

Waste Wise Schools

Goldfields Case Studies



Department of Environment and Conservation
Waste Authority



Acknowledgments

Written by

Jennifer Weston
Joanne Gray

Designed by Su-Anne Lee, Spice Creative

This case studies booklet was developed by the Waste Wise Schools Program which is managed by the Department of Environment and Conservation and funded by the Western Australian Landfill Levy through the Waste Authority and Wrigleys Corporation.

It was created in collaboration with the City of Kalgoorlie-Boulder.

For more information about the program please contact:

The Waste Wise Schools Program
Department of Environment and Conservation
Locked Bag 104
Bentley Delivery Centre, WA 6983

Phone: (08) 6467 5011
Fax: (08) 6467 5532
Email: wastewise@dec.wa.gov.au
Web: www.wastewise.wa.gov.au

The Waste Wise Schools Program would like to thank the following teachers, principals, gardeners and registrars for taking time out of their busy schedules to provide us with information and photos:

Rynee Parker	Sarah Williamson
Liana Holland	Rikki Putland
Terri Smith	Rochelle Hooper
Jodie Shurmer	Debra Rodgers
Donna Bridge	Sandi Fielder
Denise Milliken	Katie Seghini
Glen Milliken	Elizabeth Aberline

We would like to thank and congratulate all of the Waste Wise schools' staff, students and parents in the Goldfields who continue to work tirelessly towards developing sustainable waste minimisation practices at their school. It is a pleasure to work with you.



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Introduction

About the Waste Wise Schools Program

Waste Wise schools throughout Western Australia are reducing waste by implementing the 3Rs – reduce, reuse, recycle, while developing positive environmental values in students and the whole school community. Waste Wise schools model responsible environmental behaviours through hands-on learning experiences that are linked to the Western Australian Curriculum Framework.

The Waste Wise Schools Program helps schools to set up infrastructure and provides resources aimed at changing attitudes and behaviours with regard to sustainable waste management. The program, supported by funding from Western Australia's landfill levy through the Waste Authority and Wrigley's Corporation, provides teachers and other school representatives with professional development, curriculum materials and support for schools to help plan, implement and maintain waste minimising projects. Examples of these projects include recycling, composting worm farming and school kitchen gardens. The program is free and available to all schools in Western Australia.

The Waste Wise Schools philosophy

The Waste Wise Schools Program has been developed based on best practice Education for Sustainability principles. The overarching message of the program is to reduce, reuse and recycle (the 3Rs) to promote the sustainable use of natural resources and minimise our collective environmental footprint.

To effectively communicate this message, the program advocates:

- providing education, *not* simply information – information may change someone's attitude but not necessarily their behaviour
- supporting learning and practical activities by integrating them into the curriculum, thus teaching students about issues and empowering them to take action to address them
- being fun – Waste Wise projects are hands-on and students enjoy participating in them
- taking a whole-school approach that incorporates school operations, teaching, learning and the wider community
- promoting student involvement at every stage from planning to implementing to celebrating
- encouraging behaviour change through education and the development of values and understanding.



Waste Wise Schools in partnership with the Sustainable Schools Initiative

The Australian Sustainable Schools Initiative - WA (AuSSI-WA) is a whole-school planning framework that supports schools to embed sustainability within their culture through embracing sustainability as a key context for learning. AuSSI-WA encourages a whole school approach to Education for Sustainability and provides support to schools on their respective journeys towards sustainability reducing their ecological footprint and increasing their social handprint. Acknowledging that all WA schools are at some point on a sustainable schools continuum, the AuSSI-WA framework has multiple entry points of which the Waste Wise Schools Program is one.

For further information regarding the Sustainable Schools Initiative WA, visit the project website: www.sustainableschools.wa.edu.au

The Waste Wise Schools Program in the Goldfields region

The Waste Wise Schools Program has been running in schools in the Goldfields region since June 2007. To better meet the needs of these schools, the City of Kalgoorlie-Boulder agreed to deliver waste education in partnership with the Waste Wise Schools Program. Sustainability Officer, Joanne Gray, has provided local on-the-ground support for regional teachers to develop a whole school approach to reduce waste and foster environmentally sustainable behaviours. She has shared invaluable insight and knowledge into the local issues surrounding waste minimisation at school and in the community.

There are currently 19 participating Waste Wise schools in the Goldfields region that benefit from having access to local knowledge such as how to reduce, reuse, recycle and set up school vegetable gardens in an arid climate to close the recycling loop. Waste Wise teachers and coordinators have had the opportunity to attend a Waste Wise introductory workshop, topic workshops such as the Great Garden Guys school vegetable garden workshop, and cluster meetings to network with other teachers.

This case studies book focuses on how 10 of these schools have embraced the Waste Wise 3Rs philosophy by using a whole-school approach, linking Waste Wise projects to the curriculum and involving the community. These schools provide inspirational stories about becoming Waste Wise and tips to overcome barriers they encountered when trying to create a new way of thinking about reducing waste at school and at home.

Many of the schools in this case studies book have received Waste Wise grants, which are funded through the landfill levy administered by the Waste Authority. They have been able to set up Waste Wise projects such as worm farms, composting and vegetable gardens to close the recycling loop. This has helped to promote a healthy lifestyle and healthy eating habits among students.

The best things about being a Waste Wise School

These case studies demonstrate how Waste Wise can fit into a school's curriculum and other educational activities, with a whole range of ecological, environmental, economic and social benefits to the school community.

Development of positive community partnerships

A key to success for many of the featured schools is the rewarding community links they have built through their efforts to reduce waste. Teachers appreciate the enthusiastic attitude of the school community and the willingness of the local community to support and participate when they are asked. Joanne Gray's coordination of events as the local Sustainability Officer supports teachers in coming together to share ideas among themselves and with the community.

Easily integrated into the curriculum

Students are also beginning to understand how reducing waste helps the environment. For example, they are making connections between waste and the causes and effects of climate change. Some students work on their school assignments in the garden area, and Waste Wise projects can easily be integrated into curriculum areas such as Society and Environment and Science.

Student experience a connection with their environment

Teachers have the opportunity to see their students experience a lot of things for the first time, such as seeing the vegetables in the school garden start to grow or touching a worm. Learning to love worms can also engage teenagers in the topic of waste. One teacher explains how her students enjoyed participating in hands-on activities such as building and maintaining the school worm farms.

Healthy lunches produce less waste

It is fantastic to see how students get very passionate and excited about reducing waste and how peer pressure is especially effective with the zero waste lunches. These lunches have proven to be a huge success with the classes that participate and students also learn that a healthy lunch produces less waste. One school held a Waste Wise Day, which was described as 'very enjoyable and a great way for the whole school to be involved in the program'. Waste Wise projects in schools can provide opportunities to educate parents as well as children.

Student empowerment

Students are becoming very enthusiastic and take ownership of the Waste Wise projects at school. For example, there is an increased awareness in efficient paper use and one teacher tells how



‘there are some children who let me know when I didn’t photocopy back to back’. Some teachers also describe how the kids are now picking up rubbish around the school grounds since they started recycling.

Social and environmental life long learning

Teachers have noticed how the Waste Wise Schools Program has encouraged inclusive behavior among students. These students have been able to develop a range of physical and social skills in the process of growing their own food. They learn the skills that will equip them for life long enjoyment such as working in the garden, growing their own produce and knowing they are contributing to a healthier environment.

Some tips to overcome barriers

Can students grow vegetables in their Waste Wise garden with little rain and clay soils? How do teachers include Waste Wise projects in their busy schedules? How can everyone be involved in running a zero waste lunch? The following are some suggestions to these questions:

Develop a Waste Wise support network

- Waste Wise teachers are able to provide support for each other through professional development specific to the region, such as how to start up and maintain a Waste Wise vegetable garden to close the recycling loop.
- Teachers are able to solve problems specific to their area using their support network and having a local Waste Wise contact.

Start with small steps

- Sometimes other teachers think being Waste Wise involves too much extra work. Therefore it is important to start with small projects, such as paper recycling, to stimulate interest across the school.

Give clear feedback and information

- When organising zero waste lunches it is helpful to tell parents and teachers exactly what can and cannot be included. One teacher also suggests eating lunch in class 10 minutes earlier.

Consult and gain support from the canteen, administration staff and fellow teachers

- The canteen can play a big part in a whole-school waste-free lunch day and it is important for all staff to help reduce the amount of waste on these days. Having the support from the administration, canteen and other teachers is extremely important for a whole school approach to waste minimisation.
- An administration team who is keen to get things up and running and able to help with the grants process has also benefited some of the schools.

The following case studies were written by Waste Wise teachers in the Goldfields region to provide examples of how schools in regional areas can succeed in minimising waste and how important it is for schools to develop partnerships with the local council, community groups and other environmental organisations.

Other organisations schools are involved with

- Australian Sustainable Schools Initiative WA
www.sustainableschools.wa.edu.au
- Great Gardens
www.greatgardens.info/main.php
- Kalgoorlie-Boulder Urban Landcare Group (KBULG) www.kbulg.org.au
- Keep Australia Beautiful
www.kabc.wa.gov.au
- Millenium Kids
www.millenniumkids.com.au
- Solar schools
www.clean.energy.wa.gov.au/pages/solar_schools.asp
- Waterwise
www.watercorporation.com.au/Education/education_schools_what.cfm?uid=5569-5249-7246-6661

South Kalgoorlie Primary School

South Kalgoorlie Primary School was established in 1904 and has a rich history of individual and group achievement. Throughout the history of the school, staff provided a positive and supportive environment for all students to achieve their potential.

Waste Wise teachers and coordinators:

- Rynee Parker
- Liana Holland

Waste Wise activities

We discovered an unused fenced vegetable garden area with adjoining storage area on school grounds near the main building. We cleaned out the garden area and storage area and turned it into an outdoor classroom.

A fridge was rescued from the tip and we turned it into a worm farm. Other schools around Kalgoorlie then donated some worms to start the worm farm. We have collected a lot of plastic bottles for the worm leachate, designed labels and posters and developed a marketing strategy to start selling it.

We have designed a garden and planted it with both seeds and seedlings.

Two teachers and 12 students attended the Waste Wise/Great Gardens School Vegetable Garden Workshop. It was helpful to have experts to teach school and community members about worm farming and vegetable gardens.

Waste audits are regularly conducted to see how much waste is produced, and how it can be reduced by using the garden.

Curriculum links

The curriculum is integrated into all Waste Wise activities, particularly the areas of Science, and Society and Environment, such as the Investigation, Communication and Participation learning area.



Inside our 'Outdoor' classroom. Worm leachate ready for sale at the school carnival.

Community involvement

We have collaborated with other schools by sharing worms, ideas, care instructions and developing gardens. Parents and community members helped set up the worm farm and they help with the up keep of the garden on a regular basis. Waste Wise and Waterwise tips and quizzes are in the weekly school newsletter, which helps keep the parents and community updated.



We had a competition to name our worm farm and vegetable garden area in the school newsletter. 'Ninti Mayi' was chosen which means 'knowledge and understanding of food and plants' in the local Wangatha language.

We held a 'Ninti Mayi' open day for the junior school with experts teaching and showcasing about worm farming and vegetable gardens. The 'Ninti Mayi' open day for the senior school is planned for beginning of 2010 to extend the area and set up new gardens. Our sale of worm wiz, worms and worm care booklets at the school carnival to students, parents and community members was successful.

Waste Wise grants

We have used the \$2000 infrastructure grant money for the following projects:

- worm farm
- compost bins
- food scrap bins
- establishment of a vegetable garden.



Plans for the future:

- extend an invitation for new committee members for 2010
- conduct more waste audits
- apply for \$5000 Whole School and Community grant
- continue with whole school recycling program and selling worm leachate
- extend the vegetable garden area to allow more access for the whole school involvement and use of grant for more gardens, fencing and seedlings
- hold a Waste Wise assembly and waste free lunch days
- continue with ring-pull collection for Esther Roadnight Rotary.

Other environmental programs:

- Kalgoorlie Urban Landcare Group (KBULG) – making seed balls
- Waterwise



'Ninti Mayi' open day and carnival preparations.



Food for worms using scraps from our school canteen.



Visit from Great Gardens Team. How do we control caterpillars? KIDPOWER!! Pick them off, do a bug hunt every time you are in the garden.



Setting up the worm farm.

St Mary's Primary School

St Mary's Catholic Primary School is a community of faith, where staff, students and parents work together in a spirit of Christian cooperation. Their primary goal is the assistance with the spiritual, academic, physical and emotional growth of each child.

Waste Wise teachers and coordinators:

- Terri Smith
- Sharon O'Halloran

Waste Wise activities

St Mary's Primary school has developed a Waste Wise policy, created a plan, formed a committee and conducted a waste audit. Classes hold waste free lunches twice per term and even the canteen participates. The school also has eight 'no dig' vegetable gardens, created with permaculture principles, one for each year level.

The worm farm was established originally with the Kalgoorlie-Boulder Urban Landcare Group (KBULG fridge worm farm giveaway in 2007). They donated worms and castings to other schools to get their new worm farms stocked and sold worm leachate at the school fete.

The school uses compost bins and individual rooms received yellow recycling tubs from the City of Kalgoorlie-Boulder. The city provided six 240 -litre recycling bins and servicing, free of cost.

Each classroom is Waste Wise and there are boxes near the photocopiers and around the school for paper that has only been printed on one side, so it can be reused in the kindergarten and the library. We now email school newsletters and only print correspondence that is required to be given to the eldest student of each family.



St Mary's Primary School worm farm.

Curriculum links

As a school we aim to create a curriculum which actively engages students in creating a sustainable future. We aim to do this through educating our students on being active in reducing waste through using compost bins, recycling bins, 'no dig' gardens and worm farms.



We have created a whole school curriculum which explicitly educates students on the 'reduce, reuse & recycle' philosophy.

This year the Year 7 students formed an Environmental Ministry. They are responsible for organising waste free lunches and other various environmental activities.

Waste Wise grants

The \$2000 infrastructure grant and \$5000 Whole School and Community grants were used to create a shaded undercover area containing the following:

- composting area to encourage students, teachers and the canteen to recycle their food scraps.
- second worm farm to accommodate the growing number of worms. We hope to sell worms and castings to parents and people in the community to help educate the wider community.
- students growing vegetables and use them in the canteen and in class cooking.
- recycling bins in all areas of the school including the canteen and staff room.



Plans for the future:

- Chicken pen – in the future we aim to have an active chicken pen to recycle organic scraps.
- Start re-planting in the gardens for each school year between February and December.
- All new teachers to do an internal Waste Wise Professional Development.

Other environmental programs:

- KBULG Junior Landcare Award 2007 & 2009, runner up in 2008.
- World Environment Day – waste free lunch and children wore a badge to celebrate the day.
- Clean up Australia Day – cleaned up the school grounds and surrounding areas.
- Sustainable Business Award 2009.



St Mary's Primary School waste free lunch.



St Mary's Primary School building their first no-dig garden bed.



St Mary's Primary School's vegetable gardens.

St Joseph's Primary School

The school motto *Sharing is Caring* accurately describes the unique pastoral care that is freely given by all members of the St Joseph's Boulder community. It describes the Josephite tradition of seeking out the underprivileged and minority groups in order to provide assistance to those in need.

Waste Wise teachers and coordinators:

- Jade Farrar
- Kath Hawkey
- Jodie Shurmer
- Frank Hall

Waste Wise activities

We celebrated Waste Wise Day on 24 June 2009. Each teacher set up a recycling activity to run for the morning and rotate through the upper and lower blocks of the school.

Classrooms held zero waste lunches and waste audits to see if there was a reduction in the amount of waste produced. Recycling bins were placed in each classroom and staff room. Staff and students also had a tour of the Kalgoorlie Materials Recovery Facility (MRF).

Teachers attended the initial Waste Wise Professional Development day and the Waste Wise/Great Gardens School Vegetable Garden Workshop.

Community involvement

Our Parents and Friends group support our sustainability projects by selling compost from our school to the community.



Curriculum links

Our school has adopted a Sustainability Policy which aims to increase environmental awareness across the entire school. We wish to extend our environmental awareness to reduce, reuse and recycle by educating our staff, students, parents and



St Joseph's Primary School Waste Wise Day Waste Wise Champs.

the wider school community. We have a curriculum plan to ensure that the sustainability message is being taught at all grade levels through integration across Curriculum Learning Areas.

The Year 5 students studied sustainability as a term theme. Activities included having Joanne Gray, Sustainability Officer for the City of Kalgoorlie-Boulder, do a presentation about sustainability.

Waste Wise grants

We used the \$2000 infrastructure grant to establish a composting facility that can cope with all of the school's green waste and organic waste. The compost will be used on-site or sold to the wider community.



St Joseph's students preparing a garden bed at the food garden workshop.

The programs rely heavily on funding. As a school, we have applied for numerous funding opportunities. We have found that the Waste Wise funding has been very useful with direct funding to schools.

Other environmental programs:

- Junior Landcare
- Waterwise
- Solar Energy Grant (Commonwealth)



East Kalgoorlie Primary School

East Kalgoorlie Primary School promotes respect for the culture of our students and who we are. Our students are proud of their Aboriginality. We celebrate being 'Deadly and Smart'. We value diversity, respect our differences and care for each other. Our school recognises all achievements of our students. We strive for excellence and celebrate the progress and efforts made along the way.

Waste Wise teachers and coordinators:

- Principal Donna Bridge
- Dierdre Williams
- Colleen Anderson



Some of the boys talking about what is in their garden.

Waste Wise activities

Each class has reused a tyre to plant a garden and have painted them in bright colours.

We encourage healthy eating and increase knowledge of the variety of fruit and vegetables available that can be grown at school.

By teaching life skills such as gardening and teamwork, learning becomes fun, personal and memorable.

Waste Wise projects offer a purposeful and physical activity for students of all abilities, improves self-esteem through achievement and develops a strong work ethic and sense of environmental responsibility among students. We seek to involve children in every aspect of the learning process.

The process of minimising waste is interactive and enjoyable, as well as educational. We reinforce techniques that allow children to develop their own gardens, compost bins, worm farms and recycling stations at home.

The students have been recycling their food scraps and paper, building and maintaining worm farms and making their own compost.



Painted tyres for the Waste Wise garden.

Curriculum links

Over time, we seek to integrate the vegetable garden, composting, worm farms and recycling stations into the school curriculum.



Community involvement

We received assistance from:

- the local council
- the State Government in the form of a Seed Grant
- Landcare, who donated some plants
- the local mining company KCGM, who donated the truck tyres.

Waste Wise grants

We received the \$2000 infrastructure grant and established vegetable gardens using materials from around the school.

Plans for the future

We hope the school will continue to maintain and improve the gardens throughout the coming years with help from future Rural Clinical School(RCS) students. We want to integrate a cooking project with vegetables, fruits and herbs picked fresh from the garden.

Continual integration of the gardens in the school curriculum – including mathematics, science and health -is important and promotes a lifelong love of gardening and fresh food!

Cosmo Newberry Remote Community School

Cosmo Newberry community is located on the Great Central Highway approximately 90 kilometres north of Laverton. It is a small indigenous community of approximately 50 people. The community and the school have developed a close relationship that works towards promoting pride in our achievements. We are currently working on a joint project of upgrading our school garden into a much larger community garden. Work is in progress!

Waste Wise teachers and coordinators:

- Mr Glen Milliken

Waste Wise activities

We attended the Waste Wise/Great Garden Guys School Vegetable Garden Workshop.

Curriculum links

Waste Wise is integrated into all learning areas in both classrooms. All students in the school are involved.



Community involvement

School and community partnerships are developed to implement the veggie garden to close the recycling loop.

Plans for the future

We plan to work with Skill Hire to develop new programs and to eventually become solar powered. We are also working with the community on developing a much larger community fruit and vegetable garden. This project has started with the upgrade of a bore and fencing of the area.



Using a sandpit for the Waste Wise garden.



Compost tumblers in the background.



Raised garden beds.



O'Connor Primary School

O'Connor Primary School is a friendly school that values the participation of the school community. Specialist teaching programs are provided in the areas of Science, Physical Education, Music and Indonesian. The school site also houses the O'Connor Education Support Centre.

Waste Wise teachers and coordinators:

- Rikki Putland
- Alison Hunter
- Tess Darts
- Marie Hollis
- Nicolle Pollett
- Sandi Fielder
- Andrew Malatios
- Elizabeth Moore
- Helen Sheehan



Releasing the worms.

Waste Wise activities

The fridge worm farms are a great success. They have been painted, and as part of the science curriculum the students studied worm anatomy. We use shredded paper from the office in our worm farm.

Individual classes created their own waste policies, made litter critters, posters, and each classroom has a compost bin. We use raised garden beds for the vegetable garden, which have an automatic reticulation system. The Outdoor Education area is also linked with the garden.

Large 240- litre recycling bins are in every block, and are always really full! We also use 120- litre wheelie bins for collecting food scraps at recess and lunch times. A reuse room is set up in the science room and staff members are encouraged to access materials according to the principles of the 4Rs - rethink, reduce, reuse, and recycle. The administration sends the school newsletters by email and only prints what is required. We have 'Waste Free Wednesday' once a term and continue to conduct regular waste audits.

Environmental awards are also given out. Bike slips are given out during recess and lunch time to

students who keep our school tidy and a winner is drawn once a term to win a bike.

Five teachers and six students attended the Waste Wise/Great Garden Guys School Vegetable Garden Workshop. Teachers also attended the Australian Sustainable Schools Initiative (AuSSI) workshop linking education values and sustainability.

Professional development was held for teachers at the beginning of term and they were shown how to use recycled paper to make their own paper in the classroom. David Gleeson from the Kalgoorlie-Boulder Urban Landcare Group (KBULG) came to encourage staff to visit Karkurla Bushland Park and made seed balls and seed packs to sell.

Joanne Gray worked with staff to make recycled wallets from milk and other juice cartons and encouraged teachers to visit the local Materials Recovery Facility (MRF) to learn about the recycling process. Staff rotated through all of the activities and many took the opportunity to use the paper making kit that was set up for the school with their own classes. Staff found the day very educational and loved the hands-on activities.

Community involvement:

- KBULG supported our garden for the future by donating plants.
- Tyres were taken away from the music garden by a community member and the area was flattened to make way for the new garden. The tyres were recycled by a licensed company following the 4Rs.
- Our local pony club provided the manure we used to get the garden and compost tumblers running effectively.
- We will either sell the worm leachate to parents and community or use it on the school garden. Either way it will save us money.
- Staff partners helped to make the frames for the paper making kit.
- We were the first school to visit the Material Recovery Facility (MRF) and this is now offered to other schools and groups.
- Students toured the Kalgoorlie-Boulder Waste Water Treatment Facility then came back to school and worked on a number of activities in relation to the tours.
- Ring pull competition – staff and students are encouraged to collect as many ring pulls as they can during the school term. These are then counted and the class with the most ring pulls wins a large ring pull trophy. They are donated to Rotary.



Waste Wise grants

The \$2000 infrastructure and \$5000 Whole School and Community grants were combined for our 'Garden for the Future'.

- The aim of the garden is to develop an environmentally friendly produce garden to reduce the amount of waste in the school.
- A composting area allows the recycling of food scraps and paper waste working in conjunction with the pre-existing worm farm.
- This will allow the garden to be fertilised using sustainable fertilisers and compost that has been sourced through the principles of the 4Rs.
- Raised garden beds have been sourced and used to grow fruit and vegetables in an organic environment. Permaculture principles will drive the project.
- A 'reduce' room was also created. Reuse bins are placed throughout the school where the school community can place items for reuse.
- The student environment committee will then sort and store the materials for others to come into the area and select appropriate items for reuse on a needs basis.

Curriculum links

The student environmental group is starting to build long term sustainability principles into our school activities. The group is made up of Year 4 to 7 students to ensure it can be continued from year to year. A small group of these students also represented the school at the Millennium Kids (MK) workshops.

We have an Education Support School on site and a representative who works with the school to make scrap paper pads. They also made an 'enviro tree' which was created out of recycled materials from around the school.



O'Connor Primary School Special Education Centre – students made an 'Enviro Tree' from recycled materials to promote environmental awareness within the school.



Plans for the future:

For 'Recycled Item Days' each student brings something to swap at a mini swap meet. One person's trash is another's treasure. We will apply for the \$10,000 Waste Wise Sustainability grant and continue initiatives throughout the whole school for example, have a 'Waste Wise Wednesday' as a regular day and zero waste lunch weekly, and promote the reuse room.

Other environmental programs:

- Waterwise audited the whole school and we received a \$50,000 grant to replace a lot of our water works.
- Sustainable Schools Initiative
- Millennium Kids
- Coles Junior Landcare Grant – \$1100 received to create a new sustainable memorial garden at the front of the school.
- KBULG
- Solar Schools



O'Connor Primary School Teacher's Professional Development - Aimee Norris and Nahdene Sealey, pressing water out of paper making process.



O'Connor Primary School students visiting the Kalgoorlie Materials Recovery Facility.



O'Connor Primary School Teacher's Professional Development - Nicole Pollett and Davina Hartshorn making a wallet out of a recycled milk carton.

Boulder Primary School

The Boulder community initially developed the school to meet the needs of the area, and its history reflects the changing fortunes of gold mining in the Kalgoorlie-Boulder area. There is a broad curriculum offered at the school which motivates students to continually improve.

Waste Wise teachers and coordinators:

- Sue Mortin
- Deborah Newman
- Debra Rodgers
- Joel Reeve

Waste Wise grants

We have used the \$2000 infrastructure grant and \$5000 Whole School and Community grants to develop our Waste Wise activities introduced by our student based sustainability group. These include:

- initiating and maintaining a second worm farm
- purchasing, installing and maintaining raised garden beds for each cohort of children, which includes a class set of garden tools, the garden beds and soil
- developing composting practices by purchasing a second tumbler and a wheelbarrow to transport the compost
- purchasing equipment to facilitate our recycling practices including scales to weigh the recycling and a trolley to transport the recycling
- promoting Waste Wise practices through designing posters to put around the school and school based competitions.



Part of the vegetable garden and the compost tumbler is in background.



Paper recycling bin and yellow classroom recycling tub (in all classrooms).

Waste Wise activities

The care and maintenance of the worm farms is rotated on a regular basis. These are located at the school. The main school, pre-primary and the kindergarten have vegetable and herb gardens where the worm castings are used to reduce our organic waste.

We have a group of conscientious students and teachers implementing a number of projects within the school called Boulder RULES (Raising our Understanding of Long term Environmental Sustainability). This is a small but active group of students that focus on sustainability and devising projects.

Other Waste Wise activities include:

- 240-litre kerbside recycling bins and yellow tubs for each room
- designing and creating posters
- worm farm mural competition – designs for our worms farms
- sale of worm leachate and castings
- sustainability tips in the school newsletter
- raising chickens offsite at the kindergarten
- directions on photocopiers – how to use duplex (double side)
- purchasing for next year – to aim for recycled products where possible
- reuse of paper – creating scrap pads with single side printed paper
- compost tumblers
- creating a reuse area
- waste free Wednesday.



North Kalgoorlie Primary School

North Kalgoorlie Primary School is located in the vibrant yet tranquil suburb of Lamington. The school first opened in 1902 and boasts a tradition and spirit that brings the community together.

Waste Wise teachers and coordinators:

- Sarah Williamson
- Amy Buttimer



Reusable laminated plant markers.

Waste Wise activities

We attended the initial Waste Wise Professional Development day in March 2009 and learned how to do a waste audit, write a waste policy, form a Waste Wise committee and write a Waste Wise grant application.

We have five worm farms. One was received from the KBULG fridge worm farm given away in 2007. We also have three black round worm farms that were donated by Bunnings. During 2009 we set up a large worm farm in an old enamel bath donated by a parent. This was built to help increase the volume of waste we were reusing. Scraps are collected from the canteen daily and placed into the worm farms. Worm leachate and castings are also collected and used as compost for gardens. We also attended the Waste Wise/Great Gardens School Vegetable Garden Workshop.

Paper is reduced, reused and recycled. Scrap paper containers are in each class and the shredded paper is used for the worms. The year one and two classes made recycled paper in Society and Environment. Also, more teachers are photocopying back to back and there is a recycled paper drawer in the photocopy room for whole sheets of paper that can be reused in the photocopier. We also have six 240-litre blue kerbside recycling bins and yellow tubs for most rooms.

Ink cartridges and toners are collected throughout the school and given to Planet Ark. Ring-pulls are also collected for recycling from the school and wider community. We had a competition to see which class could collect the most ring-pulls and they were donated to Rotary.

During waste free lunches we have two 'golden bin' prizes for the junior and senior classes that have the least amount of rubbish. We are currently having two waste free lunches a term. Our canteen has even taken steps to reduce their waste on waste free lunch days.

Each class has a compost bucket in their classroom. These buckets collect fruit and veggie scraps from 'crunch n sip' which we have daily. They are then placed into the compost that was built from recycled materials.

We hosted World Environment Day where the children dressed in green and donated money towards environmental projects. We also had a waste free lunch on this day. In Term 3 we had a Waste Wise Day each class from pre-primary to Year 7 did a Waste Wise activity. These ranged from making litter collector robots out of recycled materials to learning about the best ways to reduce, reuse and recycle.

We also turned a large pile of waste wood and other materials into garden beds. We created seven garden beds and did not buy any materials for this project. Nails and brackets were donated by parents. We received our Waste Wise grant and at the end of the term and we built our 'no-dig' garden beds out of old newspaper, straw, garden blend soil, compost, horse manure, worm leachate and a thick layer of 'enviro' mulch. At the start of Term 4 we planted our vegetable garden with 16 different varieties of fruit and vegetables. We used the money we raised from World Environmental Day to pay for the water wise 'drip line' reticulation system that was put in soon after.

Curriculum links

At this stage, curriculum integration is organised by each classroom and specialist teachers. Examples of class projects linked to curriculum included:



- Society and Environment: Investigation Communication Participation: sustainability studies.
- Maths Measurement: measuring out the vegetable garden, weighing waste free lunch waste.
- Maths Chance and Data: organising and presenting waste free lunch and waste audit data.
- Science: learning about worms and anaerobic compost.
- English: recounts of visits to the Waste Wise area.
- Technology and Enterprise, Technology Process and Systems: Design the vegetable garden and create a system to allow for sustainability.
- Values Education: a focus of 'my Waste Wise activities' has been on valuing the environment, caring about others and working together as a team.

As well as this, activities from across the curriculum have been covered during our Waste Wise Day.

Community involvement

Bunnings donated trees for World Tree Planting Day. They have also donated worm farms and have helped the student councilors beautify our gardens.

Our parents are regularly involved in Waste Wise activities. They have helped out with our garden and are kept informed by 'The Enviro Patch' which is a Waste Wise segment in our school newsletter.

Our school has been in the newspaper on a number of occasions this year for environmental projects. A 'World Environmental Day' article was written, and pictures from the day were later included in the paper. Our student councillor garden clean up was in the paper on 2 June 2009. Also, on the 11 August 2009, the Kalgoorlie Miner included pictures from our World Tree Planting Day.



Environmental honour certificates.



Vegetable garden.



Compost scraps collection bin to use in the classrooms.



Kalgoorlie Primary School

Built in 1896, Kalgoorlie Primary School is the oldest school in Kalgoorlie. Located in the central business district, students have the unique opportunity of experiencing quality education in the heart of the community.

Waste Wise teachers and coordinators:

- Donna Davies
- Rochelle Hooper
- Sasha Vooght- Simpson

Waste Wise activities

We have doubled our worm farms by using two fridges. The school also has set up a barter system with friends, parents and the community. We trade worms for gardening tools such as shovels and gloves. We get most of the things we need this way and money does not trade hands.

The kindergarten and pre-primary students bring in waste free lunches every day. We started with only a few students bringing them and now have over 80 per cent of the students doing it everyday.

We collect our food scraps from students' lunches, at fruit time and at recess and distribute them around the school to families who have chooks. This means we have no or only small amounts of waste in the Kindergarten and Pre-Primary area which I believe to be a big achievement for our little school.

Our recycling program involves using yellow tubs and big blue 240-litre wheelie bin which have been a huge success. Our school council is also involved in recycling and two student Environmental Ministers oversee the activities.



Students enjoying their waste free lunches.

Curriculum links

An environmental focus throughout 2009 in the Kindergarten involved teaching the kids how and what to recycle and how they can help the environment by turning off light switches, recycling rubbish, eating healthy food, and growing our own food.



All kindergarten and pre-primary students learn the benefits of healthy eating choices by bringing in waste free lunches. By eating healthy food we are healthy and our Earth becomes healthy.

Other environmental programs:

- KBULG provided us with seedballs and we are restructuring the Waste Wise garden from an ornamental to a vegetable garden.
- We have received \$500 Junior Landcare Grant from Australia Post for an indigenous food and plant garden.



Examples of waste free lunch boxes.



More waste free lunches.



Students feeding the worms.



Students learning about worms.



Student holding a worm.



Kambalda West District High School

Kambalda West District High School opened in February 2000 as a new school formed from the joining of West Kambalda Primary School and Kambalda High School. Students from Kambalda West DHS have represented the school most successfully in sporting events, Country Week and cultural events.

Waste Wise teachers and coordinators:

- Elizabeth Aberline Coordinator
- Carolinne Campbell
- Ben Ratz
- Carol Rowntree
- Rebecca Thiesson.

Waste Wise activities

Our Waste Wise bins are decorated at both the primary school and the high school in order to separate recess and lunch items that are thrown away. We also have paper recycling bins in all of the classrooms, staffroom and offices. Areas around the school are set up to collect and recycle aluminium cans and mobile phones.

Teachers attended the Waste Wise/Great Gardens School Vegetable Garden Workshop and students participated in measuring and planning the future garden area.

We are an environmentally sustainable school. Daily, lights and air conditioners are turned off. Three times per week students from Years 6 and 7 empty paper waste bins which are throughout the school including offices.

Our Sustainability Coordinator, along with students, attends all Millennium Kids workshops.



Kambalda District High School waste audit.

Community involvement:

- Community Committee
- Coolgardie Shire
- Karrillon Ground Water

Curriculum links

Teachers integrate Waste Wise projects across the curriculum.



Other environmental programs

- KBULG provided us with seedballs and we are restructuring the Waste Wise garden from an ornamental to a vegetable garden.
- We have received \$500 Junior Landcare Grant from Australia Post for an indigenous food and useable plant garden.

Waste Wise grants

We received the \$2000 infrastructure grant to establish a Waste Wise vegetable garden to minimise waste.

Plans for the future:

- class roster system to maintain the gardens
- waste free lunch days to be held more often
- whole school Waste Wise day
- setting up a worm farm, obtain worms and sell worm leachate
- establishing a community fundraising committee
- beginning a recycling system from yard rubbish bins
- reducing waste through separation of food, paper and non recyclables.

Other environmental programs:

- Sustainable Schools Initiative
- Waterwise
- Millennium Kids.



Kambalda District High School students measuring up the future vegetable garden.



Kalgoorlie-Boulder Community High School

Kalgoorlie-Boulder Community High School was opened in 2006 and proudly provides a full range of lower secondary courses to students in years 8 to 10. The school is separated into three learning communities. The learning community structure provides students with a smaller, more cohesive learning environment with a select team of teachers.

Waste Wise teachers and coordinators:

- Katie Seghini

Waste Wise activities

Two teachers attended a Waste Wise introductory workshop in Term 1 2009. Since then they have completed their first waste audit and the Year 9's have made mini worm farms. These activities continue to motivate and engage students to reduce the amount of waste going to landfill.



Making a mini worm farm.

Community involvement

KBCHS school partners with Kalgoorlie Primary School by involving the pre-primary students with the worm farm. The school gardens also provide an area for inclusive learning through the Education Support Centre.



Making a mini worm farm.

Curriculum links

Curriculum links include the Year 9 Earth and Beyond pilot program which focuses on sustainability issues associated with waste and landfill, recycling and the ecological footprint of humans in developed countries such as Australia. This topic incorporates Australian statistics with issues of landfill, student home waste audits, recycling awareness and understanding the benefits worm farming.



Within Year 8 Society and the Environment, students also spend considerable time on the management of water, soil and the need to reduce human impact on natural environments.

Plans for the future:

This high school has great plans to reduce their waste in the future. Some ideas to reuse and recycle paper include putting recycling tubs in every classroom and reusing paper to make paper pads. Whole school projects include forming an environmental student group, participation in Clean Up Australia day, continuation of the Year 9 Earth and Beyond science program and excursions to further engage students.

Term 3 2009

Waste Wise/Great Gardens School Vegetable Garden Workshop

The Great Garden Guys hosted a workshop for all Waste Wise teachers in the Goldfields at O'Connor Primary School. Teachers and students learned how to design and maintain a Waste Wise garden. Through practical hands on activities they learned:

- how to develop effective and successful school food gardens
- how to grow fruit and vegetables in the Goldfields region
- what to source and how to source materials for the garden
- low cost options
- how to make the most of your growing space
- what students can do and how to get them involved.



Teachers helping out at the Great Gardens workshop.



Students helping out at the Great Gardens workshop.

For more information
go to
www.wastewise.wa.gov.au

