdoor learning experiences
- in-service training requirements in order to teach outdoors with confidence.

Technology in fieldwork and classroom contexts
Steve Papp, Patrick Spiers, Janet Rasborsek, Mark Edwards and Chris Vella
NSW Department of Education and Communities, Environmental Education Centres
Duration: 22:03

Programs offered by the Environmental Education Centres increasingly use technology for communication and fieldwork. These programs include the use of iPads to record a student's observations and interpretations of the environment, provide audio-visual guides for a visit to a natural environment that are layered with additional information, animal images and sounds with high accessibility for students with special needs and cameras and recording equipment. This symposium presentation also dispels the idea that technologies ‘get in the way of’ connecting students with the natural world and examines how technology is in fact a vital tool that provides more opportunity for connections and learning.
Teachers could consider:

- including opportunities for students to create their own audio-visual materials as a record of their experience and learning in nature
- how low-cost technology items such as sound recorders and cameras can be used to add information and dimensions to student investigations
- the increased accessibility to information such technologies provide for students with special needs
- the different learning that occurs when students create their own audio-visual content as part of the excursion experience.

Naturally better—designing opportunities to play in a natural setting

Fiona Robbé, Landscape Architect, Architects of Arcadia

Duration: 19:39

Nature based learning is integrated into all the playground designs created by Fiona Robbé. This taps into a young person’s natural affinity to explore and affiliate with nature. These play spaces are also designed to stimulate investigation, risk taking, physical challenge and build resilience. All schools have areas for activity and play and these could be developed over time to include environmental themes, messages and play.

Teachers may like to consider:

- developing a new vision or master plan for play spaces in their school to include environmental themes, such as water play
- the way simple modifications to existing play spaces may allow for a broad range of environmental investigations, such as leaf litter surveys
- the critical role of unstructured nature play for child development and how this can be accommodated in a safe way for students in their care.