

# Educating

for a sustainable future



## Kindilan Early Childhood Centre

### From small beginnings, big things grow

"Children will taste foods they've never tasted before if they've seen it grown."



Ever since it was established in 1986, recycling has been part of Kindilan Early Childhood Centre's ethos, although in those days it was just called being frugal, Co-director Dianne Miller says.

During its early years the community-based centre at Tuncurry saved boxes and paper, made its own toys and put bricks in the toilet cistern to save water.

During the past 20 years, environmental care at the centre has grown organically, so nowadays it is part of everyday life for the 36 staff and 90 students.

Dianne and her Co-Director Leanne James have made caring for the environment the cornerstone of the Centre's philosophy.

Back in 1990 a teacher who loved the outdoors established the Centre's first vegetable patch, as she believed children's innate connection with the natural world could be nurtured by positive learning experiences involving the environment.

In 1998 a bore was established to water the gardens and lawns. Through fundraising for the next five years, two small water tanks were installed, to help teach the children about water conservation.

"The children have water cans and they can water whenever they like, we have no set times," Dianne says.

"It becomes part and parcel of their lives and they understand the importance of water," she says.

### Feng shui aspect

In 2006 a new member of staff with an enthusiasm for organic gardening saw potential in the Centre's large grounds, and developed the gardens further. A feng shui aspect was incorporated into the gardens, the vegetable and herb gardens were extended and there was an area for relaxation too.

Food was grown to supply the kitchen, and an eco system of birds, insects and reptiles developed around the garden.

By 2008 two 22,000-litre water tanks had been installed to supply water for sand play, mud, gardens and flushing 15 toilets. It is planned to install an underground water system attached to these tanks.

Paper recycling bins have been installed at the centre since 2005 and all staff and students are aware of the bins and how they work.

Dianne says re-educating and informing all 35 staff and the 90 children was no easy task, but the job was achieved.

"We were told we could recycle tissues, and hand towels so we have two-year-olds using the bins. We have very little rubbish at the centre."



## New tastes

Food scraps are also recycled as compost, and three of the centre's rooms have worm farms.

Using 'worm wee' as fertiliser is one of the children's favourite chores.

Dianne says seeing children as young as three interested in tasting herbs and vegetables has been one of the many beneficial outcomes from the project.

"Children will taste foods they've never tasted before if they've seen it grown. Children eat at the outdoor lunch tables and have free choice to pick their own lettuce or beans to have with their meal.

The project's outcomes have been "expected and unexpected," says Dianne.

"We have witnessed more benefits than we could have hoped for with regard to our children, staff, families, links with our community and our environment.

"The children have learnt so much being able to explore their environment."

Staff too have learnt to appreciate their environment more and think more about it.

"Some have even overcome a fear of insects, and learned to live in harmony with nature."

## Numerous outcomes

Families have become involved and expressed an interest in developing their own vegetable patches at home, and collecting recipes from the kitchen, as well as volunteering to help with the Centre's gardens.

The local Neighbourhood Centre has also come on board with a \$3000 grant to help the centre develop more vegetable gardens.

Dianne says links to the curriculum framework are innumerable, including nutrition, interest-based play, science and nature, creativity, maths, language development and many more.

"Staff are aware of how to spontaneously guide children's learning by making connections and extending new understandings of the world around them," Dianne says.

In the future Dianne wants to share her knowledge of how to re-use and re-make things with younger staff.

"I grew up keeping things and re-using things, that was the philosophy of the time but it's not always the case today.

"I want to pass on that knowledge to the younger staff, showing them how to make toys from recycled materials."

Another big challenge for Dianne and Leanne is to work out how to avoid using 450 plastic bags a week to dispose of nappies!

For details on Kindilan's projects, contact Dianne or Leanne at Kindilan Early Childhood Centre Inc, Capel St, Tuncurry 2428, Ph 6555 4133, email: [kindilan123@bigpond.com](mailto:kindilan123@bigpond.com)

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**St Paul's High School  
Booragul**

## Working as a team making it easier to be green



**A** newsletter to the St Paul's High School, Booragul, community quotes Kermit the Frog's observation that "it's not easy bein' green". But the school is rising to the challenges and with strong teamwork front and centre, it is enjoying plenty of success.

The environmental projects and programs at St Paul's are numerous. An Environmental Action Team comprising student and staff volunteers have swapped sports periods for equally physical environmental work, including mulching and planting natives, building a pond, stemming erosion, building a retaining wall, cleaning and tending the grounds.

Water tanks have been installed and, thanks to the Federal Government's National Solar Schools Program, the school has also installed a new solar hot water system and photovoltaic solar panels. A Lake Macquarie City Council grant, to be matched by the school, will see an outdoor learning space and bush tucker garden established. Meanwhile the school community is getting behind a Council campaign to reduce the carbon footprint of the city: staff and students are encouraging St Paul's families to elect for 'green energy'.

The school also has a highly successful recycling program.

Teacher Cate Thompson says this program, involving classroom-based recycling bins, has cut the amount of rubbish

by two-thirds and two mobile phone recycling boxes, placed in the foyer near reception and another near the staffroom, collected more than 200 mobile phones and accessories in its first year.

"We do the mobile phone recycling with the Aussie Recycling Program (ARP) as they guarantee nothing ends up in landfill. They try to fix them if they are under five years old. Otherwise they break them down and send the metals away to be reused."

Hunter Resource Recovery has also been of assistance, providing three complementary whiz (wheelie) bins which they collect for free every fortnight. At the beginning of the program, Hunter Resource Recovery addressed an assembly and stayed back to talk to Year 7.

"We figured the Year 7s would be used to recycling from primary school so we wanted to keep that momentum going – we want them to become leaders eventually and lead by example," Cate says.

This year the school also started collecting reading glasses and sunglasses for the Lions Club.

Cate's colleague John Gallup, along with another teacher, David Ling, started St Paul's Environmental Action Team (EAT) in early 2008. A funny costume and a few theatrics ensured their assembly-time announcement got lots of attention. But it was the subject matter that really resonated.

"We got an overwhelming response and really didn't have enough teachers to go around for the amount of students we got, so we started with some small-scale projects around the school that we identified with the help of Landcare officer who came into the school.

Lake Macquarie Landcare provided with more than 1000 plants and gave advice on where to plant them. John also got his Year 7 classes involved in Streamwatch.

"As a Geography Teacher, we get all this information about how global warming is affecting the planet and we see species on the decline at the greatest rate of extinction since the dinosaurs. Students see that in class and most of them really want to do something about it."

The backing of the school Principal has also helped, John says.

"The Principal has been very supportive of any initiatives that look like there's enthusiasm behind them and like they might work. He's also been very supportive in sending people off to training and Landcare conferences. It's made it a lot easier for this to happen at St Paul's."

"Every little thing  
along the way makes  
its mark – projects  
shape a culture."



Troy Bull has been assisting the EAT, clearing out weeds and replanting trees and shrubs. He has also been involved in some education programs within the science department, and was actively involved in the school's successful application for a solar grant.

"Because schools are such large organisations that use a lot of energy and resources, it's important that we sort out the way that we are using them, to be much more in line with and sensitive to the damage that we are potentially causing," Troy says.

"It's also important that students are given the best knowledge and inspiration to take on environmental issues as part of their lives – so that it's not just an add-on, but something that forms how decisions are made on a day-to-day level."

Ministry Coordinator Luke Edwards is looking at the big picture, aiming to develop a whole-school environmental management plan with the EAT.

"We've learnt that this will take time, to prioritise, and the critical importance of having a plan. Schools by nature are such busy, dynamic places that to do this in a way that is ad hoc would not work. It needs to be done in a holistic, integrated, planned way. But every little thing along the way also makes its mark – projects shape a culture."

Year 10 students Christian, Connie-Lee and Sebastian have all participated in the St Paul's environmental program.

This year Christian is on the school council, helping establish a campaign to encourage the St Paul's community to switch to GreenPower. Students are planning a play, that turns around the idea of kids being asked, "have you eaten your greens?" The kids will instead ask their parents "have you gone to green power?"

Christian is anticipating a flow-on effect. "If we get parents to switch to green power, their friends and other people will hear about it then they can branch off and do it and it creates a massive chain reaction. Eventually we'll probably all go to green power."

Connie-Lee joined the EAT to promote "the whole idea of conserving the Earth and the environment and trying to raise awareness of the issue".

As she says, "we're the people who are going to inherit the Earth and if we ruin it there won't be a place for our children to live. We should treat this place as best we can".

For Sebastian one of the attractions is the community element and he says it's okay to start small.

"For me it's about getting involved and showing we can do easy things to help the community and the environment. It's about working with the teachers and parents and other students. It brings the community together.

"You start small and branch off and that's how you get bigger effects."

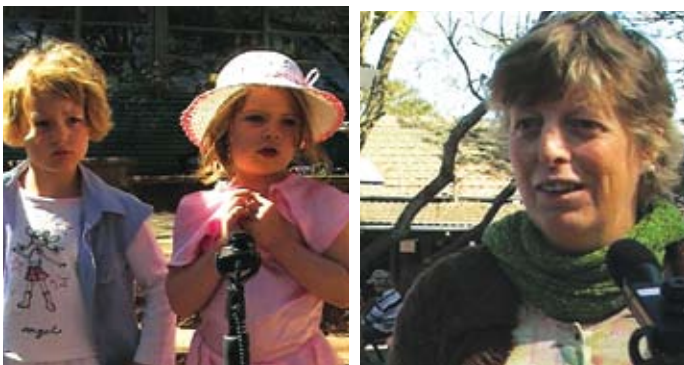
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## Currambena Primary and Preschool, Lane Cove

### It takes a community



**C**elebrating 40 years of sustainability, Currambena Primary and Preschool in Lane Cove prides itself on taking a democratic, child-centred approach to all aspects of school life – including environmental education. And with the school's whole community actively on board and pitching in, innovation is flourishing.

Early into a tour of the school, it becomes clear that this is a community that embraces the new – particularly when we are talking new and more environmentally friendly ways of doing old things.

Thanks to some government grant money, water tanks are servicing plants, toilets and more. One tank feeds the toilets which have been purpose-built to save water, with basins on the cisterns.

"As children are washing their hands the water is running through the top of the cistern and then that is eventually used to flush the toilet. It's a double-usage of the water before it goes out," says Currambena Coordinator Julianna McCarthy.

Among the other water tanks, one lies below some classrooms and dining area. Not your typical upright tank, it is soft, like a waterbed and is described as a "bladder". It enables water to be stored in otherwise unused areas, even where traditional tanks may be unable to fit.

One of the unique features of life at Currambena is the whole-school negotiation sessions, where students, teachers and parents decide what they want to achieve, how they will go about it and who can do what to help.

"Most of the families at Currambena are very conscious of the world in general and about its sustainability and our water and our air and pollution and this has always been part of our system," Julianna says. "It works for the children as well. All the children have a say as well as the parents and the teachers. There is a consciousness all around."

This system is not only encouraging environmental sustainability – it is saving money too. Parents do a lot of the school's maintenance and materials are recycled wherever possible. When Currambena renovated its classrooms, timber was re-used. By re-cutting and re-configuring the doors they saved money on a new set and reduced waste.

Currambena Preschool Teacher Susan Goode says environmental education begins as soon as children enrol. Preschoolers re-use materials and what they throw out, they sort into a garbage bin, a compost bin, a plastics recycling bin and a paper bin.

"For me environmental sustainability means looking after our own patch as best we can and using things, as much as we can, that are not going to cause harm to the environment. It means making children aware, from as early as they come here, and talking about difficult things in a way they can understand," Susan says.

"It means bringing in that: 'yes, the Earth might be in a state that is not ideal', but to also bring in hope for the children about what they might do so it doesn't feel oppressive – like they can't do anything about it. It also means very small things, like writing letters to people and finding [new] ways to do things.

"If you bring it to kids attention and work out ways that things can be helped, or how we can do our own bit at Currambena, then they really get involved and some kids have become really interested."

A trip to the Aquarium and a project on marine life has sparked an interest in many, and children have been writing letters to help improve marine health, including Grace, a Preschool student.

"If you bring it to kids attention and work out ways that things can be helped, or how we can do our own bit, then they really get involved."



"I wrote a letter about a whale to save the world because if they kill all the whales there will be no more," Grace says. "Whales help the environment and they help the world. I write to the people who kill the whales because they don't know what they are doing."

Her Preschool mate, Alex, has been inspired by the school's litter reduction program.

"At the end of the day I run around the whole school and try to pick up hundreds and hundreds of bits of rubbish," she says. "Please don't drop rubbish anymore. It makes litter and it's very smelly. And like Grace says, it will kill the whales if you put rubbish in the water."

Older students also participate in many activities with Currumbena Primary School Teacher Wendy Pettit. One project involved going through the school's refuse, categorising it and weighing it. Wendy's students then delivered lessons to the whole school on waste reduction, how to reduce packaging when preparing lunches and what items can be brought to school which don't need to be thrown away. They did a trial rubbish-free day reduced the amount by 5kgs.

Year 4 student, Alexander, says he is glad that tanks are used to save water when flushing toilets and watering the garden. "They save water and you can climb on them," he says. "It's important to save water because we are still in a drought."

His classmate, Shannon, understands that food waste is reduced by feeding scraps to the worms and chickens – and she is also appreciative of what the school gains in return.

"We go around and collect all the school's compost and scraps and we chop them up and put them in the worm farm. Our teacher Wendy tells us about the worms and she lets us hold them and put the fruit in ... Worms are really important for the soil because they add nutrients and loosen it up. They are also very important to our lives," Shannon says.

"Without worms the soil wouldn't be suitable for us to grow plants and vegetables and fruit trees. It's really wonderful having them at Currumbena."

Sam, also a Year 4 student, says Currumbena's population of chickens is producing eggs for Preschool and also for sale, for 50c each.

"The chickens are good because it means we don't have to buy eggs, so we can save up money for other things, like water tanks and toys for the school. The chickens are free range so we're not keeping them in a cage all the time."

But, like his classmates and teachers at Currumbena, Sam is also concerned about the bigger picture, including the very air we breathe.

"I like everything about nature and it's important to protect it. Without trees you can't really live because the trees make oxygen. Without them the world would just be a dead place."

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**All Saints  
Primary School, Liverpool**

## Passionate about spreading the message

"We want to make it part of the conversation in all KLAs"



All Saints Primary School Liverpool principal Rose-Marie Hoekstra describes her journey towards environmental sustainability as a "conversion", which has left her with a passionate desire to "leave a gift for those who come after me, particularly the children", she says.

About three years ago Rose-Marie decided to embark on the process inspired by the Sydney CEO's School Review and Improvement Framework, point 5.3 Environmental Stewardship, and the publication *On Holy Ground* by Catholic Earthcare.

It was decided to carry out an environmental audit at the school, looking at water and energy use, carbon emissions, solid waste, production, transport, biodiversity on the school grounds and environmental education.

The process took a year to complete, using in-house resources and outside consultants Carbon Planet and Todaye.

Rose-Marie describes the process as a "road to Damascus" which has left her passionate about the need to address climate change.

### Classroom HERO

Following the audit, the school embarked on a series of changes, including installing \$80,000 worth of solar panels, fixing taps, planting a native garden, changing light bulbs, ensuring electrical equipment is turned off when possible, recycling and installing a small pond.

In the classroom, the children are taught about the environment, and each class has its own HERO (Heating, Electrical, Recycling Officers) on a roster basis.

Environmental Footprint Report and Recommendations were published, including, a Code of an Environmentally Friendly Class, with guidelines on water, and electricity use and tips on minimising waste in class.

"We want to make it part of the conversation in all KLAs," Rose-Marie says.

Classroom teacher Alice Gobeli says classes now compete with each other to see who can use air conditioning the least.

Rose-Marie is committed to spreading the message, and as well as hosting a workshop at the IEU's Educating for Sustainability Conference, she organised a Regional Primary Students Sustainable School Conference for schools in the Liverpool area.

"I've realised my responsibility is way beyond just measuring

"I realised how blessed I've been to live in a world which is full of beauty and rich natural history."



and managing," she says.

### Gift for the future

"It has to do with my relationship to God and creation. I realised how blessed I've been to live in a world which is full of beauty and rich natural history, in an environment where you can still see wildlife.

"I realised unless we as a people – by that I mean people of the earth – learnt to control our need for more – our rates of consumption – much of this will disappear.

"My anxiety is that children who come after me will not have the enjoyment, will not have the experience of looking at the world with the eyes that I have looked at it.

"I'm quite passionate about this because I'm a spiritually religious person. I believe everything I've been given is from God and I in turn need to give a gift back to God and leave a gift to those that come after me, particularly the children."

She says an old phrase 'Live simply so others can simply live' is something we should all heed.

"I want this school to be carbon neutral as a sign that our impact on the environment is zero.

### Having the conversation

"I hope the conversation that happened to me when I started to do this will happen at the children's level, at the teacher's level, at the parents level and through other schools and the CEO."

Alice agrees and says sustainability is an important aspect of her life as she grew up on a farm.

"I knew about conserving water a long time ago when I was pumping out of the well," she says.

"Water is such an important part of life and in the city it can be just taken for granted, so I really like helping children understand where water comes from and what it means to people around the world.

"I just like talking to children about the environment and making them aware how their lives impact on other people's around the world."

Fellow classroom teacher Karen Roach says the school was trying to integrate the environment into every KLA.

"In the classroom we try to minimise waste and re-use things. For art we use all natural products.

"We have trialled the waste free lunch where kids bring in re-usable lunch boxes and bottles, and no wrappers, foil or plastic. This has meant less rubbish in the playground.

"A lot of kids have taken these points home and are recycling at home."

Karen says the children were "falling in love with" the environment.

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**St Therese's  
Primary School, New Lambton**

## Recycling can be delicious



**A** combination of projects – including worm wee, a herb garden and a chook farm – provides students at St Therese's Primary School, New Lambton, with ample opportunities to experience environmental stewardship in action.

It's all made possible by a whole-school recycling program that collects students' recess and fruit break scraps which are used for worm farms and chook feed. The results include an ever-growing environmental awareness, a taste of self-sufficiency and more than a few yummy morsels on the way.

### Chook care

Caring for a community of chooks brings daily delight to St Therese's students, who have developed a detailed knowledge of each feathered friend's unique personality.

Every morning the preschoolers make sure the chooks are alright and students feed them, ensure they have fresh water and collect their eggs. The eggs are put to good use by the school community, whether for cooking classes or meals, and scrambled eggs and omelettes are a favourite treat – especially when teamed with ingredients from the herb garden. Mini quiche was in store for a Term 4 project.

### Worm wee

Many schools have excess scraps left over from lunches and snacks but Year 3 at St Therese's was determined to put them to good use. The local Council had the answer, providing six worm farms.

Now special containers are provided around the school grounds to catch suitable scraps and signs have been created to remind students which foods are worm-friendly.

Meanwhile those happy, wriggling, well fed worms are doing their bit too, producing wee that is captured and added to the plants.

All planting beds benefit from the worm's nutrient-rich wee, including the herb garden started by Year 5 and garden beds planted by Year 2 for Grandparents Day.

Any precious wee that is left over is on sale for a gold coin, which is reinvested back into the school's environmental program.

### Successful program

School Principal Duilio Rufo describes the program as "hugely successful". It also helps create a good balance. "This is all such a different approach to what we usually do in the school, which is actually very technology focussed," Duilio says.

"Years 3 and 4 have especially taken ownership and I'm not exaggerating when I say parents are over the moon."

A planned environmental audit of the school is set to increase the involvement of Years 5 and 6 but already their enthusiasm is evident. About 100 attended a talk on animal rights, particularly focusing on battery hens and their free-range cousins.

Playing a strong coordinating role in St Therese's environmental program is Year 3 Teacher John Rowe, who has been released from a range of duties, including playground duty, and is allocated one and a half days per term.

"Providing this education in primary schools shows the boys and girls that they can make a difference in their environment – that they can see the results of their actions on a daily basis," John says.

"It also shows them that by recycling their scraps they reduce the amount of garbage we have at school each day. Plus they can see the benefits of recycling the nutrients with our worm wee, back into the garden and how that makes our plants grow healthier without any chemicals or additives that are non-environmentally friendly."



"Providing this education in primary schools shows the boys and girls that they can make a difference in their environment – that they can see the results of their actions on a daily basis."



## Broad benefits

Students who participate in the worm, chook and planting projects are benefitting in many ways, which they are keen to share.

Year 3 student Benjamin says his involvement in the chook project has helped him overcome a personal fear.

"When I was younger I was always scared of chickens. I thought they would peck me. When we got chickens at school I thought they would help me conquer my fear. When we got them and I got into it they started to help me and now it's alright. They never usually peck or anything – except for the white one, called Salt. He used to jump up and scare kids who put their arms over the fence."

Another student, Isabelle, explains the reciprocal relationship between the worms and the school community.

"At fruit break the kids bring us back the buckets with the fruit in them and we chop them up and put them in with the worms. The worms eat the scraps and produce worm wee. We sell some of the wee and get money for the school. People put the wee on their gardens and it helps them."

Isabella, also in Year 3, comes from one of the households that has benefitted from worm wee.

"Worm wee helps your garden grow and it makes your grass greener. That's what I did on my grass. It made it heaps greener and it was a very good improvement."

Meanwhile Isaac has inside information about what is hot or not for worm feed.

"We take care of the worms by taking the fruit scraps in. Sometimes you need to do it with more help because there are so many buckets to collect. We can't put citrus fruit or mandarin peel in for the worms. We put that into another bucket and then throw it into the garbage."

When Year 3 student Kane got a worm farm for his birthday, he knew exactly what to do thanks to his experience at school.

"At home we got some hessian and put it in the bottom of a worm farm and then we got manure and put some food scraps in. We put some worms in and then some wet hessian over the top and then the lid. I knew what to do because I did it at school."

Year 3 student Adriana says there are many ways to be involved.

"We're having a gardening competition. You have to buy a bottle of worm wee to enter it and then you grow flowers. You can win ribbons for first, second and third place."

Duilio says the environmental program has been "great for everyone ... not only for the children but also for the parents who have become really involved in how the whole school is looking at the environment".

"It's been a great overall experience for the school."

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## Quirindi Pre-School Kindergarten

### Opening up a whole new world



"Staff have enjoyed having conversations with children in a more relaxed environment."

Learning at Quirindi Pre-School Kindergarten has been transformed since work began on the Centre's sustainable garden.

Director Alison Thompson says even though it is early days in the Centre's green development, the affect on staff, children and the community at large has been significant.

Situated about 70 kilometres south of Tamworth, the centre caters for 20 children a day, with three full-time staff, a part-timer and an administrative worker.

The centre recently celebrated its 40<sup>th</sup> anniversary, although Alison has only been director for two and a half years, and the work on the environmental garden only started recently.

"I'm a real believer in indoor and outdoor programs," Alison says.

#### Finding the funding

Sourcing funding was the first step in the process, with Alison able to secure \$9000 from the Namoi Catchment Management Authority to buy water tanks, \$2000 from BHP and \$18,000 from the Department of Education.

"We have a large block which is long and narrow. One end of it wasn't being used because it was full of bindis, and a long way to carry anything. It was just a grass area that was dead. Everything was happening indoors in one room."

The Centre has planted more than 500 native plants, and installed pipes from the water tanks for watering the garden. They employed a landscape designer and recreated a dry creek bed using river rocks and appropriate plantings. A bridge goes over the creek bed and paths lead down to it.

"The outdoor areas is now used for experiences by large and small groups all the time. Children help with weeding, and have to learn what is a weed and what is a plant, as we have planted some native grasses.

#### Experiencing the life cycle

"They have to be aware of looking after the garden and walking on the path. They help water the garden with their watering cans. They have their buckets to put dirt on the garden. We now have birds visiting and it's a very peaceful area.

"The children have experienced a full lifecycle, watching eggs turn into a caterpillar, and then a moth, on the veggie patch and they make clay creations in the garden."

The Centre has started a small veggie patch and grown spinach and bok choy, which the children and staff have turned into pumpkin scones and spinach pancakes, which they sell to parents.



"One child had a birthday and didn't bring in a cake, so we made some spinach pancakes and put candles on them.

"As well as being a huge improvement in learning for the kids, the staff have enjoyed the change.

"We have morning tea and lunch outside. There's a choice of areas to teach in. They say they now have time to listen to the children. Instead of constant directional teaching, they can be more intentional.

"There is room for spontaneity. When the kids are outside they ask questions. Staff have enjoyed having conversations with children in a more relaxed environment. Children who find it difficult to sit still can go outside and run around."

### Spreading the good stuff

Parents too have appreciated the changes, taking part in working bees – spreading mulch and laying the footpath.

"One mother told me how much her child enjoys coming to preschool, because she has the choice of activities."

More funding has now been secured – \$2500 from the Foundation for Rural and Regional Renewal and \$1000 from Gunawirra. Projects in the pipeline at the Centre include building an indigenous pathway, although Alison says at the moment she is busy analysing the Government's new funding arrangements for childcare, and thinking of ways to expand the Centre.



# Educating

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St Francis Xavier  
College, ACT

## Handprints: Making sustainability part of everyday learning

"Practical applications show students that positive change is achievable."



Sustainability is truly integrated into every aspect of learning and living at St Francis Xavier College in the ACT.

Sustainable Schools Officer and IEU Member Damian Woods says the Canberra school has installed solar panels, allowing students to see first-hand the 25 kilowatts generated each day. This energy will be fed back into the city's power grid and the school will be reimbursed for the energy supplied.

Senior mathematics students learn trigonometry in relation to the angle of the solar panels and azimuth of the sun and physics students learn the panels' circuitry and electronics. Chemistry students learn the make-up of photovoltaic cells; and design and technology students created an award-winning solar model car.

"Practical applications show students that positive change is achievable and sustainability is becoming a part of day-to-day life," Damian says.

Students have also developed a drought-tolerant garden, which shades classrooms and attracts native birds. A mathematics class did the costing, design, and construction of the garden and a Year 11 English class wrote correspondence for the project management and construction.

Students also carried out a water audit, which resulted in the installation of dual flush toilets, efficient kitchen appliances and an improved irrigation system for the oval.

A Sustainable Schools Group oversees recycling stations, composting and a worm farm. Every curriculum department and the canteen adopt smart purchasing practices to avoid non-recyclable material. This has seen an 87% reduction in waste.

Sustainability and waste reduction is also integrated into the College's religious education curriculum. Year 7 has a 'Caring for Creation' unit, where students integrate their spiritual teachings with practical activities such as waste surveys, researching recycling processes or studying ecosystems.



# Educating

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**St Mary's High School  
Gateshead**

## School project inspires stewardship



"To us, landcare was more than a day off classes. It is a chance to make a change in our school community. It has taught us how to weed a big creek area, or shovel a truckload of mulch and to appreciate nature and shows how as a single student of St Mary's, I can actually make a difference."  
(Michael Mercer, Yr 10)

St Mary's High School Gateshead is located in a suburb of Newcastle and is fortunate to have remnant bushland along an unnamed creek which runs along our back playground. This area provides an ideal outdoor environmental and educational opportunity for our 700 Junior High Schools students.

Our school's Sustainable Schools Project aims to enhance the teaching and learning environments of our school and at the same time be active in our role of environmental stewardship.

### Many successes

A small number (approx 20) of students are asked to volunteer twice a term to be part of the Student Landcare group. In the past few years over 200 students have accomplished:

- regeneration of Stage 1 of the creek by planting over 1000 native trees and shrubs along its banks. They continue to mulch, weed and plant out this site. This regeneration work earned our school the Lake Macquarie City Council's High Schools Environment Award for 2006
- planting and maintenance of the frog garden
- stencilling of the playground with statements like "The creek begins here"
- planting the newly established Aboriginal, Japanese, Marian and Student gardens in what was once a concrete playground resembling a carpark with too many bare patches of dust. Students now enjoy their lunchbreaks and period change interludes in tranquil native gardens. According to Brendan, a Year 10 student who helped in these gardens: "The Landcare program has really changed the aura of St Mary's. Not having loose dirt fly in your eyes is a bonus"
- planting approx 500 native trees and shrubs in the front gardens of the school.

### Wasting not

Paper recycling and being more conscious about turning lights and fans off in the lunchbreaks is on most teachers' minds. The Science Department and their students undertake the Waterwatch program. Year 8 Geography students use the Creek site to complete a field observation booklet. Two students in conjunction with Lake Macquarie City Council have been working on an educative brochure which will go out to neighbours.

**Maryanne Murray  
(Landcare Coordinator)**