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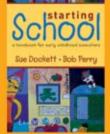




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Building and nurturing ecologically sustainable values and practices

Empowering children and families to value, build and nurture ecologically sustainable communities is a major goal for early childhood education this decade.

As Professor Ian Lowe from the Australian Conservation Foundation says in his guest statement, ecological sustainability is everyone's responsibility. Climate change and environmental problems are linked and will directly affect the lives of young children now and in the future.

What should we be doing about this? Lowe reminds us that energy underpins modern civilisation and 'without usable energy our communities would literally grind to a halt.' He gives a two-part solution that each of us can employ to make wiser use of our limited resources.

Firstly he says we need to increase our use of renewable energies, like solar or wind power. His second suggestion is to use energy more efficiently. Efficiency improvements and more thoughtful use of energy should be both a national and personal goal for every home and early childhood service.

In the long term children must genuinely value the environment and this requires a holistic vision of education for sustainability, including a focus on ecological knowledge and understanding, environmental attitudes and behaviours, building a sense of place and forging connectedness within our communities. This deep ecological understanding needs to begin in early childhood. It is also vital that children build strong self-esteem, interpersonal relationships and positive attitudes toward learning and school.

In the arena of health we need to focus on strengthening children's attitudes, beliefs and knowledge about nutrition, especially the importance of fruit and vegetables in a balanced diet. Growing vegetables helps children gain an initial understanding of food requirements and nutritional systems. Linking food growth with consumption helps children to appreciate how our environment sustains life and raises broader environmental issues. These real-world experiences assist children in building a strong sense of self, place in the community and personal pride.

Helping children to learn about the environment and to make wise food and energy choices are the first steps to ecologically sustainable early childhood centres, schools and communities. In order to do this, just talking isn't enough. Children need to see sustainability modelled in their homes and educational settings. This reinforces our environmental education messages and provides practical opportunities for children to experience sustainability.

While governments and policy-makers have key roles in climate-change regulation, building and nurturing ecologically sustainable communities must begin with the education and care we provide. Early Childhood Australia's recently updated Code of Ethics states that we must 'Work with children to help them understand that they are global citizens with shared responsibilities to the environment and humanity.'

In this issue of Every Child we explore bigpicture environmental and sustainability issues and provide some wonderful practical ideas.

We look at the sometimes controversial role of zoos in society. Geoff Underwood and

Ben Luxton argue that modern zoos and aquariums play important roles in helping to enrich understandings of biodiversity, interdependence and conservation and they can empower people to take positive action for our environment.

Ros Cornish has written a heartening piece on building a childcare centre that incorporates sustainability while meeting the diverse requirements of children and staff. With so many centres conforming to the most minimal of regulations it's great to see such a visionary model.

Our article on 'green cleaning' deals with the serious problem of making informed decisions about cleaning products. Director of Fresh Green Clean, Bridget Gardner, provides great green cleaning tips and advice on selecting products that are both safe and effective.

We all need to work together to counter the impact and extent of climate change. We can't just sit and wait for government policies on fossil fuel alternatives and energy demands. Regulatory uncertainty may be a fact of life but, as shown in this issue of Every Child, there are lots of things we can start doing right now. It's time to make a change.

Alison Elliott

Editor

Every Child



Early Childhood Australia's goals and directions

Margaret Young is the new National President of Early Childhood Australia. She has been on the National Executive for 10 years and has spent the last six as National Treasurer. Currently she is the CEO of the Lady Gowrie Child Centre, NSW.

Early Childhood Australia's (ECA) new Board of Directors had its first meeting in September during which we ratified the organisation's focus areas. These include:

- endorsing and promoting service quality standards for the wellbeing of children
- bringing issues to the forefront in the lead-up to the next federal election
- promoting the recent revision of our Code of Ethics
- highlighting leadership and integration as part of the development of our organisation.

We are also committed to strengthening ECA's work for Aboriginal and Torres Strait Islander children and families, and to dealing with the crucial threat of global warming to the future wellbeing of our children.

We have kept a number of our former members and inherited much energy and commitment from the previous board, led by our former President, Judy Radich, and we are keen to continue where they left off.

In fulfilling our commitments in regard to children, ECA will be staying informed and taking action, and encouraging our members, readers and the people we talk to in government to do the same.

We know that the work that each of us does, with and for young children, has an immediate and long-term impact. Accordingly, ECA has selected its priority areas based on their immediate and potential

future impacts on children's lives. Looking to the future, building a strong, just society and healthy community—and finding ways to involve young children in each step along the way—is essential if future generations are to enjoy happy and fulfilling lives.

The issue of quality standards often seems complex because of the different ways service delivery, regulations and funding have developed and operate around Australia. ECA believes that we need to advocate for funding, regulatory and quality-assurance processes that are based on current research evidence of what leads to long-lasting quality outcomes for children. We all must take up the challenge of evaluating and communicating about our work and its impact on children, families and services.

ECA is concerned about basic issues of human rights and social justice for Aboriginal and Torres Strait Islander children and families, as well as the quality of life of young Indigenous children, both now and in the future. In a sense ECA is going back to basics, looking for ways to learn more about the history and lives of Indigenous children and families, and encouraging others to do the same, to underpin greater and more meaningful reconciliation.

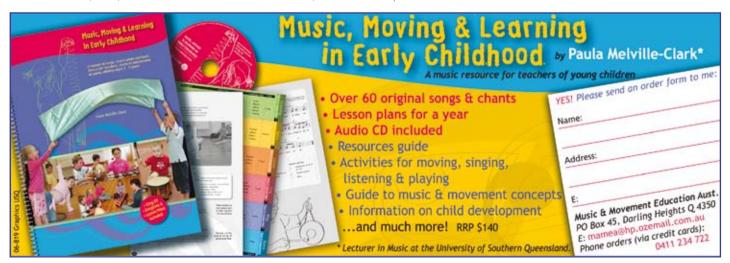
This issue of Every Child, with its focus on sustainability, is a great beginning for ECA's work on climate change, which directly results from non-sustainable lifestyle practices. Global warming is a major issue for all of us because it is only with careful and considered practice that we can give our children a healthy and fulfilling future.

We look forward to working towards our goals through many diverse means, including *Every Child* and, as always, we encourage your involvement and feedback.

Margaret Young

National President Early Childhood Australia

Margaret Young





Climate change and our children's future

Ian Lowe is Emeritus Professor of Science, Technology and Society at Griffith University and a consultant to the CSIRO Division of Sustainable Ecosystems. He explains why global warming must be uppermost in our minds, particularly as the custodians of our children's future.

Climate change will directly affect the lives of those who are now young children. Carbon dioxide stays in the air for about 80 years, so the energy we use today will affect the climate for the entire lives of today's youngsters.

Climate change is not just a serious problem in its own right, it also contributes to other major environmental problems, such as the state of rural land, the flow of inland rivers and the loss of biodiversity. Over the last 650,000 years the concentration of carbon dioxide in the atmosphere has varied naturally between 180 and 280 parts per million (ppm). It is now about 380 ppm and increasing by a further two-three ppm each year.

Average temperatures are now about 0.7 degrees higher than a century ago, sea levels are rising, rainfall patterns have changed significantly and we are seeing more frequent severe weather events—all as climate models were predicting 20 years ago. Australian summers are hotter and it is drier where most of us live, causing problems ranging from water shortages to more intense bushfires.

The most optimistic projection of change, this century, is about double the rate of change of the previous 100 years, with all other—arguably more realistic—scenarios giving even greater rates of change. Because of the long timelag in the atmosphere and the climate system, we face the inevitability of further change even if we are able to develop a concerted global response.

WHAT SHOULD WE BE DOING?

Energy is the basis of modern civilisation. We have easier lives than our grandparents did because we use much more energy: electricity, gas and transport fuels. Energy is also used to ease other shortages. Cities with limited drinking water process seawater—using energy. We have increased food supply for our growing population by farming more intensively—using energy. As we exhausted rich metal ores, we moved on to poorer deposits—but that takes more energy. Without usable energy, modern societies would literally grind to a halt.

We urgently need to reduce our rate of releasing carbon dioxide into the air. There are two ways to do this. First, we must use cleaner fuels. It is much better to use gas than electricity. Using electricity to heat water or cook, rather than burning gas, puts about four times as much carbon dioxide into the air.

Renewable energies, like solar or wind power, are cleaner still. These natural energy flows are huge, far greater than human energy needs. The entire world's energy use for a whole year is only about double the solar energy hitting Australia in one summer day! We should get much more of our energy from sun, wind and other renewable sources. It will cost more than burning coal, but it won't impose the large and growing costs of climate change.

MOVING TO SUSTAINABILITY

A 1992 report by the Commonwealth government department responsible for energy found we could get 30 per cent of our electricity from a mix of renewable sources for less than 10 per cent extra cost—in other words, for less than the GST added to our power bills. If we were prepared to see costs increase over the next 30 years to 50 per cent more than we now pay, the report found, we could get all our electricity from renewable sources. That would be a responsible policy.

The second part of the solution is turning energy more efficiently into the services we want. Nobody actually wants energy: we want hot showers and cold drinks, the ability to cook our food, wash our clothes and move around. Most of the technology we use is very wasteful. Several European countries now have a target of cutting energy use to a quarter of the present level by efficiency improvements. That should also be our applied to the present level by efficiency improvements.

Central to the solution is teaching our children about getting back in balance with the natural systems of the Earth and preparing them for the changes we have imposed on their climate. This is our duty and responsibility as carers and educators of the future generation of Australians.

lan Lowe

President Australian Conservation Foundation



Atticus Fleming, CEO of Australian Wildlife Conservancy, discusses our duty to educate children about the importance of caring for our precious flora and fauna.

Australia is one of only 12 countries referred to as 'megadiverse' because it contains such an array of plants and animals. Australia is the only wealthy country of the megadiverse nations—the others are developing countries in Africa, South America and Asia—so it should be expected that we have an outstanding record of protecting our wildlife.

Sadly, Australia has the worst mammal extinction rate in the world; worse than any country in Africa, Asia or South America, where poverty and rapid population growth have placed an enormous demand on natural resources.

If we do not take action, Australia's wave of extinctions appears set to continue. Currently, there are more than 1500 plants and animals on the endangered species list. Australia's unique wildlife faces an extinction crisis.

AUSTRALIAN WILDLIFE CONSERVANCY

Fortunately there is hope in the emergence of organisations like Australian Wildlife Conservancy which is helping to define an innovative new model for conservation. An independent, non-profit organisation, Australian Wildlife Conservancy has purchased 15 properties for conservation, covering 1.1 million hectares (2.7 million acres) around Australia.

These properties protect a diversity of habitats ranging from rainforest and tropical savanna to desert woodlands and mangrove-lined lagoons. Endangered animals such as bilbies,

Securing a future for Australia's endangered wildlife

numbats, Gouldian finches, cassowaries and tree kangaroos find refuge on these properties.

IMPORTANCE OF CHILDHOOD EDUCATION

I commenced work as the CEO of Australian Wildlife Conservancy in 2002. How did I end up in this position? Frankly, I blame my parents. I think it all started when mum and dad gave me a book on endangered animals of the world when I was four (I still have the book). The importance of conservation was also reinforced by my upbringing in the bush. By the age of seven, I was a member of an organisation dedicated to saving whales. When my turn came to give a presentation to my classmates (aged nine), I played them a record of humpback whale songs. There was no turning back.

My background has taught me that early education is vitally important in influencing our thoughts and values about the world around us, including conservation. This won't surprise readers of *Every Child*, but perhaps Australia's poor record in protecting wildlife over the last 200 years will?

WHAT CAN WE DO?

You can help save Australia's wildlife by introducing children to our wonderful animals; by showing them what makes a bilby or a cassowary so unique, and explaining that we will lose more of our animals forever unless, as a community, we change the way we behave towards our environment.



Photographs courtesy of Australian Wildlife Conservancy.

Explain what it means to lose a species forever—every child should know what extinction means. Hopefully then our wildlife will be in safe hands when our children get the opportunity to make decisions.

EDUCATION FOR THE FUTURE

It is also important to educate children about practical steps that can be taken to save our wildlife. Australian Wildlife Conservancy and other organisations can provide useful case studies about conservation in action, highlighting that there is still hope.

Australian Wildlife Conservancy operates a program of school visits to Yookamurraat, one of our properties in South Australia, where primary and secondary children learn to conduct a wildlife survey and perform basic scientific investigations relevant to conservation. Other school events are hosted at sanctuaries such as Karakamia (near Perth), where children from seven years and up can participate in nocturnal walks to see endangered species such as the tammar wallaby.

In future, I hope we can produce more educational material for various age groups. Visit our website for more information about Australian Wildlife Conservancy and our activities: www.australianwildlife.org

Atticus Fleming

Chief Executive Officer
Australian Wildlife Conservancy



A way of travelling: The environment and our *Code of Ethics*

Catharine Hydon is a member of the Code of Ethics national working party who have been working, since 2003, on a revision of the code, originally drafted in 1990. The new version was finalised in late 2006.

A code of ethics is not a 'set of rules or even a road map: it's a way of travelling, a mind set; a resource for the journey'. Ethical practice is 'not a destination: it is more like the calibration of true north on a compass, maintaining our sense of direction while leaving us free to explore whatever lies ahead' (Mackay, 2006, my emphasis).

THE ETHICS OF SUSTAINABILITY

A friend of mine is expecting his first child next year and asked me to recommend childcare centres. After visiting several, one thing particularly stuck in his mind: 'What's this thing about teaching children about the environment? They're only babies—surely they're too young to have to worry about recycling and all that?'

Given the increasing frequency of environmental catastrophes and evidence of global warming, my answer was, 'how can we not talk to children about sustainability?' How can we ignore such an important part of our lives? Might it actually be considered irresponsible not to show children that the ways in which they behave towards the environment will impact the rest of their lives and those of future generations?

Dahlberg, Moss and Pence (1999) suggest that if we are to see children as more than just biological beings—as co-constructors with agency and power—then we need to invite them into a collaboration of learning and teaching that includes tackling issues that our society faces. Of course, this does not mean that young children need to debate the merits of carbon trading. What it can mean is that they are engaged in local action, learning about their contribution to the bigger picture. This response—as the Code of Ethics suggests—will help children to understand 'that they are global citizens with shared responsibilities to the environment and humanity' (Section I, point four).

If the response to Al Gore's visit to Australia indicates anything, it is that ordinary people—especially families and children—recognise the issue of environmental sustainability as their business. It must become early childhood business as well.

But it must be more than community pressure that determines 'the way we should travel'. It is ethics that impels us to contemplate the direction of our interactions with children and their families. We have an ethical obligation to teach, demonstrate and explore the environment with children, and to help them understand our role in caring for where we live.

CONCLUSION

Considering the ethical dimensions of environmental education does not automatically mean making radical changes to practice (although a rudimentary examination of evidence might point us towards this sort of change), but it does require us to review a plethora of new information and ideas—such as those detailed in this issue of *Every Child*—in order to review what we present to children in daily program planning and practices.

Mackay suggests that we use ethics as a guide to true north, as a way of measuring what is worthy of children's attention and what is important for them to know as citizens of the 21st century. Environmental education is a worthy candidate, necessary to progress towards a secure future.

Catharine Hydon

Early Childhood Project Manager Brotherhood of St Laurence, Victoria

References and further reading

The Code of Ethics is available to view and download on the Early Childhood Australia website: www.earlychildhoodaustralia.org.au/code

Dahlberg, G., Moss, P., & Pence, A. (1999). Beyond quality in early childhood education and care: Postmodern perspectives. London: Falmer Press.

Mackay, H. (2006). Right and wrong: How to decide for yourself. Sydney: Hodder.



Action across Australia: Working towards a sustainable future

Sue Elliott discusses the development of Australia's early childhood environmental education networks and the necessity for federal support.

In 1986 I attended an Australian Association for Environmental Education conference held in Victoria. As the lone early childhood educator, I made a life-long commitment to raise the profile of early childhood environmental education and to seek acknowledgment from the wider environmental education field that environmental education begins in early childhood.

Since 1986, interest in early childhood environmental education has grown significantly through the efforts of active and committed individuals. Shared enthusiasm has led to the establishment of four state-based professional groups and one national special interest group:

- Environmental Education in Early Childhood Victoria Inc. (EEEC) in 1992
- Queensland Early Childhood Environmental Education Network (QECEEN) in 1995
- NSW Early Childhood Environmental Education Network (NSW ECEEN) in 2003
- Early Childhood Australia Victorian Branch Environmental Sustainability Special Interest Group (ECA Vic SIG) in 2006
- Australian Association for Environmental Education Early Childhood Special Interest Group Inc. (AAEE EC SIG) in 2003.

BEYOND PATCHES OF GREEN

A significant milestone during this establishment period was the *Patches of Green* review (NSW EPA, 2003) which detailed the patchwork quilt of early childhood environmental education. The green patches were grassroots localised organisations such as EEEC and QECEEN, some exemplary early childhood centres and committed individuals. The numerous not-so-green patches included tertiary training, research, policy, peak organisations, resources and relevant government authorities. The review recommended that action was necessary on local to national levels.

FFF(

Environmental Education in Early Childhood Victoria Inc. developed over 14 years from a professional interest group to a not-for-profit business that now operates a resource centre, conducts professional development, sells play materials and publications, and undertakes funded projects.

Regular general meetings have been an ongoing strength of the group, bringing together members to share their stories and the challenges of implementing sustainable practice in early childhood services. EEEC has also played a significant role in mentoring the establishment of QECEEN and NSW ECEEN.

Resource Centre Coordinator – eeec@alphalink.com.au 03 9471 4673 (Wednesdays) www.vicnet.net.au/~eeec/

QECEEN

Queensland Early Childhood Environmental Education Network was started to link people in the early childhood education and environmental education sectors so that they could share ideas, expertise and resources. The group successfully achieved these goals.

In 2002, QECEEN became an incorporated organisation. However, by early 2005, it became apparent that the combination of incorporation, ongoing management of the network and individual commitments was too time-consuming, even for the network's energetic leadership team. Consequently, the group let its incorporated status lapse and went into hibernation.

In mid-2006, moves were made to re-activate QECEEN. On 24 January this year, the Queensland branch of Early Childhood Australia began providing auspice to the group—thus marking the rebirth of QECEEN!

We are now looking for one or more convenors for the group, and for new ways–perhaps through greater use of electronic communication–to reach the community, in order to encourage previous members to rejoin and new people to sign up. If you have a passion for early childhood education for sustainability we hope you will step forward!

Julie Davis – j.davis@qut.edu.au www.rite.ed.qut.edu.au/geceen/

NSW ECEEN

The NSW ECEEN evolved from an early childhood advisory



group established by the NSW Environmental Protection Agency. It strives to promote and support education for sustainability by connecting early childhood services with information, resources and organisations within their community. Early Childhood Australia provides auspice for the group and it is currently managed by members of key early childhood organisations and independent professionals.

ECEEN supports members to develop environmentally sustainable practices through its website, newsletters, meetings, resource kits and email/phone assistance. Environmentally sustainable projects are highlighted through the annual Sustainable Projects OUTStanding (SPROUTS) and encouragement awards. These projects are showcased on the website, and in presentations and resources to provide initiatives and ideas for others.

Julie Gaul - nsweceen@earlychildhood.org.au 02 9398 4374

www.earlychildhoodaustralia.org.au/nsw_branch/eceen.html

AAFF FC SIG

The AAEE EC SIG functions across Australia as a network for coordinating, advocating and resourcing early childhood environmental education. A plan that identifies priorities for action in the early childhood sector has been developed and this has been instrumental in documenting progress and guiding action at local and national levels. Group members network electronically by email and a quarterly newsletter, and meet locally or at AAEE conferences.

For more information visit the AAEE EC SIG website: www.aaee.org.au/sig.htm or contact the convenor, Sue Elliott on susan.elliott@rmit.edu.au.

ECA VIC SIG

The ECA Vic SIG began last year with auspice from the Victorian branch of Early Childhood Australia. The group is convened by Tracy Young and meets four times a year at Swinburne University's Child and Family Studies Department in Prahran. Although the group is based in Victoria, anyone enthusiastic about environmental education is welcome to join!

The ECA Vic SIG aims to:

- advocate for children, families and issues that relate to environmental sustainability
- increase awareness and knowledge
- increase discussion on topics about sustainable education and development.

Tracy Young - tryoung@swin.edu.au 03 9214 6114

NATIONAL ACTIVITY

Recently the pace has quickened as some national professional organisations and various government authorities have begun to support early childhood environmental education initiatives.

Among the peak early childhood organisations, Early Childhood Australia has been very active, ratifying a position statement on environmental sustainability last year and actively supporting state-based groups, including NSW ECEEN and the ECA Vic SIG.

Some government initiatives include:

- the NSW Environmental Protection Agency have funded Promoting Environmental Sustainability in Early Childhood Services, a professional development program implemented across the New South Wales early childhood sector from 2004-5
- South Australia's Department of Environment and Heritage and Department of Education and Children's Services developed the Sustainable Schools and Children's Services Initiative to source and collate environmental education resource materials for early childhood services and schools, in 2005
- Victoria's Department of Human Services published a Design Guide for Children's Services containing sustainable design principles in 2005
- Gosford and Wyong Councils NSW established the Little Green Steps program in 2005 to promote sustainable

practice in local early childhood services and is now developing a 'how to' manual to encourage other local governments to engage with the early childhood sector.

National support is emerging, rather than evident, and is somewhat behind the lead set by the localised 'green patches'. However, it is absolutely crucial that the number of national initiatives increase, in order to move from the margins to the mainstream.

MAKE YOUR VOICE HEARD ON SUSTAINABILITY EDUCATION

Late last year the Federal government began the process of developing a National Action Plan for Education for Sustainable Development (NAPESD). The objective of the plan is to contribute to achieving a more sustainable Australia through community education and learning.

The process for developing the NAP will include an analysis of the current status and needs of the sectors involved in education for sustainable development (or education for sustainability and environmental education), as well as the identification of stakeholders that have not previously been engaged. It will focus on areas of greatest national need and impact.

Following a national online survey (which took place in January and February this year) a consultation phase will run from March to May. At this time there will be a further opportunity to provide input at state workshops, through your group or representative. The plan will be approved in the middle of this year.

It is imperative that individuals and organisations currently active in early childhood environmental education work together to create a committed voice during the consultation process. Federally supported national action is essential to promote systemic change in the early childhood sector.

It is strongly recommended you participate by:

- keeping yourself and your organisation up to date by visiting the project website: www.urbisjhd.com/nap
- reading and responding to the discussion paper on the site
- providing input, through your group or representative, at your state workshop.

For specific queries contact Roberta Ryan on NAP@urbisjhd.com.

CONCLUSION

It is imperative that we work towards a future where sustainable practices are embedded in all early childhood services, well supported by research, resources, training, policy and regulatory standards, and all young children are immersed in education for sustainability, whether at child care, preschool, family day care or playgroup.

Sue Elliott

There are many helpful reports, books and websites on sustainability and environmental education. Please contact AAEE EC SIG through their website at www.aaee.org.au/sig.htm or Sue on susan.elliott@bigpond.com to find out more.

Reference

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emPower: Beyond compost and worm farms

Many services incorporate environmental practices into their programs through worm farms and units on recycling. This is a great starting point for sustainability education but, as Tracy Young explains, environmental education can be much more.

What might environmental education which explores social, cultural and economic considerations look like? It could be children who learn about conservation not just by using water collected in a tank, but by discovering the social and economic reasons for doing so. There is much discussion about how this could occur at an early childhood level, especially as we continue to use resources without considering our future generations: the children in our services.

THE EMPOWER PROGRAM

Kirsten Slifirski is a member of the Early Childhood Australia (ECA) Victorian Branch Environmental Sustainability Special Interest Group. Last year, she took the group on a tour of the Booroondara Kindergarten in Richmond, where she is assisting the development of a program called 'emPower'.

emPower focuses on conserving energy and the environment, and encouraging others to do the same. It developed from three principles:

- 1. Early childhood is a critical time for environmental education because the starting point for long-term wellbeing is the years from birth to age five.
- 2. Children can be pivotal in communicating and instigating behavioural change in families—behaviours and practices modelled in kindergarten may well be replicated by children at home.
- 3. Children's centres connect communities and are important sources of support for families.

TECHNOLOGY FOR SUSTAINABILITY

One of the unique aspects of Booroondara Kindergarten—which I believe is a first for Australian services—is their use of sustainable technology. The centre is in the process of installing:

- a solar wall which captures sunlight to passively heat air
- three solar chimneys—funded by Sustainability Victoria and the kindergarten community—which provide natural ventilation, increase airflow and natural light
- solar heaters that capture and circulate air, heated by the building's metal roof.

Other sustainable initiatives include:

- vegetable and herb gardens
- three water tanks
- green cleaning
- native trees
- community art projects
- a large playground, including sand and patches for digging, which provides opportunities for wonder and discovery.

LEARNING STORIES

Since 2001, Booroondara Kindergarten has practised an innovative approach to communication inspired by New Zealand's *Te Whāriki* curriculum. This approach recognises that children learn in a sociocultural context; from their environment, teachers, peers and family.

The program encourages collaboration with adults and peers through guided participation and observation, as well as individual exploration and reflection. Central to this approach are 'learning stories'—a narrative method of documenting learning which includes the voices of children, teachers and family.

Because emPower integrates energy conservation into Booroondara's curriculum, through its physical environment and learning activities, 'learning stories' are powerful aids to stimulating critical thinking about energy conservation by children and families.

EMPOWER EMPOWERS

Booroondara Kindergarten's program stimulates pride in children and families, in making decisions that conserve energy and care for our environment. The ECA Victorian Branch Environmental Sustainability Special Interest Group commends the kindergarten for developing a whole-system approach to environmental sustainability and we look forward to working with them to achieve their goals.

Tracy Young

Child and Family Studies Department
Swinburne University of Technology, TAFE division, Melbourne
ECA Victorian Branch Environmental Sustainability Special
Interest Group is based in Melbourne, but participation
is welcomed from anyone in Australia enthusiastic about
education for sustainability. To find out more about the group,
please contact Tracy Young on 03 9214 6114 or
tryoung@swin.edu.au.

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Connecting with the environment

'Our place' is The Point Preschool in Oyster Bay, NSW. It is a place where children, families and staff are dedicated to creating an earth-bound culture that teaches a lifelong responsibility for our planet.

'Turn the tap off or we will run out of water and you can't wash your hands', Ryan tells Isabella in the bathroom. 'Yes we have water restrictions', she replies.

The children discuss the treasures they've collected in their dilly bags, how they made ochre from rocks by rubbing them together, and the 'big tree': the magnificent Moreton Bay fig they stood around with their hands joined.

'Look, there's our place', Matthew says, pointing to the pink heart on the map of the local area, symbol of The Point Preschool.

A HOLISTIC SCHOOL

'Our place' is where environmental education and wonder is embedded in preschool philosophy and curriculum; where there is a celebration of learning which enables children to develop not just a readiness for the transition to school, but also a knowledge of being part of our environment and community.

We have witnessed that there is unlimited potential for learning in having a deep connection to the land. We have seen first-hand that environmental education has enhanced our community's pride, empowered children with a sense of responsibility for environmental sustainability and conservation, and strengthened our school's commitment to building relationships.

ENVIRONMENTAL CHALLENGES

The following examples are initiatives developed at The Point Preschool. Why not take on some of these challenges at your service?

Our children:

- monitor, record and collect rainwater
- recycle and compost daily
- reuse and recycle paper
- reduce waste through 'low-waste lunch' challenges and by recycling and collecting food scraps for a worm farm
- have designed a native bush tucker bird garden in collaboration with the local Gangara Land
- make decisions if lights need to be turned on or if blinds can be opened to give light and save energy
- visit the preschool on weekends with their parents to weed, mow the grass, rake leaves and clean the birdbath
- water plants according to water restrictions
- watch and admire the creatures that visit the playground
- document their investigations and explorations of the environment through art and projects
- contributed to an early childhood environmental education network meeting
- raised money to sponsor the endangered
 Sumatran tiger and local lace monitors by selling newspaper bio-pots, potted vegetables and bottled worm fertiliser.

One family was so inspired that, together, they wrote to a fruit bar company recommending they change packaging in order to support the 'lowwaste lunch' challenge. The children were rewarded by the manager informing them that their letter has encouraged them to review their packaging.



'To make a beautiful world, we have to look after the animals. We have to reuse and recycle and reduce. We have to save water and share with your friends. That would make a beautiful world. We don't want fighting, we want to be gentle and be friends with everyone in the whole wide world.'

Matilda (age four)

'Our place' is filled with love and inspiration and a sense of wonder. It is a place where children, families and staff work together to achieve great things for our planet. It is a place where children know how to make the world a beautiful place.

Catherine Lee

Director and teacher
The Point Preschool, Oyster Bay, NSW

Acknowledgments

This article was inspired by the dedication of the children and their families and my staff Anne, Lisa, Cate, Claudeen and Belinda and the support of the management committee, especially our environmental officer Sharon, and Julie Gaul from the NSW Early Childhood Environmental Education Network

(www.earlychildhoodaustralia.org.au/nsw_branch/eceen.html).

Photography by Catherine Lee.



Snails live in houses too: Environmental education for the early years is a practical guide to using the natural curiosity of children to develop science inquiry skills. It is available from Early Childhood Australia for \$37.95 (inc. p&h). To order please visit www.earlychildhoodaustralia.org.au/sund39 or freecall 1800 356 900.



It's time to pay attention to our local and global water stories: we don't get any new water—it is continually cycled throughout the world—but our population is steadily increasing. Barbara Jensen provides advice on developing water-aware policy and practice at services.

Teaching and learning about water is important because it is a finite resource, integral to everything we do. Droughts have made us aware of just how long we have been taking water for granted and how we all have a shared role and responsibility in making sure we use our water wisely.

WATER MANAGEMENT AT SERVICES

Children's services are not comparatively big water users but can, potentially, be big water wasters. At a practical level there are plenty of opportunities to improve water management by reducing the wastage caused by service activities and facilities. Common water wasters include:

- the cleaning of paint brushes
- leaking and dripping taps
- outdoor cleaning

- hose and water play
- single flush toilets and taps that stick
- large, old washing machines.

The maintaining of lawns and garden watering are also potentially high water guzzlers.

ACTION PLANS

The first step to deal with wastage is to use a water audit to identify areas of potential action. Following this, design a water conservation action plan and assign each issue a short, medium- or long-term priority. Many issues will involve calling a plumber to assess existing fixtures and suggesting alternatives. An action plan sets out the steps and the people responsible for investigating each issue. This helps with the planning, budget and timing necessary when undertaking behavioural and/or infrastructural change.

SAMPLE ACTION PLAN							
Issue	Action	Steps	Who	When	Water saving comments		
Children's taps left dripping as hard to turn off.	Reduce the flow in taps and/or replace.	Plumber to assess options for aerators, flow restriction devices or replacement taps.	Director and plumber	Medium term	A tap that drips once every second wastes around 30 litres per day. Many services recommend lever handle taps for children.		
Adult toilet is single flush.	Reduce the flush volume.	Plumber to assess options for flow reduction, displacement devices or cistern changeover.	Director and plumber	Short term	Single flush toilets use 12 litres, dual flush are 3 and 6 litres only.		
Paint and paper scraps in sink plug holes.	Put sieves in all sinks.	Purchase sink sieves and educate all users.	Director	Short term	Sink sieves will protect waste water and plumbing from contamination and clogging with paints, paper and other scraps. This leads to long-term economic and environmental savings for a whole community.		

Water management is more than just reducing consumption and avoiding wastage. It also means being aware of your place in a catchment and considering what is leaving your service. The passage and nature of water (always flowing downhill, collecting and mixing along the way) links us to the whole environment. No matter where you are in your catchment, your actions will have an impact somewhere else.

What does a water-aware service look like?

- Garden beds contain mulch and local native plants.
- Toilets are dual-flush and single-flush ones contain displacement devices.
- Taps have aerators or other flow-restricting devices.
- Paved areas and paths are swept.
- Water-play trays are emptied on garden beds.
- Outside grounds have alternative surfaces to lawn.
- There are water tanks for outdoor use.
- All hoses have nozzles and there are strainers in sinks.
- Only biodegradable cleaners are used.
- Centre resources include water-themed books, puzzles, music and stories.
- Program planning includes water experiences.

IS WATER TOO VALUABLE FOR PLAY?

In the age of low storage dams and water restrictions, are we giving water its true value? Has it become too precious for play? Water is recognised as an important learning tool in early childhood programs, one which provides a soothing, cooling sensory experience. Young children have a natural curiosity about water and play can allow for the exploration of cause and effect, the practice of fine motor skills and engagement in social learning.

Staff in Northern NSW services are aware of this dilemma and have taken action in several ways. On the one hand they are modelling and incorporating water-wise practices for play, such as recycling with pumps, limiting the amount and recycling on gardens. On the other, they are working to minimise wastage in other areas by fixing leaks, installing flow reduction fittings and sweeping—not hosing—paved areas. They are also investigating or undertaking options to reduce the amount used in water play by applying for grants to install rainwater tanks.

I encourage more debate on water play and suggest that it could be a catalyst to challenge many current water practices, policies and teachings.

CONCLUSION

Regardless of your location, for your service to be a sustainable water user it needs to assess where it is now, where it needs to be in the future, and the steps necessary along the way. Becoming water aware involves teaching practice, programming, policy and purchasing. Considering water use not only reduces consumption and avoids wastage but also empowers others to conserve and protect water. Of course, saving water means saving money too, another incentive for smart water management.

Water management is also an opportunity to equip young children with the attitudes, knowledge and skills necessary for a sustainable lifestyle. Water, waste, biodiversity and energy management are all part of restoring and maintaining our environment in a way to sustain healthy, functioning ecosystems today and in the future. Educators and carers are exceptional at nurturing children: it's time to take on nurturing the environment as well! I look forward to the early childhood sector leading the way in sustainability and making environmentally-sustainable services mainstream.

Barbara lensen

Rous Water Community Education Officer water@rouswater.nsw.gov.au

Photo courtesy of Rous Water Early Childhood Program 2006.

THE WATER AWARE CENTRE PROGRAM

If your service is in the Rous Water region of Northern NSW (i.e. Ballina, Byron, Lismore and Richmond Valley Council areas) you can book the Water Aware Centre program.

The program takes a holistic approach which involves:

- a basic water audit to identify management issues
- a song and story for children, to set the scene for wise water use
- educational resources for staff to enhance water-wise culture
- a display to inform the parent community.

You can find more information at www.rouswater.nsw.gov.au or by contacting Rous Water on (02) 6621 8055.

For those in other areas, there may be support through your water supply authority or local council—I encourage you to find out.



Exploring water with young children contains lots of exciting and practical ways to incorporate water into programs. It is available from Early Childhood Australia for \$77.95 (inc. p&h). To order please visit www.earlychildhoodaustralia.org.au/sund174 or freecall 1800 356 900.



Developing a food safety program in early childhood settings

Although the current form of food safety legislation is new, the concept of a safety program is not. It is simply putting the hygiene guidelines most of us already know into a formal framework.

Food hygiene is important at home but even more so in a facility that feeds large numbers of children. Most children have a less-developed immune system than adults, and busy childcare environments contain a much larger number, and variety, of microbes than homes. Also, since most young children do not have a detailed understanding of hygiene principles, the transmission of disease and illness is very easy in early childhood settings.

In Australia, our general standards are determined by the Commonwealth agency, Food Safety Australia New Zealand, and the state governments are responsible for the laws that enforce these standards. In some states the laws are also overseen by the local government. Our general approach to food legislation is based on the Hazard Analysis Critical Control Point principles which systematically evaluate each step in the food-handling process, deciding if there is significant risk and developing ways to manage it.

FOOD PREPARATION AND SERVICE

Although food safety discussions often focus on microbiological safety, all aspects of food supply are important. This includes preventing foreign bodies from entering food, making sure products are not contaminated and ensuring that food does not contain, or come into contact with, allergens or products to which people may be sensitive (such as latex).

Every organisation has slightly different requirements and a food safety program should reflect this, although it may be easier to begin with another service's template and adapt it to your own needs.

Putting a food safety program in place can, at first, seem a nuisance. It helps to focus on the logic behind the scheme rather than seeing it as a bundle of rules. Think about the issues and, if unsure, ask an expert, search the internet, ring a colleague or contact your local food safety officer.

Kay Gibbons

Manager Nutrition and Food Services Royal Children's Hospital kay.gibbons@rch.org.au

Further reading

To find out more about local food safety requirements, visit the Food Safety Australia New Zealand website (www.foodstandards.gov.au), which contains contact information for your state health authority or local government.

DEVELOPING A FOOD SAFETY PROGRAM

It is important to consider issues specific to a children's setting, which would not ordinarily arise amongst adults. For instance, you may want to create guidelines that ensure children do not share water bottles or glasses (for example, children only drink from a bottle that has their name or a recognisable picture on it). It is a myth that it is dangerous to reuse plastic bottles, however you may want to develop guidelines on cleaning bottles.

Make sure you consider the following areas:

- purchase and storage of food
- preparation of meals
- hygiene of kitchen and eating areas
- hygiene of staff responsible for preparation and serving.

It is also important to develop principles about food brought from home and whether/how it can be shared hygienically with other children.

Training is an essential component of a program as it prepares staff to understand issues and their requirements. It is also important that there is careful documentation and monitoring of processes. This can be a tedious task but it is vital for the protection of a setting, if an incident occurs.



An ecosystem of learning

What does sustainability in early childhood mean? Very young children do not have much say on the oil crisis. Nor can they influence ethical business practice in the corporate world. So how can children help create a sustainable future?

Lilly is four and loves to learn through drawing and making; Max is five and an avid learner-by-doing. They explore, test and express their learning through different art forms and mediums. As an educational practitioner, I wonder alongside these children: 'I wonder how this came to be?' 'I wonder what it would be like if ... ?' 'I wonder what would happen if ... ?' We are all wonderers.

DIVERSITY OF LEARNING

Every person, young or old, has access to an 'ecosystem' of processes and perspectives which we can use to learn. We think in many different ways, through intelligences, languages and senses.

I believe that life is a positive experience because Lilly loves to understand images, because I love to understand music and because Max loves to understand motion. This love of learning lets us recognise the possibilities of life. Isn't this what sustainability truly means: having optimism for the future?

It is concerning that in many educational settings the opportunity to use a range of languages to explore the world is limited. When talking about learning curriculum, environment and relationships between human and non-human elements there should always be possibility for inspiration, collaboration and depth of learning.

CREATING A SUSTAINABLE LEARNING ECOSYSTEM

A healthy ecosystem is cyclical: create an environment which benefits those who live in it and they will, in turn, nurture it.

- Listen to children's questions and pose your own, such as 'what creates the spark of life?'
- Explore the world alongside children, through your senses and different forms of expression.
 - → How would the world look if it were very large or very small?
 - → In what ways can it:
 - be represented through painting and dance?
 - measured by test tubes and scales?
 - approximated through shadows and vibrations?
- Allow plenty of time to explore and for trial and error.
- Practice what you preach: your life is a language.
- Wonder a lot!

Our world is our future. This is an abstract concept that many adults have trouble relating to. But it can be as simple as this: if we love our environment then we must constantly ask how to reduce our ecological footprint. How can we utilise reusable materials, recycling, composting and energy efficiency in our learning and teaching?

CONCLUSION

I believe that one of the most important tasks in working towards a sustainable future is helping to create lifelong learners. This is why it is so important that learning is an authentic and positive experience for children—and authentic learning is joy.

Elissa McAuliffe

Coordinator REmida, Perth

REmida links industry, education and arts. Housed in an ex-library, the centre runs innovative workshops that encourage children to develop creative learning tools and problemsolving processes. It helps children turn waste into valuable education experiences.

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Q&AInterview with Graeme Base

Graeme Base is one of Australia's best-loved illustrators and authors. He recently published his tenth children's book, *Uno's garden*. Base uses sustainability as a central theme, recommending respect and care for the environment that supports us.

What are your thoughts on sustainability—is this an issue that you find increasingly important?

Of course, extremely important. It's fantastic that kids these days know about ecology and recycling and sustainability. They weren't taught that when we were at school. And it's so good that we're recognising the problems that we have, while there is still a chance to change things; to make a difference.

How do you explore this theme in your new book?

You'll notice that *Uno* is in two halves. In the first, Uno arrives in the forest and then more and more people follow him, and they build houses and then an increasingly larger city. The animals and plants start to disappear and eventually they realise they got the 'numbers game' wrong: everything finishes up out of balance. But fortunately Uno has kept a garden—it's like Noah's ark—it's a second chance and this time they manage to achieve the right balance.

I feel very privileged that I can speak to children in my books in this small way; that I can have this influence on them.

What lessons do you think are most important for young children?

Well there's the importance of sustainability and also the idea that one person can make a difference. That's why it's *Uno's* garden: Uno's ark. He realises things have gone wrong and makes a difference. And you'll notice that it's

the children of Uno who have the chance; the opportunity in the second half to make the change.

Are there messages or values you hope readers of all ages will take from your books?

I don't really expect people to get a certain thing out of my books: I don't want to talk to any particular group. It's more about people being able to enjoy it and take away what they want. And my books are multi-levelled, so there're different things for different age groups. For the very young I suppose it's the bright colours and movement, and the fun of finding the different creatures. Slightly older ones can count the animals and enjoy the sounds of the words. The older ones will be able to get into the maths and sequencing games.

How do you balance entertainment with education?

The worst thing I think is to talk down to children. I really like the idea of 'education by stealth': being subtle. If you put humour and enjoyment ahead of what you're trying to say then sometimes your reader won't even realise you're saying something and, in the end, they may be left with a message, at some level.

Which authors/illustrators/artists inspire you?

Well, Tolkien to begin with. I read those novels (The Lord of the Rings) when I was 11 and they were powerful. It sounds like a cliché now, but they were so powerful—and back then

the movies were decades away! Then there's the sensational work of Maurice Sendak and Chris Van Allsburg, and Robert Ingpen, another fantastic local artist. And Leunig of course. He does amazing things with such economy. My paintings are always so complex and time consuming; I'm always envious of artists who can say so much with a simple line.

What plans do you have for future projects?

I've got a bookshelf with the 10 books I've created and then 10 more blank books, and they each have a title and idea with the intent to be filled in in the future. It's just a case for me now to decide which one to tackle next.

So another book in four-five years?

Hopefully it'll only be two years!

Do you have a message you'd like to send out to our audience?

Yes, I believe in something that you can apply to any situation, anything you want or need to do. You just need three things: Passion—you have to care about what you do. Perseverance—you have to keep going even when the going gets hard. And (because they all have to begin with 'p') providence: luck. You need to be in the right place at the right time. Or meet someone who introduces you to the right person, or have the right idea at the right time.

Julian Fleetwood

Uno's garden is reviewed on page 20 of this issue.

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Indigenous culture and sustainability: Exploring the Great Barrier Reef in the classroom



Traditional use of marine resources. Image courtesy of the Great Barrier Reef Marine Park Authority.

Many schools around Australia teach their students about the Great Barrier Reef as it is an important part of Australia's landscape and history. For thousands of years, Aboriginal and Torres Strait Islander people fished, hunted and gathered in the waters, adjacent coastal areas and islands in the area now known as the Great Barrier Reef. Today, there are still some 70 coastal Aboriginal and Torres Strait Islander groups living adjacent to the Great Barrier Reef and they maintain strong relationships to what they call their 'sea country'.

By teaching about the relationship between Aboriginal and Torres Strait Islander culture and the Reef, you are providing students with an opportunity to learn more about some of the most significant people and places in Australia's history. Students of any age will enjoy learning about the Reef's important Indigenous sites, traditional hunting, fishing and collecting practices, and maintenance of Indigenous cultural features, like fish traps. These activities have long been part of Aboriginal and Torres Strait Islander culture and continue today.

REEF UNDER PRESSURE

Students can also learn about the pressures the Great Barrier Reef faces today and what's being done to keep it in good shape for the future. Before European settlement, the Reef was almost untouched. Today, humans use the area for various activities including fishing, tourism and shipping. Unless these activities are managed sustainably, they can put pressure on the Reef.

Land activities can also impact on the Great Barrier Reef. Pollutants, such as detergents, fertilisers and pesticides used in the Reef's catchment can enter waterways leading directly to the Reef, smothering corals and preventing them from getting energy from the sun. Marine animals can also mistake litter for food, causing sickness and worse.

Climate change is also affecting the Reef. Increasing water temperatures can lead to coral bleaching and damage marine habitats, plants and animals. The Australian Government, through the Great Barrier Reef Marine Park Authority (GBRMPA) and Queensland Government departments, are working alongside community groups to reduce these threats.

VISIT THE REEF WITHOUT LEAVING YOUR CLASSROOM

Wherever you are in Australia, you and your students can experience the Great Barrier Reef through Reef Videoconferencing. Your classroom will be transported to the Coral Reef and Predator Exhibits at Reef HQ, in Townsville, Queensland,

State-of-the-art videoconferencing technology unlocks unique teaching and learning experiences, including information delivered live by a scuba diver. Reef Videoconferencing can be tailored to address specific teaching and learning needs.

Keep learning exciting: let your students experience the habitats, behaviours and interactions of reef creatures and help them understand why protecting the Reef is important.

CULTURAL AND SUSTAINABLE **EDUCATION**

GBRMPA's Reef Education program has developed interactive and challenging activities to stimulate enquiring minds, and curriculum-linked activities to enhance and extend students' learning. Teachers can download activities and curriculum units that cover multiple key learning areas from the Reef ED website: www.reefed.edu.au.

KEEPING THE REEF GREAT

Everything we do on the Reef and on land, affects this diverse and fragile ecosystem. The plant and animal communities that make up the Great Barrier Reef need to be protected for future generations. It's important to recognise the Reef's remarkable history and its value in Indigenous cultures. We can all play a part in keeping it great!

Fred Nucifora

Education Manager Great Barrier Reef Marine Park Authority

For more information about reef education programs, please visit www.reefed.edu.au or contact the GBRMPA Education Team on 07 4750 0700 or education@gbrmpa.gov.au.

Great Barrier Reef

Working towards sustainability

Woodbridge School, a small country school 40 kms south of Hobart, won the 2006 National Landcare Education Award for its Whole School Sustainability Program. Nel Smit discusses how this program is promoting responsibility and cooperation between children and the community.

The Whole School Sustainability Program involves teachers, office and grounds staff, and the community in developing environmentally sound operational practices. It encourages children to participate in practical land care tasks and to take on leadership roles in managing environmental initiatives.

ENVIRONMENTAL PLANNING

The practical aspects of the program draw on a plan developed by staff and children in 2002, based on a vision of what the school community wanted to see at Woodbridge in five years time. The plan considered:

- community opportunities
- what the school was already doing
- what was possible from available resources.

Implementation of the plan began with an environmental review. Children were asked questions such as:

- what is special about Woodbridge?
- what do we know about the animals and plants that are native to Woodbridge?
- what do we know of our Aboriginal history?
- how much waste are we producing?
- what are our energy bills?

ENVIRONMENTAL INVESTIGATION

Children took responsibility for a small area of land. Upper primary classes grew, cooked and ate produce from organic gardens, enriched by a biodynamic mixture of cow manure, egg shells, valerian herbs and crushed basalt plants, which stewed over the summer.

All the classes helped to clean up the school, counting rubbish as they went along. A secondary maths class analysed the data. The children were shocked by the results and, consequently, appointed two Environmentally Friendly Leaders from each class to meet weekly and develop strategies to reduce litter, such as a raffle rewarding children who did the right thing.

An Aboriginal advisor showed a group of Indigenous children how to identify artefacts found in the coastal foreshore area. These children became the school's Indigenous advisors, who proudly helped others to understand the artefacts.

BUILDING MANAGEMENT AND COMMUNICATION SKILLS

Children played an active role in overseeing land care practices, including planning and designing gardens, collecting and propagating native seed and rehabilitating the wetlands.

An important curriculum objective was to encourage communication and leadership through a focus on the environment. Children took responsibility for environmental issues, demonstrating problem-solving skills, collaboration and communicating within the school and the wider community. Community partnerships became a vital element of the program.

These whole-school initiatives have resulted in very positive outcomes. There has been significant improvement in community awareness and involvement in sustainable practices, and an overall increase in biodiversity, water conservation and waste management.

Initiatives at the school saved an estimated 1.3 million litres of water in 2006. All paper waste—which formerly comprised 80 per cent of total landfill—is now shredded for paper making, composting, mulching and recycling. The school now has no organic waste which goes to landfill.

CONCLUSION

Ecological sustainability is not only part of our curriculum but integral to how the school and community operates. The 200 children at Woodbridge are involved in practical activities which empower them through the opportunity to make decisions, develop skills and work in partnership with community leaders.

Through their involvement in the program, children stimulate others to become a force for positive change. These future generations of decision-makers will be better equipped to continue our progression to a more sustainable world as they participate in communities as informed workers and citizens.

Nel Smit

Teacher Woodbridge School, Tasmania nel.smit@education.tas.gov.au



Early childhood environmental education: Making it mainstream explores how to implement environmental education in an holistic, empowering and integrated way. It is reviewed on page 20 of this issue of Every Child. To order please visit www.earlychildhoodaustralia.org.au/pub35 or freecall 1800 356 900.

Uno's garden



Graeme Base

Penguin Viking (2006) RRP \$29.95 (hardback)

Graeme Base is the author of the international bestsellers *Animalia*, *The waterhole* and *Jungle drums*. This, his latest book, is a wonderful combination of reading, counting and puzzles.

Uno's garden is a moving tale that gives children a very clear picture of what happens if we forget to look after the environment. Uno is searching for a new place to live and finds it in a forest—a forest that is also inhabited by the elusive snortlepig. More and more people follow Uno and, as we turn the book's pages, we find the forest and its animals steadily disappearing until, one day, the world has become grey and there is not a plant or tree in sight. Fortunately, in one tiny corner of this world are the descendants of Uno, whose backyard still contains a small plant and the elusive snortlepig. Uno's children demonstrate that there is the possibility of finding a balance between living in the world and taking care of the environment.

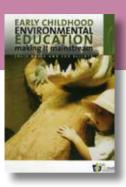
My four-year-old niece Emily loved this book. She laughed at the names of the animals, counting them as they disappeared and then reappeared. Emily was enthralled by the illustrations and asked questions about what was happening. We read the story over and over, and she couldn't wait to take it to creche to share it with her teacher and friends.

This book would be a useful addition to the bookshelves of all early childhood centres and primary schools. Easy to read to children and full of teachable moments, it provides a wonderful base for discussing the environment and how we can make a difference.

Sharon Mills

Planning, Development and Resource Coordinator Melton Shire Council, Victoria

Early childhood environmental education: Making it mainstream



Julie Davis and Sue Elliott

Available from Early Childhood Australia (2003) for \$25.95 (inc. p&h) (paperback) www.earlychildhoodaustralia.org.au/pub35 1800 356 900 (freecall)

This book is an excellent resource for early childhood educators to develop and support environmental sustainability. It provides reasons why action is needed to move from unsustainable to sustainable lifestyles and global practices as soon as possible.

The authors put forward compelling reasons why urgent change is necessary, using references to reports and research with national and international acclaim, and by providing case studies of early childhood educator-initiated sustainable changes. Additional resources include lists of websites and professional organisations; in-service, research and curriculum initiatives; and useful publications, kits and play materials.

Davis and Elliott argue that early childhood educators are in a prime position to practise Education for Sustainability (EFS) through transformative teaching: by raising awareness and implementing practices that will have a long-lasting effect on children's understanding of sustainability. Transformational educators need to be environmentally responsible adults, with the courage to guide and promote change. The book provides a compelling argument for educators to be well informed and embrace the values, concepts and practices underpinning sustainability.

In order to view EFS as quality education and to make changes, the book urges educators to re-think their practices. Implementing EFS requires children to have experience *in, about* and *for* the environment—and that means going 'beyond the nature table'. EFS assists children to develop a sense of responsibility, active participation and a commitment to the environment.

Addressing the need for sustainable practice is not just an environmental issue but also one of social justice, since our current generation guards the environment for future generations.

Wendy Boyd

School of Early Childhood Queensland University of Technology

The labour market ate my babies: Work, children and a sustainable future



Barbara Pocock

Federation Press (2006) RRP \$44.95 (paperback)

This is a must-read for all Australian early childhood professionals. Sometimes we get so caught up in teaching or working with families that we forget about issues of the wider-world, and how changing contexts can have dire consequences on our ability to advocate for children.

Barbara Pocock is director of the Centre for Work and Life, which publishes widely on issues including economic productivity, gender studies, industrial relations, work and inequality. She has done significant qualitative research on what young Australians understand about having parents in the workforce. Pocock uses a number of approaches to gain a perspective on why work is important to our wellbeing, yet at the same time is 'thinning the fabric of our community'. This book is informative and challenging, depressing and uplifting at the same time.

I found her exploration of child care particularly interesting in the chapter 'Kids as commodities? Childcare in Australia', and her despair about the fractured early childhood education and care system in 'Children, work and a sustainable future'. Early childhood professionals are urged to respond to the notion that Australian child care is oriented to the lowest mandatory standards, rather than high-quality care. Further, the establishment of a national system of early childhood education and care must be a priority.

Such pleas are not new to early childhood professionals, but the groundswell of interest in this area, by researchers from other disciplines, will surely provide momentum for change. As Pam Cahir, the CEO of Early Childhood Australia said in her presentation at a recent Children's services conference, 'We cannot stay where we are. We have to take charge and make the changes necessary to build a high-quality, sustainable system.'

Jennifer Cartmel

School of Human Services Griffith University

I've got nits!



Mike Brownlow

Koala Books (2001) RRP \$10.95 (paperback)

Contracting head lice is a common childhood problem and can be a source of social embarrassment and concern for parents. I've got nits! is written for teachers and carers to use in early childhood settings, including the early years of school, as well as for parents to read with children at home.

This rhyming book with quirky illustrations tells the story of Mother and Father Fotherington, who discover that their precious daughter has come home from school with 'the dreaded head lice'. It shows the family as they grapple with this new reality and the ongoing and repetitive process they have to follow to get rid of the head lice.

The book also contains helpful information about treatment and puts a humorous slant on something that teachers, caregivers and parents often find frustrating. A picture book that makes us laugh at ourselves and see head lice for what they are: a nuisance but not life-threatening.

Judy Radich

Director Cooloon Children's Centre

Heat illness and young children

Babies and children are much more susceptible to heat illnesses than adults. Peter Chatman discusses warning signs and provides several suggestions for keeping cool this summer.

'Heat illnesses' is the broad term for a range of conditions, from sunburn and heat rash, to heat cramps and life-threatening heatstroke. Children are more susceptible to these conditions than adults due to their bodies being less-readily able to adapt to changes in temperature. Children also have a much lower capacity to perspire, which reduces their ability to expend the heat that builds up in their bodies.

It is critical that parents, and all who care for children, are aware of the increased danger of heat illness in summertime. Perhaps the most devastatingly common sight for emergency care professionals is finding a child locked in a car. Cars heat up at an extraordinarily high rate, becoming furnaces in hot weather. Never, ever, leave children unattended in a locked car.

MONITORING HYDRATION

An easy way to monitor levels of hydration in adults and children is in the colour of urine. A clear to straw colour is normal. If it becomes fairly dark then a person has gone beyond the level of full hydration.

In young children, the symptoms of heat illness can initially appear as a hotflush or dryness. In babies, if their nappy has been dry for three or more hours then it is an indication that they have already become dehydrated.

Dehydration can lead to unusual behaviour and lethargy which is a critical warning sign. If not assisted at this point children can fall unconscious, which is a life-threatening state.

Since young children aren't aware of how much to drink, adults need to be continually mindful of what and when they are drinking. Plain water at room temperature is always the best choice as ice-cold water—due to its lower temperature—slows down a body's metabolic ability to hydrate. Tepid water metabolises much faster.



If children are running around a good idea is to keep a spray bottle of tap water nearby. A quick spray to the face gives the body respite from heat and encourages it to get its thermo-regulation levels back to normal.

Also, if children are in buildings that don't have air conditioning, adults need to make sure there is adequate airflow inside. If fans are placed near open windows then this helps to drag air from outside, boosting circulation.

Of course heat illness is not the only sun-related danger. Instances of skin cancer are alarmingly high in Australia compared to the rest of the world. So it is vital, wherever children play, that there is adequate shade and adults make sure they slip on a shirt, slop on sun cream and slap on a hat.

Peter Chatman

Queensland Ambulance Service Area Manager North Brisbane

www.emergency.qld.gov.au



Everyday learning in the backyard contains a wealth of creative ideas that build upon children's natural desire to explore the outdoors. It is available from Early Childhood Australia for \$14.95 (inc. p&h). To order please visit www.earlychildhoodaustralia.org.au/lah0402 or freecall 1800 356 900.



Signals UV Sensors

Perfect for outdoor play and excursions - even children can help monitor UVB rays from the sun with these small patches applied to skin or clothing.

Designed to complement your existing sun safety policies these little patches start out yellow and turn deep orange when exposed to harmful rays indicating when it's time to generously reapply sunscreen, cover up or find some shade. Your sun screen won't tell you if you're getting too much sun, but Sun Signals will.

To order your Sun Signals Kids Shapes, call FDCA Member Services on

Freecall 1800 658 699



TIPS FOR CLIMATE CARE

Simple decisions can significantly cut greenhouse gas emissions, improve your quality of life and save you money.

- An aerated backyard compost produces three-four times less greenhouse gas than land-filled food and garden waste, and is a cheap and nutrient-rich fertiliser.
- Fluorescent light bulbs produce 2kg of greenhouse gas (per 100 hours) compared to 10kg from ordinary globes.
- Use outdoor washing lines instead of electric clothes dryers, which generate 3kg of greenhouse gas per load.
- Thick curtains help to keep heat out when it's not wanted, and in when it is.
- Stop draughts by sealing cracks and gaps, fitting dampers to fireplaces and blocking unnecessary vents.
- Driving fast results in higher fuel consumption: at 110km/h cars use up to 25 per cent more fuel than at 90km/h.
- Select pots and pans with flat bases that match the size of electric elements.
- Put cold items back in the fridge immediately after use. Cooling a two-litre drink bottle from room temperature generates 10 times more greenhouse gas than opening a fridge door.

Graham Walker

If you'd like to keep up-to-date with climate and other science news, and get great kids activities, subscribe to CSIRO's free Science by Email newsletter. Visit www.csiro.au/sciencemail. For children over seven, CSIRO's Double Helix Science Club provides fun and education. Visit www.csiro.au/helix or call 02 6276 6643.



Managing health in services

Judy Radich discusses balancing health policy with the emotional concerns of staff and families.

The health and wellbeing of young children is central to the creation of high-quality early childhood environments. Services are also required by legislation and accreditation to have policies on managing illness and infectious diseases. However, these policies only provide basic guidelines; day-to-day family and centre conditions can often complicate practice.

One of the big difficulties staff face is when to inform a parent that their child is too sick to remain in a centre. Frank Oberklaid says in Health in early childhood settings (2004) that this decision will:

"... vary according to a number of factors, such as the age of the child, the perceived severity of the symptoms, how competent the staff are in managing common problems, the wishes of the parents and access to good and immediate advice from a nurse or doctor."

PLANNING AHEAD

Research is clear that young children in groupcare are more susceptible to upper-respiratory tract infections—such as colds—as their immune systems are immature and often unable to cope with the numbers of viruses around them. An enrolment interview is the ideal time to let parents know that this is normal and their child may be barely over one cold before they catch another. It is also a good opportunity to talk about centre policy and the requirement for families to prepare for their child being sick; in particular to consider how they can be collected before the end of a normal session.

Care-providers need to ensure that their relationships with families remain at a professional level and that there are clear boundaries in place; so that parents have manageable expectations in regard to their child's health.

MEDICATION AND ALTERNATIVE THERAPIES

Giving medication to children in care can also be problematic. This is especially true with the increased use of 'over-the-counter' medications by parents. One simple way to avoid conflict about their value and necessity is to make it service policy that their use be supported by a doctor's letter.

A related problem is the use of alternative therapies and medication, about which families and staff may have strongly contrasting views. Ultimately this issue falls into a service's 'duty of care' obligation and you should consult with health professionals and consumers to decide how you will manage it, being especially mindful of using medications or therapies whose effectiveness has not yet been scientifically proven.

DEALING WITH HEAD LICE

Head lice are a 'health' concern in early childhood settings, although not a serious medical condition. Due to the contagiousness of lice, parents must remove their children from care and treat them themselves. This obligation often causes tension for staff—certain children have head lice repeatedly—and parents, since the problem is often inconvenient, expensive and embarrassing.

It is up to services to have policies—based on best practice, centre-culture and local practice—which deal with all kinds of health issues, including how services will manage head lice when a parent is unable to collect a child.

Managing both major and minor health issues in early childhood services is a complex issue, as the emotions of both families and care-providers are affected. Centre policy must be developed and reviewed regularly by health professionals and consumers to ensure that it supports best practice and ultimately has the best interest of children at its forefront. As service providers we have an obligation to families, from first contact, to inform them of our policies and the range of health issues that may affect them.

Judy Radich

Director

Cooloon Children's Centre

Reference

Oberklaid, F. (2004). Health in early childhood settings: From emergencies to the common cold. NSW: Pademelon Press.



Health in early childhood settings: From emergencies to the common cold is available from Early Childhood Australia for \$74.95 (including p&h). To order, or to find out more, visit www.earlychildhoodaustralia.org.au/sund113 or freecall 1800 356 900.

Waste-watch at school

Sarah Synnott discusses how Turner School took the Waste Wise challenge.

Last year, children at our kindergarten were becoming more and more concerned about the amount of rubbish in the playground, regularly talking about it at circle times. The teachers were noticing students dropping rubbish during playtime without much regard for their school environment.

WASTE WISE SCHOOLS

Soon afterwards Turner School started the Waste Wise Schools program, which assists ACT educators to teach children about recycling and minimising waste. The entire school spent a term doing work with some kind of environmental focus. In the kindergarten, we developed a unit called 'What a waste' that looks at what we put in bins and where it ends up.

The unit began with a tour of the local tip and Materials Recovery Facility which showed students the difference between landfill and recyclable waste. Students looked through a giant window and cameras situated throughout the site, discovering how recyclable materials were sorted and what happened to waste. Students were involved in a range of activities, including sorting packaging materials.

We also took a bus tour of the landfill. This was an extremely powerful experience for the children, who could spy out those items which should have gone in the recycle bin. Many students were horrified at what a landfill was and couldn't believe how smelly it was! Consequently our class was very enthusiastic about setting up a recycling centre at school.

REDUCE, REUSE, RECYCLE AND RETHINK

Back at school we introduced the four Rs: 'reduce, reuse, recycle and rethink'; and set up a communal recycling centre, encouraging students to bring in a range of packaging from home to sort. This became a very popular activity which not only allowed us to assess student understanding but also to link recycling to our school shop, encouraging students to make better shopping choices!

A GOOD BOOK GOES A LONG WAY...

In order to encourage students to think about the long-term effects of waste, we used James Reece's fantastic picture book, Lester and Clyde's catastrophic adventure, which tells the story of two frogs threatened by human pollution. This book initiated many discussions on a large range of topics, including feelings, rhyme, frogs, water and pollution—we even started running regular trips to the local wetlands. Unfortunately it is currently out of print so if you're looking for a copy, try your local library.

We also made good use of Matt Dray's lovely book Dougal, the garbage dump bear, which tells the story of a misplaced bear in photojournalist style, encouraging children to think more carefully before they throw something way.



We started holding 'waste-free picnics', asking children to bring reusable containers and encouraging families to do the same when packing school lunches. Staff were very impressed by the amazing lunches that started coming in: lots of fresh, healthy food with little or no packaging.

ONGOING BENEFITS

Soon afterwards we introduced red bins for recycling hard plastics, aluminium and tin. Students were able to actively participate in waste reduction at our school. The benefits of the program were very evident.

The Waste Wise program has made real changes to our school culture and, while there are still areas to develop, work is well underway. One important thing we have learnt is that small steps each day make a big difference!

Sarah Synnott

Teacher

Turner School, ACT

Sarah.Synnott@ed.act.edu.au

Photos courtesy of Turner School kindergarten.



Waste Wise Schools is run by No Waste, based on similar successful programs in Queensland and Victoria. If your school is in the ACT and interested in participating in the program, call Canberra Connect on 13 22 81 or email no.waste@act.gov.au to find out more.







Sorting it out: A problem-solving approach to recycling

'What can we do about the rubbish in the yard?'

This question was often asked by children in the Glenora Prep/Grade One class. It was used as the key issue in problem-based lessons taken on by a vertically grouped learning team. We encouraged children to define problems, look for solutions and predict further difficulties that may arise from their action plans. Exploration and discovery were the tools of this program.

STEP ONE: COLLECTING RUBBISH

With appropriate hygiene precautions in place, children set about stockpiling rubbish from the playground. They discussed sorting the rubbish and tried several different categories. Finally, they decided to sort it into:

- waste paper
- food scraps
- general rubbish.



STEP TWO: CHANGING THE SYSTEM

The children found that people were placing a mixture of food scraps, paper and general rubbish in classroom bins and that most of the contents were burnt in the school incinerator. Children wanted to change this to allow paper to be recycled and food scraps to be collected and used within the school grounds. In short, the discussion became one of ensuring a greater level of sustainability within the school.

In investigating how to improve the system, children suggested a new bin system was needed, that allowed classes to sort their food and paper scraps into separate containers. They particularly wanted to make bins visually different so that there would be no confusion about how waste was sorted.

Teachers at Glenora District High School describe how young children used inquiry and problemsolving skills to clean up their playground.

STEP THREE: BRAINSTORMING

The children thought about the different bins they had seen at home, school and in the community. They talked about what kind of bins would be suitable for sorting classroom waste, considering things like the time that might be needed to fill and empty bins, and whether they would need handles and lids.

Children worked in small teams and used a proforma to prioritise their choices and to make sure that they had considered all alternatives. Each learning team brought their choices back to the group in order to get a consensus on which bins would be used.

They decided that crates would be the most suitable container to store paper waste and that larger green garbage bins would be used for general and mostly non-recyclable rubbish, as well as small white bins with handles and lids to hold food scraps.

STEP FOUR: CONTACTING LOCAL ORGANISATIONS

Once a decision had been made, the children approached organisations, such as the council, to donate bins and recycling crates.

NEW QUESTIONS

Now the children had a sorting system in place they needed to work out what to do with the scraps.

In class discussion, the children suggested that waste paper could be:

- reused
- shredded for recycling
- used in craft activities such as paper-making workshops.

The children suggested getting some chickens to eat the food scraps and soon they became the proud owners for several silkie chickens. Prep/Grade One assumed responsibility for looking after them and ensuring that food scrap bins were collected, emptied and cleaned each day.

COMPOST-RELATED ACTIVITIES

After looking at what the chickens ate each day, it became obvious that there were some foods that chickens would not consume, so children investigated setting up a compost bin.



The first step was to find which materials could be composted. The children:

- buried various objects in the school garden to test if they were biodegradable
- created a mini-compost in a large glass jar to show the many layers of the compost process
- thought about what could be added to make healthy compost, such as shredded paper, grass clippings, leaves, manure, household waste and fruit and vegetable scraps
- investigated the possibility of compost worms by adding several to the jar, to watch them at work. The children observed them closely and made drawings.

Based on the children's investigation, a compost bin was placed near the infant playground and all classes were encouraged to contribute to the contents!

GETTING THE MESSAGE OUT

Children involved in the project called themselves 'Rubbish Busters'. To let the school community know about their work, they:

- made posters encouraging everyone to keep the yard tidy
- put up a photographic display showing their activities and aims
- acted as playground monitors to encourage other children to use the bins at recess and lunch time.

A local recycling company visited the class to discuss other options for sustainability in the school. They offered valuable praise and support to the children for their initiatives and provided suggestions for other possible future projects. The company also provided information on ways in which bottles and cans could be recycled.

CONTINUING SUSTAINABLE PRACTICES

Since the Rubbish Busters project, the K-4 sector at Glenora District High School has run more sustainability projects, including establishing a garden for which the whole school is responsible.

- Paper scraps are used to mulch garden beds and to block weed re-growth in the newly established beds.
- Classes use a roster to make sure that water is used wisely and that there is enough moisture for vegetables to grow.
- Pre-Kindergarten children have a garden for themselves where they work with their parents, alongside other children.
- Children use vegetables from the garden and eggs from the chickens to cook food to share.

CONCLUSION

In tackling the problem of rubbish in their playground, children investigated many big ideas about sustainability and social responsibility. They took ownership of the problem, finding real ways to make our rubbish management system better and developing new ones. With these ideas at work, we are very excited about a sustainable future which our children are helping to create.

Sonya Plunkett-Smith

Co-ordinator of pre-Kindergarten-Grade Six sonya.plunkett-smith@education.tas.gov.au

Amy Jones

Prep/Grade One Teacher
amy.jones@education.tas.gov.au

Glenora District High School, Derwent Valley



Photos courtesy of Glenora District High School.



Hollyhocks and honeybees: Gardening projects for young children contains step-by-step advice for developing garden projects which appeal to all of children's senses, and create meaningful learning experiences. It is available from Early Childhood Australia for \$107.95 (inc. p&h). To order please visit www.earlychildhoodaustralia.org.au/sund88 or freecall 1800 356 900.

Green cleaning

Many carers and educators find it difficult to make informed decisions about cleaning products. Bridget Gardner, director of Fresh Green Clean, provides advice on selecting methods that are both safe and effective.

Fresh Green Clean runs workshops in early childhood services which primarily focus on improving cleaning practices. However, the questions that most participants ask are 'which brands are safe?' and 'do green cleaners really work?' Unfortunately, there is no easy way to separate marketing spin from facts.

HOW SAFE IS SAFE?

There are currently two methods of assessing the safety of a cleaning product:

- 1. Label warnings like 'Caution', 'Keep out of reach of children', 'Poison' and 'Dangerous poison' mean that a product contains scheduled poisons.
- 2. Material Safety Data Sheets (MSDS) are provided by manufacturers and list health effects and first aid information. All children's services must keep an MSDS onsite for every product they use.

The problem is that these warnings are based on toxicity tests that must prove a certain compound causes disease and, as Canadian toxicologist Dr. Herbert Needleman said in 1997, 'Toxicity testing has not even begun to keep pace with disease. We are conducting a vast experiment on our children which will affect generations to come.'

CLEANING TIPS

It's not difficult to find ways to clean that are both safe and effective:

- Warm soapy water can remove dirt and bacteria from most surfaces. Mix a little readily biodegradable and pH neutral detergent or pure liquid soap into warm water.
- Basic products such as bicarbonate of soda and vinegar are very effective cleaners.
- Window and surface sprays can contain toxic solvents in order to quickly evaporate. Instead of using these products, wash surfaces with basic agents then remove moisture with squeegees, microfibre glass cloths or flannelette rags.
- Always make sure bathrooms are well ventilated and use essential oil sprays instead of air-fresheners, which often contain highly toxic compounds.

In a nutshell, all effective cleaning requires is clean hands, water, tools and a little elbow grease!

SAFE AND SUSTAINABLE CLEANING

In order to address the confusion about cleaning products, Fresh Green Clean has received funding from the Victorian Government's Sustainability Fund, managed by Sustainability Victoria. This funding will be used to develop the Safe and Sustainable Indoor (SASI) Cleaning project for early childhood services. The project will be piloted this year in partnership with the City of Yarra, in three Yarra Council childcare centres and The Lady Gowrie Child Centre.



Three Swinburne University faculties are assisting the SASI Cleaning project:

- 1. The National Centre of Sustainability is developing criteria to assess the safety and sustainability of cleaning products which will require manufacturers to provide proof that their product is safe.
- The Faculty of Life and Social Sciences is challenging the belief that green cleaning is not effective by testing selected methods in two early childhood centres.
- The Faculty of Design is taking a usercentred approach to represent the results of the pilot project, to ensure that the concerns and requirements of management, staff and parents are addressed.

The project intends to deliver a website with a simple guide to safer cleaner purchasing, to be launched mid-year, and the SASI Cleaning certified program which will be extended to other early childhood services in Victoria by 2008 and, nationally, by 2009.

Bridget Gardner

Director

Fresh Green Clean Pty Ltd.

To contact Bridget or find out more about the SASI Cleaning project, email bridget@freshgreenclean.com.au or visit www.freshgreenclean.com.au.

Reference and further reading

Needleman, H. (1997). Quoted by P. Landrigan at the Toxics Release Inventory and Right-to Know Conference, Washington, D.C.

For more information, read the National Health and Medical Research Council's Staying healthy in childcare document (www.nhmrc.gov.au/publications/synopses/ch43syn.htm) and the Department of Health and Aging Infection Control Guidelines (www.icg.health.gov.au).

Building a sustainable service

In 2004, Lady Gowrie Tasmania won the tender for the management and operation of a 50-place long day care centre. Ros Cornish describes how this state-of-the-art centre incorporates sustainability while meeting the diverse requirements of children and staff.

Lady Gowrie Tasmania's new purpose-built centre was one of six services proposed under the Tasmanian Government's Child Care in Schools project. This initiative was developed to address the shortage of childcare places as well as an opportunity to foster stronger links between services and schools.

The Department of Education was responsible for implementing the project and establishing a project team to design the facility. This team included Departmental facility services representatives, an architect engaged by the Department, childcare licensing representatives and Lady Gowrie Tasmania representatives.

MEETING SERVICE REQUIREMENTS

While such aspects as size and budget were predetermined, the centre designers began with the core requirements of a service—that it:

- is functional
- caters for both children and staff
- supports quality early childhood practices
- is sustainable and as energy efficient as possible.

To realise these goals, the project team visited a number of other services, viewing their facilities. The architect provided a number of concepts for consideration but also listened to practitioners who had first-hand experience of what does and does not work.

SUSTAINABLE DESIGN

The final design included a number of features to support flexibility and sustain the centre into the future. It demonstrates an understanding and respect for the early childhood profession and the importance of the early years. For example, the original size of the centre and number of individual play spaces were increased to improve staff-child ratios, particularly for infants, and to reduce the size of groups.





The extensive use of glass is a striking feature of the centre. Internally, it provides direct links between individual child play spaces, which supports interaction between siblings and different age groupings. It also facilities collegial support and the potential greater visibility promotes high-level supervision. External glazing traps heat generated by sunshine which reduces operating costs and drain on resources.

The design incorporates extensive covered outdoor areas which are accessed directly from child play spaces. This supports an all-year-round, child-focused indoor/outdoor program, provides shade and also reduces the use of air-conditioners.

While the centre has a commercial kitchen, the four childcare areas also each contain a kitchen/food preparation area. These allow staff to maintain maximum supervision of play spaces while preparing snacks or heating food.

STAFF USE

When designing the facility, staff needs were a priority. The centre contains a staff room with access to an enclosed, exterior courtyard, providing a retreat from the main child spaces.

An extra room is connected by folding doors. These can be pulled back to create a larger room for planning children's programs, professional learning and family information sessions.

ONGOING DESIGN

The centre has been operational for over 18 months and staff report that it is very functional. It has been recommended for state architectural awards and is often visited by developers and architects. Testament to its success is that another centre is currently being constructed based on the same design—but with improvements suggested by staff, including a central store and breastfeeding area.

Ros Cornish

Chief Executive Officer Lady Gowrie Child Centre, Hobart



Maria Magiropoulos and Miriam Giugni discuss the importance of evaluating the theoretical, educational and political frameworks hidden in our working environments.

Our centre is designed to be ecologically sustainable, using systems such as recycled water and solar energy. Our curriculum strives to provide education that is socially and ecologically just. It is complex work and, thus, vital that we understand why we do what we do. We investigate consumerism, feminism and ageism below.

CONSUMERISM

We found that many items in our rooms came from 'blockbuster' early childhood catalogues. It seemed that the marketing of this equipment was directly linked to developmental outcomes. We asked whether this leads to a constructed, normalised way of using resources and teaching children.

By reflecting critically on practice it was clear that children made their own uses of resources—for example, spades were often guns in disguise. Our ideas about the expected use of spaces differed from those of children. Our home corner, hairdressing table and outdoor barbecue became superhero hideouts and poison-making laboratories. Expected developmental outcomes were not found in these 'traditional' play areas—another kind of learning was taking place!

We developed a rationale for the use of natural materials and then took this a step further and made it part of our sustainability and social justice curriculum. This produced a physical and pedagogical transformation through the centre, changing how children interacted with materials and the ways staff used them to teach. It also encouraged critical reflection on how we create specific learning areas and the reasons for change.

FEMINISM

We thought about how gender shapes our selection and use of provisions, and considered whether or not we were challenging gender norms. In the box to the right, Maria shares her reflections.



WHY DO WE HAVE HOME CORNERS?

In the middle of last year we were sitting in one of our playrooms, fully equipped with block, book and literacy areas; computer centre; art and craft space; and, of course, a home corner. The room was carefully organised to look beautiful and have clearly designated learning areas.

Miriam and I were talking about sexism and how gender-specific roles are encouraged by educators through the areas and materials we do (or do not) provide. I was sitting in the home corner thinking about how I held the importance of dramatic play so close to my heart. I believed that, through modelling, I could challenge the stereotypes surrounding gender and social norms.

Our conversation led us to ask: why do we have a home corner in each of our play rooms? We recognised that developmental ideas about children governed how we thought they should learn and what they should do. We realised that we had focused more upon children having a balance of developmental experiences, like 'dramatic play', rather than seeing how political ideas about gender shaped our program.

What if we removed home corner from the room?

- What would we replace it with?
- What about the monetary value of the equipment?
- What is the developmental value of dramatic play in learning?
- What are the risks/benefits of changing traditional and familiar learning areas, like the home corner?

These questions revealed our struggles to replace developmental with feminist reflections. We saw that children's imaginative play stretched far beyond home corner. We began to see how power shapes what we think is and isn't political. Once we had placed gender at the centre of our reflections, our ideas about what a children's centre could look like changed.

AGEISM

For the past 12 months we have been considering the types of discrimination perpetuated in everyday teaching and learning at our centre. We found that grouping children by age reflected a limit in development and—as a result—recognised that this practice is ageist.

In order to change we became a 'multiage group' centre (Prendergast, 2000). Our philosophy now states that children of all ages should have access to each other as a right to know the multiplicity of the world. By grouping children of different ages together we are dealing with the power associated with age and working to socially transform discrimination. We now ask educators to consider how their curriculum recognises that children's social worlds are comprised of people of all ages.

Miriam's reflection demonstrates that we should consider how the meaning of age is constructed, and rethink the ways we set up learning spaces.



WHICH BLOCK SHELF?

During tidy-up time a young boy stood at the door holding a block in his hand. I suggested that he put the block away and join the other children.

'But I don't know where to put the block'.

'On the shelf', I replied.

The child looked perplexed and asked 'which one?'

I realised we had four block shelves and that his block may have travelled from any one of them. What was our purpose of having four block spaces? Why was the shelf in the babies' room less desirable than the one in the three-five years' room? How did this encourage (or discourage) children to build relationships with children of different ages?

This reflection enabled us to see the political underpinnings of our curriculum choices. We recognised the developmental clashes in how we grouped children, created environments and perpetuated social norms.

These reflections helped us criticise and reshape our use of time and space. Instead of shaping rooms around 'babies', 'toddlers' and 'preschoolers' we have created spaces that are infused with different kinds of learning possibilities, defined by how we live in those spaces, rather than a limited developmentally-based provision, such as home corner. This does not mean the end of imagination, rather it means we are better able to work with children's imaginings of the world in critical ways.

Shared spaces such as the Games Room, Studio and Library enable children, families and educators to live different educational lives that deal with power inequities. Foucault (1983) argues: 'the exercise of power ... incites, it induces, it seduces, it makes easier or more difficult'. We have begun to ask new questions about equity and sustainability. We recognise how power relations that have held developmental ideas about children, resources and environments in place, can shift with new thinking.

CONCLUSION

Our desire to work for sustainable social justice continues. We are careful not to limit sustainability to maintenance, but use it as a focus point for critical reflection on practice and theories that might threaten living that is socially and ecologically just.

Maria Magiropoulos and Miriam Giugni

Tillman Park Children's Centre, Marrickville Council and Centre for Equity and Innovation in Early Childhood, University of Melbourne

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Going green in early childhood centres



We know that connecting young children to the natural world and teaching environmental responsibility is not only good for our world but also essential to their holistic development. Accordingly, the staff at Carinya Children's Services Centre decided to make environmental education an integral part of their philosophy, program and practice; not just by providing natural materials and experiences within play, but also by viewing environmental education as an integral part of every area of development and learning.

Carinya is a 40-place student-based long day care centre situated on a TAFE campus in Newcastle. In 2005 Carinya won the SPROuts Practice Award for excellence in environmental initiatives in early childhood education. This was achieved through vision, dedication, fundraising, a good strategy plan and-above all-hard work from staff, children and families, all eager to make Carinya's service more environmentally conscious and active.

SUSTAINABILITY AT YOUR SERVICE

We have access to a fast growing collection of inspiring resourcesincluding environmental publications, websites and environmental organisations—but where should you start? The secret is that you are probably already on your way to sustainable practice, but don't know it yet.

Does your centre:

- use recycled materials (e.g. collage, box construction)?
- take opportunities to explore the natural world with children (e.g. weather, insects, plants and life cycles)?
- have a garden or plants that you and your children care for?
- encourage children to reuse materials (e.g. both sides of paper)?
- carefully collect natural resources for use in children's play environments (e.g. shells, leaves, bark)?
- use compost, have a worm farm or water tank?

These initiatives may seem like common sense, and already occur every day at many services, but they are excellent starting points for environmental education. If you are doing any of these regularly, then you are on your way.

DEVELOPING AN ENVIRONMENTAL STRATEGY

An environment management plan allows services to expand curricula to include many more areas of environmental responsibility. Below is an example of a strategic plan developed by the TAFE environmental officer and staff at Carinya in 2005. However big or small your centre is, it could develop any of the following strategies.

EXAMPLE - ENVIRONMENT MANAGEMENT PLAN

Environmental policy statement: Carinya Children's Centre staff are committed to reducing their impact on the environment and seeking to nurture environmental awareness and appreciation through education and practical work.

Title	Actions	Responsibility	Completion date	Green tick
Policy	e.g. develop an environmental policy.	Director and staff		
Targets	e.g. reduce water consumption by 10 per cent.	All staff		
Purchasing practices	e.g. use only environmentally friendly items.	All staff to investigate		
Recycling program	e.g. paper towel recycled into compost.	All staff		
Reuse program	e.g. reuse old furniture.	All staff		
Reducing greenhouse gas emissions: Energy, lighting, heating and cooling	e.g. investigate energy-efficient fluorescent tubes.	Environmental officer		
Water conservation	e.g. add water-saving fittings to children's wash basins.	Facility officer and staff		
Cleaning products	e.g. investigate environmentally-friendly and child-safe products.	Environmental officer		
Green waste: Composting and worm farm program	e.g. compost fruit and food scraps.	All staff		
Gardening	e.g. educate children about plant life.	All staff		
Communication	e.g. include environmental issues in all staff meetings.	Director		

Key points to remember when developing your plan:

- Big brainstorms-write down all ideas, no matter how ridiculous; you never know where they might lead you.
- Appoint one or more environmental officers to steer and motivate.
- Delegate tasks and use resources from the community-e.g. donations
- Run parent working bees and utilise work experience and student input.
- Research safe cleaning—what chemicals are necessary for cleaning in a childcare environment? There are many good workshops available such as Cleaning with less chemicals, run by the Gosford City Council (visit the council website at www.gosford.nsw.gov.au to find out running times).
- Include children and families and make it fun.

Further invaluable information, links and resources are available from the NSW Early Childhood Environmental Education Network. Visit www.earlychildhoodaustralia.org.au/nsw_branch/eceen.html or contact Julie Gaul on 02 9398 4374 or nsweceen@earlychildhood.org.au.

Rachael Kinsella

Carinya Children's Services Centre Rachael.Kinsella@tafe.nsw.edu.au

Environmental learning: The Special Forever program

Special Forever is an exciting environmental communications project linking children, schools and communities.

Each year approximately 20,000 primary school children in the Murray-Darling Basin catchment area participate in the Special Forever program, learning about their unique local environments and the Murray-Darling Basin as a whole.

HOW THE PROGRAM WORKS

Special Forever is managed by the Murray-Darling Basin Commission and the Primary English Teaching Association. It aims to:

- involve children in becoming critically aware of their local environment and the Murray-Darling Basin
- empower children to communicate their knowledge and understanding, feelings, opinions and ideas about sustainable use of environments
- provide children with a genuine purpose for creating texts and visual works of art, for a range of audiences
- promote action in response to learning about the environment
- promote positive attitudes towards the sustainable use of environments.

Children participating in the program focus on one of the three themes:

- Time and Change
- Living Together
- Managing Resources.

Educators have access to resources and guidelines which assist in developing hands-on projects. As children progress through each teaching unit they produce writing and artwork which is displayed locally and throughout the region. There is also an opportunity to submit work for selection in the annual Special Forever anthology.

SPECIAL FOREVER PROJECTS

The Special Forever program allows for the development of a diverse range of projects, as shown in the examples below.

PERMACULTURE VEGETABLE AND HERB GARDEN

This project teaches children about the growth and structure of plants; health concepts; the roles of nutrients, water and sunlight in food cultivation; the importance of careful management and the connection between agriculture and consumption.

- Involve children in the planning and construction of a garden young children have great imaginations and will have no trouble with the design process.
- Approach parents and community groups to assist with practical requirements.
- Use manure and natural mulch.

 Invite children to select the vegetables and herbs, and create a rotation system of planting.

COMPOSTING AND WORM FARMS

A worm farm teaches children about waste management practices, compost and the care of living things.

- Compost all organic waste.
- Feed food scraps from the learning environment to worms.
- Liquid worm castings make a great fertiliser which can also be sold to the local community.

The methods children use to communicate are endless, and teachers are encouraged to make use of new technology, such as digital cameras and scanners, to assist children in designing ways to present their experiences.

For young children involved in Special Forever, learning is real and purposeful. It influences the ways they will interact with their local environment throughout their lives.

If you would like further ideas for projects or to receive support, please get in touch with your regional Special Forever coordinator. Contact details—as well as a program calendar, teaching resources and more—are available at the Special Forever website: www.specialforever.org.au

Wendy Renshaw

Special Forever Coordinator Wodonga-Wangaratta, Victoria



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From ostriches to snakes: Zoo biodiversity and education

Geoff Underwood and Ben Luxton talk about what makes a good zoo.

Modern zoos and aquariums around the world have moved away from simply displaying the charismatic megafauna that appeal to visitors, such as elephants and big cats. Collections now include reptiles, invertebrates, bats and other species that play important roles in biodiversity and demonstrate the interconnectedness of habitat communities.

LEARNING ABOUT BIODIVERSITY

Education is one of the core purposes of zoos. It gives communities access to living plants and animals in order to enrich their understanding of interdependence and conservation. It also empowers people to take positive action for our environment.

Enclosures within zoos must not only provide the requirements for sustaining life for their inhabitants but also generally reflect the natural environment from where the animals originate. Such 'immersion' exhibits broadcast an important conservation message that we should preserve not only displayed species, but also the natural habitat that supports them and suites of other species in their wild state.



Tiny Tots Originals mould your childrens' drawings into 19cm diameter melamine Plates, preserving their artworks as family keepsakes. The Plates are dishwasher proof and very robust and are an excellent fundraiser as they give so much pleasure. Tiny hand or footprints remind you of those childhood years that will soon be gone.

'We absolutely loved the plates and so did all the parents. They are a great fundraiser and we hope to do them again next year.' *Stone Memorial Kindergarten*

'Many thanks. The plates were fabulous.' Culgoa and District Kindergarten

'Thank you for your great service. We have found it a very positive experience.'

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ANIMAL ADOPTION IN KINDERGARTENS

In order to help children develop an understanding and awareness of how zoos protect and ensure the survival of species, Jean Bonython Kindergarten adopted a long-necked tortoise. We encourage children to frequently visit the zoo with their families and take a photograph of the tortoise to discuss in kindergarten.

We raised funds to support the tortoise in several different ways. On soup days children and a staff member purchased vegetables and made pots of soup, cups of which were sold to parents at a special lunch. We also created a large drawing of a tortoise. Children were encouraged to do a small job at home for their parents and bring in a gold coin to stick on the tortoise. This led to a discussion amongst the children about what kinds of jobs are most valuable.

Through our continued commitment to sponsoring our tortoise we have helped foster our children's desire to care for the environment and its flora and fauna.

Lynette Jones, Sue Daw Thomas and Mary Raman

Jean Bonython Kindergarten, South Australia

Good zoos and aquariums around the world are joined to well-established networks such as the World Association of Zoos and Aquaria and the Australasian Regional Association of Zoos, Parks and Aquaria. These networks facilitate the integration of individual zoo animal collections into database retrieval systems to assist the management of genetic diversity amongst captive collections around the world. A 'marriage register' is used to pair animals in order to maximise the genetic diversity of captive species.

CONSERVATION AND FUTURE RESEARCH

Zoos are becoming increasingly involved in field-based programs to conserve species and habitats in the wild. Cleland Wildlife Park, operated by the Department for Environment and Heritage in South Australia, cooperates with a range of organisations and institutions in biodiversity conservation programs for a range of species such as the yellow-footed rock wallaby, black-eared miner and greater bilby.

Zoos are rapidly evolving to serve in multiple ways as conservation centres. In order to support our environment, they must:

- reflect sustainable relationships of humankind and nature
- explain the values of ecosystems and the necessity of conserving biological diversity
- practise the conservation ethic throughout zoo operations
- cooperate within the world zoo network and with other conservation organisations to achieve sustainable outcomes.

High-quality, responsible zoos are an integral component of the worldwide effort to conserve the biodiversity of this planet.

Geoff Underwood Ben Luxton

Manager

Community Education Officer

Cleland Wildlife Park, South Australia www.clelandwildlifepark.sa.gov.au

The sexualisation of young children: A powerful marketing ploy

Bras, lipgloss, leopard print bikinis, wedge heels, music videos and more ... The standard props of teenage experimentation with growing up and awareness of identity and sexuality are now being marketed to much younger children. But what are the costs? And what can staff in early childhood settings do?

Fast-tracking young children into a semi-adolescent lifestyle beyond their physical, social and emotional understanding can have a number of detrimental effects on early childhood development.

Overemphasis on a limited range of 'looks' and body imagery can contribute to the development of eating disorders in later childhood and adolescence. It may also affect children's selfesteem and their participation in active play.

IMPACT OF SEXUALISATION

Children pick up the message from advertising and popular culture that 'sexy' equals 'cool'. Games like modelling, makeovers and imitation of pop stars can lead to the displacement of interest in, and engagement with, a full range of age-appropriate activities—physical, social, creative and so on.

The emphasis on 'sexy' looks and behaviour can also engender a skewed view of how to initiate and sustain healthy, reciprocal and caring relationships. Marketing may send the message that it's ok for a young child to be seen and behave in a manner well beyond their chronological and developmental age. Messages like these can sometimes place children in dangerous situations.

WHAT EDUCATORS AND CARERS CAN DO

Early childhood workers are in a good position to encourage age-appropriate activities and behaviour. For decades now, many early childhood environments have been designated 'war-toy-free zones', as violence is not appropriate in this context.

A similar approach can be used to counter the premature sexualisation of children. It is reasonable for staff in early childhood centres to encourage a 'teenage-theme-free zone'. This could include:

- educating parents about the potentially detrimental effects of sexualised products, or behaviours that are sometimes considered 'cute'
- a poster on the noticeboard, an article in a parent newsletter, or inviting a guest speaker and holding a discussion afterwards
- implementing centre guidelines that promote children being dressed appropriately
 for active and messy play. A picture or drawing and a short message on the parent
 noticeboard is often enough, although it may need to be repeated in a parent
 newsletter or mentioned sensitively to individual parents.

Make positive interventions in teenage-themed play. For example, if play with dolls revolves around fashion, staff can plan to set up an alternative play context: perhaps building a house for the dolls or designing a 'school' setting with whiteboard, etc.

Encourage children's own creativity. If children are mimicking music videos, there may be parents who have musical or dancing talents who can help children make up their own songs and dances, perhaps even create their own videos!

APPROPRIATE SEXUALITY

Children will, of course, remain curious about the real implications of sex and sexual difference in their lives, including the difference between boys and girls and the question of where babies come from. Such curiosity is age-appropriate and early childhood workers and parents will need to discuss how to respond in a developmentally appropriate way, when children raise these issues.

CONCLUSION

Age-inappropriate sexualisation may lead young children to be interested in a 'sexy' appearance and behaviour well before their teenage years. Children themselves are not able to understand how such an interest might be detrimental to their development. It is up to the adults who care for children to counteract this new marketing trend by promoting a healthy self-image via appropriate play interests and activities.

Dr Emma Rush

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