



Wide World of Waste

Mechanics of Organics

Catchment Chronicles

Water Welfare



Waste Watchers

Report 2009

Presented to

 City of Ryde



Macquarie *Generation*



Executive Summary

Keep Australia Beautiful NSW experienced a very successful and constructive teaching period during Term 1 and 2, 2009. During this time, Waste Watchers achieved a number of key outcomes for the City of Ryde Council including:

- Visiting 17 primary schools, with 1920 participants over 20 days.
- Delivery of the Water Welfare module at 3 schools.
- Delivery of the Catchment Chronicles module at 14 schools.
- Improved awareness of local stormwater issues with an understanding of local waterways.
- Attitude change regarding our water leading to more appropriate water use behaviours.

The Waste Watchers workshops are designed to satisfy not only government policy and legislation concerning environmental education, but also syllabus outcomes for primary schools set out by the Board of Studies, and the objectives of Council.

During the Water Welfare module, students learnt how we obtain water from the natural water cycle. The need to care for, and conserve our water was apparent as students investigated just how limited our water supply actually is! Conservation strategies were discussed focusing on water use at home and school. Workshops motivated children to look at, and change personal behaviours and practices if not currently appropriate.

During the Catchment Chronicles module, students investigated the effect of stormwater pollution on their local catchment. A catchment story helped students understand the cumulative affect of stormwater pollution, whilst other activities helped them identify appropriate behaviours to guarantee the health of our waterways.

Our other modules increase awareness of many environmental issues and include:

- Mechanics of Organics
- Wide World of Waste
- Sustainability Sleuths (a new addition to our current modules – to be launched in 2009)!

Students at schools who have registered previously have attained (and retained) large amounts of information from their previous workshops. However, Keep Australia Beautiful NSW, **strongly** recommends that City of Ryde Council considers utilising one of these different modules for its next booking. Alternatively, council could offer a choice of modules (different from Water Welfare / Catchment Chronicles), as these modules have been the *only* options for your schools since our professional relationship started in 2007.

Some schools registered this year with requests for a module change as they have taken part in both previously. When we were unable to change the module (as directed by City of Ryde Council), the schools pulled out of the program.

Keep Australia Beautiful NSW coordinates other successful environmental programs including:

- Tidy Towns, Sustainable Communities
- Clean Beach Challenge
- Sustainable Cities

Keep Australia Beautiful NSW appreciates the support of Council and looks forward to working with you again in the future. The following document provides detailed outcomes and results achieved by Waste Watchers for the City of Ryde Council in March, April and May 2009.

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1.0 Introduction

Waste Watchers visited 17 schools in the Ryde area over 20 days in Terms 1 and 2, 2009. The program targeted primary students from Kindergarten to Year 6. This year there were 1920 participants.

Participants choosing the Water Welfare module investigated appropriate water use behaviours and identified problems associated with water pollution and wastage. Concepts such as water being a universal need, the water cycle being our means for collecting this resource and water conservation being an important priority were discussed in depth during each workshop. Strategies for appropriate water use and sharing were investigated. Sydney's current water restrictions were also highlighted.

Students at the schools choosing the Catchment Chronicles module analysed activities that adversely impact on catchments. The harmful consequences of these behaviours with regard to water quality and biodiversity were evaluated. Depending on the location of each school, students looked at the effects of certain actions on their local waterways, some of these included Kitty's Creek and Stranger's Creek.

1.1 About Waste Watchers

Waste Watchers is the State's leading environmental education program. Last year, 38,133 participants from 330 schools in 37 local government areas benefited from the activities in this informative and stimulating program. Our specialist waste educators deliver a fun-filled and interactive lesson.

A high quality education service is provided to all stakeholders with administration and liaison handled by Keep Australia Beautiful NSW, resource material distributed to participants, and a comprehensive report written for the host council.

1.2 Policy and Legislative Framework

Waste Watchers assists councils achieve obligations under a range of environmental and sustainability policies.

- Federal level:
 - Environmental Education for a Sustainable Future – National Action Plan
 - Caring for Our Future – The Australian Government Strategy for the UN Decade of Education for Sustainable Development, 2005 – 2014
- State level:
 - Learning for Sustainability – NSW Environmental Education Plan 2007 – 2010
 - NSW Biodiversity Strategy
 - NSW Waste Avoidance and Resource Recovery Strategy (2003)
 - Water Management in NSW

The program also addresses primary school teaching requirements given in NSW Board of Studies K – 6 syllabus documents (Appendix 1):

- English
- Human Society and its Environment
- Science and Technology
- Personal Development, Health and Physical Education

2.0 Description of Workshops

Workshops promoted the hosting role of Council. An acknowledgment card was displayed and indicated whenever appropriate during discussions and answering students' questions. The specifics of Council's services and regulations were an integral part of the activities. Thanks go to Council staff that completed the Information Form prior to the booking. This allowed our Education Officer to be fully informed regarding local information relevant to the schools and participants. The program was relevant and provided valuable clarification of local issues.

To ensure optimum educational outcomes the following guidelines were implemented:

- A maximum of 4 workshops per day were conducted.
- Workshops were generally one hour in duration; shorter for infants classes.
- One class group attended each workshop.
- An indoor central location was used at each school.
- Schools provided details for our educator about environmental practices in their grounds.

14 schools selected the Water Welfare module:

1. St Kevin's Primary, Eastwood
2. St Therese Primary, Eastwood
3. Gladesville PS
4. St Michael's Primary, Meadowbank
5. St Anthony's Primary, Marsfield
6. Eastwood Heights PS
7. North Ryde PS
8. Our Lady Queen of Peace Primary, Gladesville
9. Northcross Christian School, Ryde
10. Eastwood PS
11. West Ryde PS
12. Meadowbank PS
13. Ryde PS
14. Melrose Park PS

3 schools selected the Catchment Chronicles module:

1. Ryde East PS
2. Truscott Street PS
3. Holy Spirit School, North Ryde

2.1 Water Welfare: Module Overview

Activities conducted help students understand the natural processes of the water cycle, how we use and allocate water, and the need to use it wisely. The importance of caring for and conserving our water is highlighted. Water is a universal need and sharing strategies are investigated. Students have fun examining and assessing appropriate strategies and behaviours. The module provides a thought provoking challenge as students investigate just how precious and limited our water is.



Our Waste Watchers educator successfully delivered the Water Welfare module in Ryde as requested by Council. Students displayed a high level of interest and investigated local water issues.

2.2 Water Welfare: Lesson Plan Summary

AIM:

This module aims to foster students' understanding of the value of water, and to develop attitudes and skills conducive to the achievement of sustainable management of this limited natural resource

OBJECTIVES:

Students will develop knowledge and understandings about:

- Sources of water
- Need for water
- Appropriate and inappropriate use of water

Students will develop skills in:

- Identifying natural functions within the water cycle
- Communicating the importance of caring for water
- Adopting behaviours and practices that conserve water

Students will develop values and attitudes relating to:

- A respect for the natural functions of water in the environment
- An appreciation of water as a limited resource
- A commitment to act for water conservation by supporting sustainable water management

KEY CONCEPTS:

- Water is a universal need
- Water cycle processes
- The value of water
- Appropriate/inappropriate use of water (including sharing)
- Strategies to reduce personal/domestic water consumption

ACTIVITIES MAY INCLUDE BUT WILL NOT BE LIMITED TO:

Role plays, labelling, discussion, picture/poster analysis, water investigations such as measuring and pouring, activity investigations such as cleaning teeth and washing paint brushes, compare and contrast, brainstorm, hypothetical scenarios.

2.3 Catchment Chronicles: Module Overview

The Catchment Chronicles module clearly demonstrates negative affects of inappropriate behaviours in a catchment. It is interactive and informative. Students role-play the harmful activities carried out by characters in a catchment story. Through observing this cumulative affect, it is readily seen that even small, seemingly insignificant actions at home can have a major impact on water quality and biodiversity. Participants are challenged to adopt environmentally friendly practices to protect our fragile waterways. Students also discover the difference between sewage and stormwater.



Our Waste Watchers educator successfully delivered the Catchment Chronicles module in Ryde as requested by Council. Students displayed a high level of interest and investigated issues relevant to the local catchment.

2.4 Catchment Chronicles: Lesson Plan Summary

AIM:

This module aims to foster students' understandings of how and why appropriate behaviours and activities will prevent Stormwater pollutants entering our waterways. This assists in developing skills and attitudes that promote the achievement of environmentally sustainable management.

OBJECTIVES:

Students will develop knowledge and understandings about:

- The nature and function of ecosystems and how they are related
- The impact of people on environments
- Catchment processes
- Stormwater infrastructure

Students will develop skills in:

- Identifying and assessing environmental problems
- Adopting behaviours and practices that protect the environment

- Communicating environmental problems to others

Students will develop values and attitudes relating to:

- A sustainable catchment management philosophy
- A respect for life on earth
- A commitment to act for the environment by supporting long-term solutions to environmental problems

KEY CONCEPTS:

- The difference between sewage and stormwater.
- Definition and function of a catchment.
- The school's surrounding catchment and stormwater infrastructure.
- Appropriate / inappropriate waste disposal and actions and their effects on our waterways.
- Strategies to act positively to prevent stormwater pollution.

ACTIVITIES MAY INCLUDE BUT WILL NOT BE LIMITED TO:

Discussion, puzzles, picture/poster analysis, compare and contrast, story role play, catchment investigations such as pouring water and observing flow, activity investigations such as effects of dropping litter, using detergents outside and not collecting dog droppings, brainstorm, hypothetical scenarios.

3.0 Timetable for City of Ryde 2009

School	Visit Duration	Last Participated
St Kevin's Primary, Eastwood	2 days	NEW
St Therese Primary, Denistone	1 day	2007
Ryde East PS	2 days	2008
Gladesville PS	1 day	2008
St Michaels Primary, Meadowbank	1 day	2008
St. Anthony's Primary, Marsfield	1 day	NEW
Eastwood Heights PS	1 day	NEW
North Ryde PS	1 day	2008
Our Lady Queen of Peace Primary, Gladesville	2 days	NEW
Northcross Christian School, Ryde	1 day	2007
Eastwood PS	1 day	2007
Truscott Street PS	1 day	2008
West Ryde PS	1 day	2008
Meadowbank PS	1 day	2007
Ryde PS	1 day	2008
Holy Spirit School, North Ryde	1 day	2008
Melrose Park PS	1 day	NEW

Notes:

Ermington PS

- NOT keen to book as they had experienced both modules previously.

Truscott PS

- Specifically requested recycling units as both water modules had been delivered previously. They did end up participating but would prefer a change next time.

Cancellations:

Kent Road PS

- Cancelled 18.2.09 an additional day given to St Kevin's Primary and Ryde East PS.

Total days of program delivery	20
Total schools participating	17
Total number of NEW schools	5
Total students participating	1920
Educator:	Peta Notari

Date	School	Contact	Time	Grade	No.
Tues 31 st Mar	St Kevin's Primary WELFARE	Adam Nolan	9.00-10.00	5	21
			10.00-10.55	2	25
			11.35-12.35	2	25
			12.35-1.35	5	22
Wed 1 st Apr	St Therese School WELFARE	Rita Kolibac	8.45 – 9.45	4	30
			9.45 – 10.45	3	31
			11.10 – 11.55	5	16
			11.55 – 12.40	6	18
Thurs 2 nd Apr	Ryde East PS CATCHMENT	Mark Thompson	9.30-10.20	5/6	24
			10.25-11.10	5	27
			11.45-12.45	5/6	31
			2.05-3.05	6	27
Fri 3 rd Apr	Gladesville PS WELFARE	Judith Partland	9.10-10.10	1	24
			10.10-11.10	1	23
			12.00-1.00	1	24
Mon 6 th Apr	St Michaels Primary WELFARE	Debbie Bestulic	9.00-10.00	2	32
			10.00-11.00	2	32
			11.30-12.30	2	32
Tues 7 th Apr	St Anthony's Primary WELFARE	Sue Blyth	9.00-10.00	6	19
			10.00-11.00	5	27
			11.30-12.30	4	31
			2.00-3.00	3	25
Wed 8 th Apr	Eastwood Heights PS WELFARE	Carly Lloyd	9.30-10.30	6	30
			12.00-1.00	5/6	30
			2.30-3.30	5	31
Thurs 9 th Apr	Ryde East PS CATCHMENT	Mark Thompson	11.45-12.45	4	23
			2.00-3.00	4	31
Wed 29 th Apr	North Ryde PS WELFARE	Suzie/Bridget	9.10-10.10	3	26
			10.10-11.10	4	29
			12.15-1.15	5/6	28
			2.10-3.10	5/6	28
Thurs 30 th Apr	Our Lady Queen of Peace Primary WELFARE	Matt Tyson Emily Press	9.00-10.00	4	25
			10.00-11.00	4	25
			11.30-12.30	5	30
			2.00-3.00	6	26
Fri 1 st May	Our Lady Queen of Peace Primary WELFARE	Matt Tyson Emily Press	9.00-10.00	3	32
			10.00-11.00	2	28
			11.30-12.30	2	29
Mon 4 th May	Northcross Christian School WELFARE	Emily Southerton	9.40-10.40	3/4	28
			11.00-12.00	3/4	28
			12.00-1.00	3/4	28
			1.50-2.50	3	30

Tues 5 th May	Eastwood PS WELFARE	Lyn Edwards	9.10-10.10	4	25
			10.10-11.10	4	26
			11.40-12.40	4	26
			2.00-3.00	4	26
Wed 6 th May	Truscott PS CATCHMENT	Julian Millar	9.30-10.15	1	25
			10.15-11.15	1	25
			11.40-12.40	2	22
			2.00-3.00	2	24
Thurs 7 th May	West Ryde PS WELFARE	Rodney Yates	9.00-10.00	4/5	28
			10.00-11.00	1/2	21
			12.10-1.10	1	21
			2.00-3.00	1	20
Fri 8 th May	Meadowbank PS WELFARE	Roger O'Keefe	9.00-10.00	4	28
			10.00-11.00	3	29
			11.30-12.30	2	20
			1.40-2.40	1	22
Mon 11 th May	St Kevin's Primary WELFARE	Adam Nolan	9.00-10.00	6	27
			10.00-10.55	4	23
			11.35-12.35	6	29
			12.35-1.35	4	23
Tues 12 th May	Ryde PS WELFARE	Lyndall Westover	9.00-10.00	6	30
			10.00-11.00	5/6	30
			11.30-12.30	3/4/5/6	30
			2.00-3.00	4/5	30
Wed 13 th May	Holy Spirit School CATCHMENT CONFIRMED MEDIA VISIT	Amanda Westgate	8.55-9.55	1	29
			9.55-10.55	1	29
			11.25-12.25	1	28
Thurs 14 th May	Melrose Park PS WELFARE	Sally Barhon	9.00-10.00	2	20
			10.00-11.00	3/4	26
			11.30-12.30	1	20
			2.00-3.00	5/6	27

Total Participants: 1920

4.0 Participant Resources

Schools and participating teachers were given a number of resources and supplementary program information. This will encourage the on-going teaching of environmental issues and foster positive behaviours and attitudes to encourage an environmentally sustainable future. The material was sourced from a wide range of Federal and State government departments, industry organisations and individual companies.

The Keep Australia Beautiful NSW Environmental Education Resources CD was also widely distributed and contains valuable follow-up material and relevant website links. Students also received Waste Watchers bookmarks for participating in the workshops.

4.1 Schools

Each Waste Watchers workshop was delivered to the Ryde schools by a professional, fully trained teacher. Each school was provided with the following resources from a wide variety of stakeholders:

Books and posters:

1. A Keep the Seas Plastic Free poster (Natural Heritage Trust)
2. A Pollution Kills poster (Australian Maritime Safety Authority)
3. A 'Clean Out' chemical collections poster (Resource NSW)
4. A Return your Unwanted Medicines (RUM) poster
5. Certificate of Participation acknowledging Council's hosting role (Appendix 1)

An information pack containing:

1. Syllabus links (Appendix 1)
2. Module information (Appendix 1)
3. School newsletter for each family - extending information to a wider audience (Appendix 1)
4. Waste Watchers Environmental Education Resources CD
5. Template letter of invitation to a low waste lunch (Appendix 1)
6. Extra fliers and pamphlets relating to waste issues including:
 - "Oil Recycling" (Product Stewardship for oil program)
 - "Smart Paint Disposal" (Australian Paint Manufacturers' Federation)
 - "Return Unwanted Medicines to your Pharmacy" pamphlet (Return Unwanted Medicines Project)
 - "Chewing Gum Fact Sheet" (Keep Australia Beautiful and the Wrigley Co)
 - "Protecting our Wildlife: Responsible Pet Ownership" (Department of Environment and Heritage)
 - "Easy guide to Composting" and "Easy Guide to Worm Farming" (Department of Environment and Climate Change)

4.2 Teachers

Each teacher received:

- Evaluation form (Appendix 2)
- Teacher notes and follow up ideas (Appendix 1)
- Module information (Appendix 1)
- A newsletter with information related to waste issues in Ryde (Appendix 1).

5.0 Responses to the Program

The presentations were conducted across the Ryde area. General community awareness and response are described below.

Observations:

- All students could relate to, and displayed high interest in the issues addressed.
- Students were eager to go home and teach their families the things they learnt.
- Students responded in a positive manner and enjoyed the hands-on activities.
- The catchment story made an obvious impact on students who hadn't realized the impact of their actions on local waterways.
- Many creative water saving strategies were devised to save and protect our water supplies.

The new schools were very keen to have us visit and are looking forward to our next visit. The schools that have a regular participation with us were keen to have us back again and requested other topics to increase their environmental education scope throughout the school.

School Summaries

St Kevin's Primary, Eastwood

A new school to the Waste Watchers program. The children were very excited to learn of many creative ways to save water both at home and school. They knew of all the standard ones, but were keen to think of unusual ones. The older students were horrified to learn of the current state of the world's water supply. It made such an impact in fact, that they told all their mates during recess and lunch. They also suggested talking to their parents about better water usage at home.

St Therese Primary, Dennistone

The children at this school remembered the big green board from last year and consequently, thought it was the same topic. They were excited to see a different module, stimulus material and experience different activities. Children were keen to share their own water saving strategies and the older students were horrified to learn of the state of the world's water supply.

Ryde East PS

This school booked in 2008 with years 3/4 and chose the Catchment Chronicles module and registered again this year with years 5/6 (last years 3/4's) with the same module. Students from last year did remember the module and suggested to their teacher that they 'saw this last year'. The school perhaps, should have chosen different grades or a different topic to last years.

The educator did try to confirm this module choice in the lead up to their allocated day and was told that they did in fact, 'want the same one as last year because it was so good'. The educator mentioned this feedback to the contact teacher who agreed that next time they will chose a different module.

Gladesville PS

Two of the three year one classes gave the educator the impression that they were the more advanced classes as they were able to offer more in depth discussion about the water cycle and were also able to repeat the correct terminology more easily. The children enjoyed themselves and came up with new and creative ways to save water during their everyday activities.

St Michaels Primary, Meadowbank

The children here were very keen to learn about water in general. The children claimed that they would adopt many of the varied water saving strategies that came out of the workshops. They found this aspect very valuable. A father of a child in one class, is a plumber and the child therefore had a valuable input into the workshops. He enjoyed sharing their water saving tips from home.

St Anthony's Primary, Marsfield

The children were great to work with and were aware of common sense water saving strategies but were keen to learn new and creative ways to save water. Students shared their real life experiences freely.

Eastwood Heights PS

The class sizes were increased as another class was spilt up – this made the duration of the activities longer resulting in some students becoming restless and some content and activities needed to be omitted as there was a push for time. Students did admit to wasting water at various times in their lives but claimed these new ideas would alter their behaviour.

North Ryde PS

This school was excited to show off their environmental initiatives. The children were also keen to share their ideas. The older children were horrified to learn of the real state of the world's water supply.

Our Lady Queen of Peace Primary, Gladesville

This school has started a veggie garden and grows a variety of veggies like capsicum and pumpkins. They were keen to have environmental workshops with Waste Watchers. The older children were disgusted that some people are forced to drink unsavory water – a basic need but the only water they have access to. This aspect of the workshops was valuable as students began to think about how lucky they are and that they need to protect the clean water they have here.

Northcross Christian School, Ryde

This school last registered in 2007 so the visual nature was very appealing to students. Students were motivated to help protect and conserve our water supplies. The contact teacher had moved from a school in another council LGA that we service and had seen the invitation to participate this year and therefore, registered for Waste Watchers workshops.

Eastwood PS

This school is huge! They have a least 4 classes for each grade, a four stream school from k-6. All participating teachers mentioned the same thing....that it would be very beneficial if a longer Waste Watchers visit to their school was supported so all classes could take part. Staff also mentioned that a change in module from year to year to cover a wide range of environmental issues would be valuable as they are currently placing an important emphasis on environmental initiatives.

Truscott Street PS

The children were all really excited to participate as the colourful and vibrant nature of the display really caught their interest. Students had no idea how much of an affect their rubbish had on animals and the environment. Students were successfully able to relay the movement path of stormwater by the end of the workshops.

West Ryde PS

The children in 4/5T were very savvy when it came to testing their knowledge on the water cycle which was an indication of the effectiveness of last years workshops – information was retained. The three year one classes were a lot less knowledgeable (understandably), but large numbers of children with little or no English, made workshops with these classes a challenge!

However, children were asked by the Education Officer to notify teachers within the school if they saw a dripping tap so that it could be logged in the maintenance book and thus repaired. A teacher was commenting in the staffroom at lunch that she had all these children coming up to her telling her about leaking taps – she was not aware of the workshops and that the children had been asked to do so by the Education Officer! This showed that students were thinking about the content of the workshops even after they had left their sessions!

Meadowbank PS

The children were keen to visit Waste Watchers and learnt new things about the water cycle. They also insisted they would start to implement some of their new found water saving strategies at home.

Ryde PS

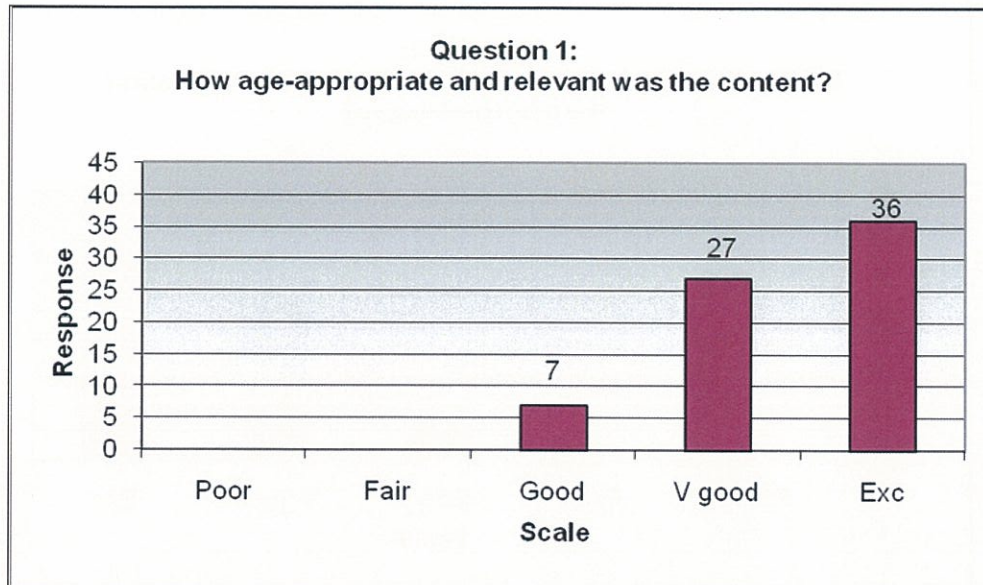
The students had seen this same module last year and suggested they knew it all already! It was clear from the group work and discussion however, that this was not the case! Older students were told of statistics revealing just how bad the quality of the world's water is and that this is the water some countries are forced to drink because it's the only water they have access to. This impacted on students greatly and they insisted that it would be enough to change their behaviours and that they would stop taking water for granted, and would instead, see themselves as lucky for having access to safe, quality water.

6.0 Evaluation of the Program

An evaluation form was given to each participating class teacher seeking feedback and suggestions of ways to further develop the Waste Watchers program. Teachers were asked to grade on a 5-point scale from *poor* through to *excellent* for five questions. Question Six asked which of our modules teachers would like their students to experience next time. The last three questions gave teachers the opportunity to offer personal feedback related to other environmental education services that they would like offered to their school, suggestions for improvements to the current program and record student comments and responses to the program.

73 evaluations were handed out and 70 evaluations were completed and returned to the educator. Not all respondents answered every question. Completed evaluation forms can be found in Appendix 2.

The information has been collated, graphed and analysed, and shows the following results.

Question 1

Our program is effectively tailored for all primary aged students from Kindergarten through to Year 6.

During the workshops, younger students were taught the basic consequences of littering, the impact of this on creeks and rivers and how to reduce the amount of water we use for everyday activities at home and school. Children were enlightened to various aspects of the water cycle and were made aware that there is more to water than just the tap and pipes as these only deliver water to us from the natural environment.

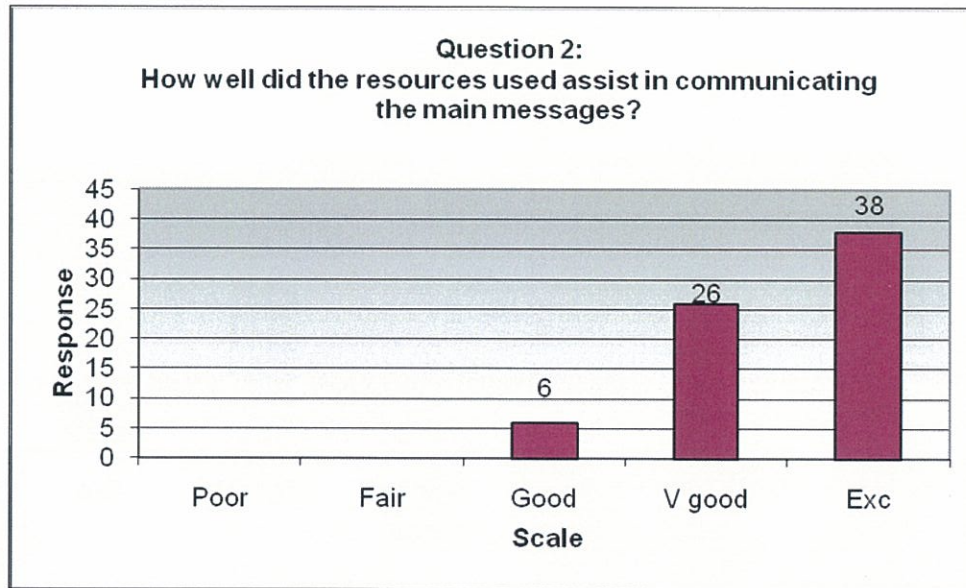
Older students were challenged with activities that required them to think more critically and creatively about water conservation strategies. The dire state of the world's water supply was demonstrated using a sequence of statistics at the end of the workshop. This was a lasting thought for students who left their workshop understanding the poor quality water some countries have access to, and feeling a strong empathy towards those who are forced to drink this water, the only water they have!

Teacher Comments

- I thought it was very well organised and delivered. The children were very interested and engaged. There was a good variety of teaching strategies and activities. Visuals were very helpful also.
- Great presentation - very effective. Reinforces curriculum.
- The amount of information discussed and the sequence of ideas was excellent for the session.
- All fantastic!

Student Comments:

- I found it a good reality check, I now the way we use water, and how some people live.
- Quite good, I learnt lots of new words.
- Very environmental.
- Very interesting.
- Disturbing!
- I learnt about how little water we have on our earth.
- It was definitely excellent.

Question 2

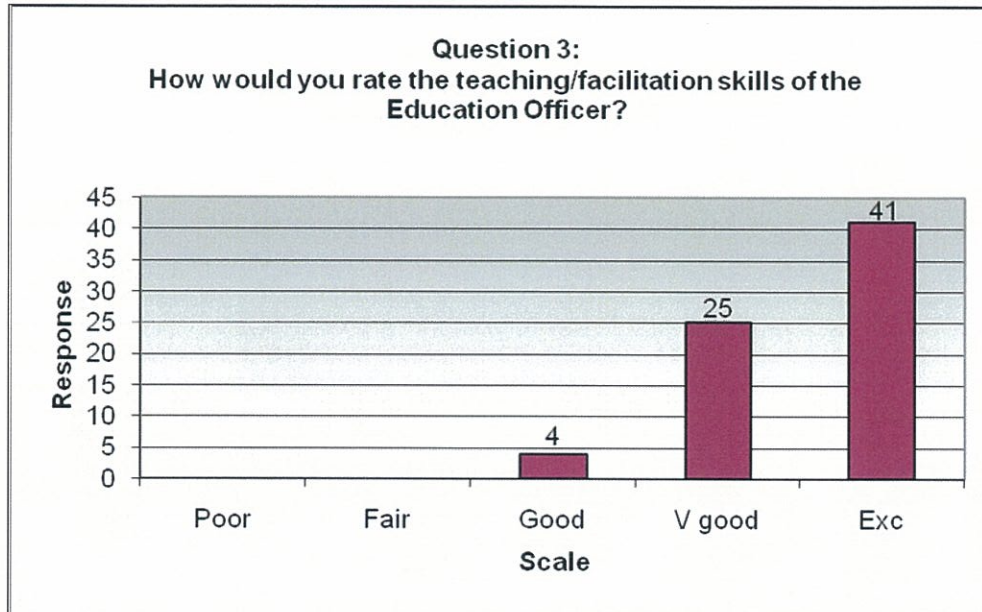
The resources used by Waste Watchers were very beneficial in communicating the main messages and were shown to be appropriate for students from all backgrounds. The resources were designed specifically so that participants can easily relate to the topics covered during the Waste Watchers workshops.

Teacher Comments:

- This is a really good program - the water examples are very graphic - the bags were fun - thank you.
- Excellent, really informative and the visuals really helped to engage and educate the children. Teachers loved it too! Thankyou so much! Students loved participating in the story.
- The children enjoyed all the hands on participation with "One day it rained".
- A lovely mix of information and activities. Thank you!

Student Comments:

- I thought it was really good - especially the duck in the tank activity (Daisy).
- I liked pouring in the bubbles - it was cool (Hayden).
- Display was large enough for everyone to see clearly.
- Puzzle was fun.
- I loved the pictures and model of rainfall.

Question 3

Teachers rated the teaching skills of the Education Officer very highly. Keep Australia Beautiful NSW Education Officers are teacher qualified and are shown to have excellent skills to help implement the key messages within the program. Their ability to respond to behaviour management needs and build effective rapport with the students further aided the efficiency of the program.

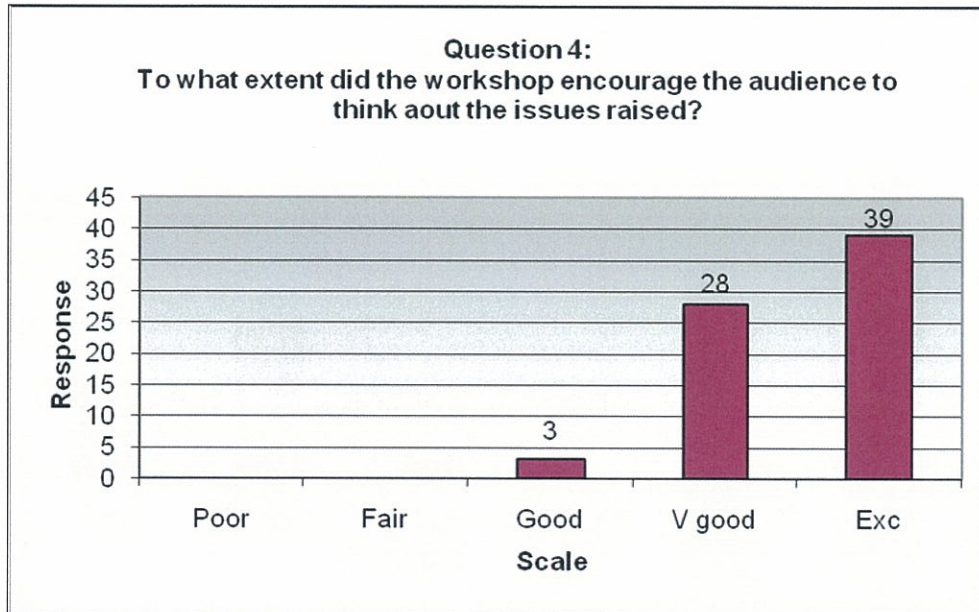
Keep Australia Beautiful NSW believes in achieving maximum positive change to the NSW environment. The enthusiasm and passion of the Education Officer helped to facilitate this for the City of Ryde Council, and the participating schools.

Teacher Comments:

- It was great to see Peta so passionate about the cause!
- The lesson was creative and resourceful. Pacing of lesson was excellent and student's attention was maintained throughout session. Students were motivated.
- Excellent use of language cues. Thank you!
- The presentation had all students motivated and involved.
- I thought it was very good. A lot covered in an hour session. Child involvement was great!
- Very informative session. Instructor talked on children's level well and kept their concentration.
- An excellent program - age appropriate, repeated messages, great teaching practise. Very good presentation, clear, positive, fun. Students were very engaged and interested.
- It was really engaging and everyone was interested and involved.
- Peta was a great presenter!

Student Comments:

- Fun activities.
- Enjoyed the role plays.

Question 4

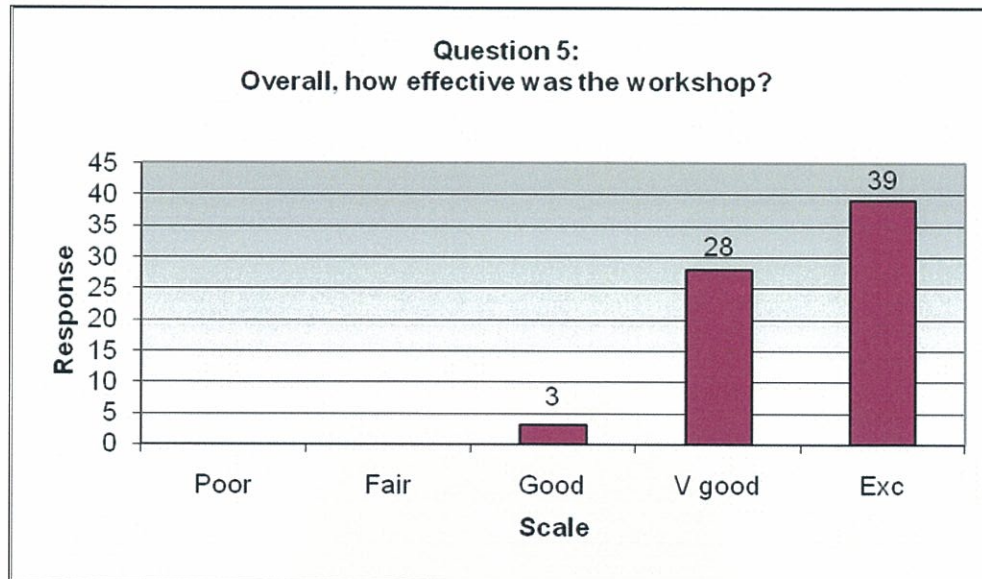
Students were empowered with a greater understanding of the need for appropriate behaviours and actions in their local and home environments. Workshops equipped students to utilise their experiences inside and outside the school environment. Students were motivated and involved in the discussions and hands-on activities facilitated by the Waste Watchers educator. Participants were encouraged to take the information home to educate their family and friends which enhanced the effectiveness of the program and extended its influence into broader communities.

Teacher Comments

- Students were shocked with the statistics of other counties and they had comments about how they should save water and how lucky they were to live in Australia. Very knowledgeable (educator).
- Students found the workshop to be fun and different. They enjoyed the learning experience and it related to past learning they have had. It was interactive which kept them interested the whole time.
- Children were interested and asked relevant questions.
- Kids loved it! One kid said "awesome" - he couldn't wait to see how Porters Creek would be like at the end of the session.

Student Comments:

- I found heaps good and insightful, it will make me think twice about my water usage.
- Taught me how to stop wasting water.
- It showed us a number of ways to re-use water.
- Use large loads rather than small loads [in the laundry].
- Wash vegetables in small container - use left over water for pets, garden or washing hands.
- Most students realised how bad it was to pollute waterways - Some didn't realise how bad it actually was!

Question 5

Overall the workshop was considered to be extremely effective. The responses by teachers and students to the Waste Watchers program in the Ryde area have been very positive. Students and teachers were engaged and many showed a high level of interest in environmental conservation. Teachers hoped the program would return again and be available for a greater number of their classes next time.

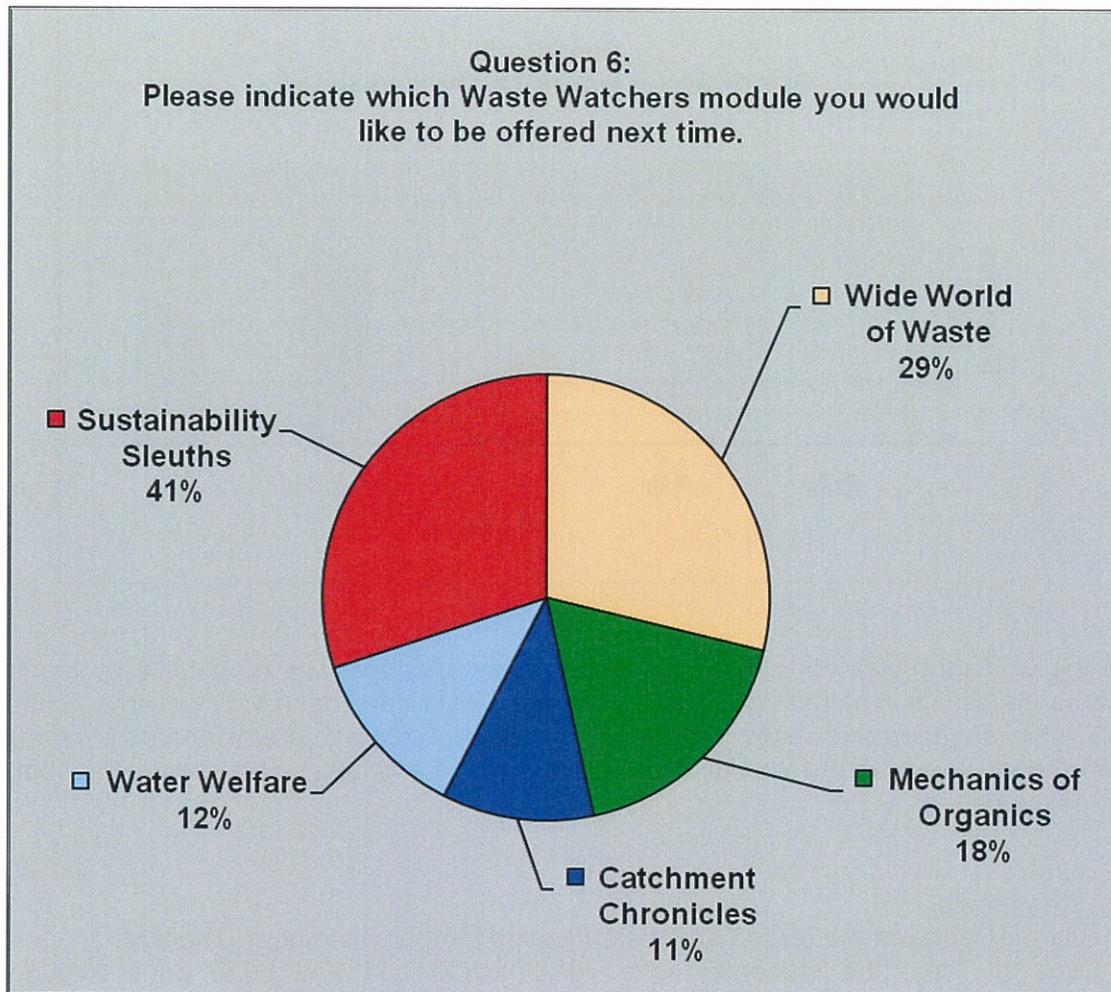
Teacher Comments

- Students enjoyed the lesson and were focused for the whole hour. Thanks!
- Love it! They [the students] were very excited and had huge grins throughout the presentation.
- The program illustrated our current water issues effectively. I liked that the students were able to interact and discuss these issues.
- The presentation with all the visual aids and the children participating was very engaging and interesting for the class. The program is outstanding! The students were able to repeat the cycle 'gutter/drain/pipes' by the end of the presentation.

Student Comments:

- We don't have much fresh water.
- I have learnt that water is precious and we need to look after it.
- I think it is a good program because it teaches children to save water.
- Good working in groups.
- It was fun, enjoyable and we learnt a lot about saving water and the water cycle.
- Now know the way litter from drains travels to the rivers.
- All rubbish needs to be in bins.
- Only thing down the drain is the rain.
- Keep your rubbish till you find a bin.

Question 6



This graph illustrates the response to Question Six from teachers at the schools that participated in the program. A majority of teachers (41%) suggested the Sustainability Sleuths module would be good to cover with students. The Wide World of Waste module and the Mechanics of Organics module also popular choices for teachers (29% and 18% respectively).

Waste Watchers **strongly recommends** that City of Ryde Council selects either of these three modules (Sustainability Sleuths, Wide World of Waste or Mechanics of Organics) next time, or again give a choice of topic to the schools, including two of these preferred three. Teachers really see the value of the Waste Watchers program – our resources and our delivery style. They would really appreciate our program again but with a different module so they can further expand their commitment to environmental education within their schools.

Teacher Comment:

- All modules taught will help the understanding of students' need to be environmental friends.

Question 7

Teachers were given the opportunity to suggest changes or improvements to the workshop. Responses to this question were minimal, indicating that teachers were well satisfied with the current program. Out of 70 evaluations completed, only 18 suggestions were made; two of these were relating to longer visits at each school and a change in module selection.

1. Maybe find a tiny container to keep the two drops [of water] safe.
 - This is a good idea but the comical aspect of this, is that the drops evaporate in the students hand and results in less water for all of us!
2. Colour would be great (jigsaw puzzle).
 - Our resources are now past the trial phase and will be drawn up professionally.
3. Explanation of some technical terms (eg industry and agriculture).
 - This is usually included in the workshops for older children, but this class was running late and so various aspects were omitted.
4. I would like this program to extend from stage 1 to stage 3 every year as environmental education is very predominate in our curriculum.
 - Extending the length of the Waste Watchers booking would allow for longer visits to larger schools.
5. Maybe a demo about steam rising up to make clouds?
 - Role plays are part of the Water Welfare workshops for younger students and the explanation given likens this process to steam coming off a kettle.
6. Provide pre-visit activities to raise interest and awareness.
 - Waste Watchers is designed to be a stand alone program and thus catering for little knowledge or awareness.
7. A master copy of the water cycle to use as a revision lesson.
 - Water cycle diagrams are included on the resources CD given to each teacher. The ones we use during the workshops are our intellectual property.
8. Possibly smaller groups for older age groups - makes **all** students participate.
 - This school requested we combine two classes together as there was an internal organisational clash. The educator mentioned to the contact teacher that this would cause problems with the flow of the workshop and the amount of student interaction with the resources. It was noted by the contact teacher who appreciated that the educator was flexible and allowed the session to proceed. One class group at one time is what we stipulate and this school did not meet our requirements. Consequently, the workshop was not very involving for the students.
9. Great - maybe Australia statistics like river systems and algae.
 - Particular locations and events are given to students to further strengthen the anti-littering/pollution debate, some numbers are included here.
10. Include ICT or video to further illustrate the importance of water usage.
 - These resources are included on the resources CD given to each school for follow up after our visit. We are an interactive program and come fully self resourced for hands-on activities with the children.
11. For larger groups, have available more access to activities (groups of 8 too large).
 - Once again, a school needing to combine classes or 'add extra children' into the workshop meant the quality of the workshop was then jeopardised for all participants. We set guidelines for program delivery in order to maintain a quality program. We appreciate that teachers wish to do this as they don't want students to miss out, but it does impact on the quality of the workshops we can then deliver.
12. Would like 3-6 to participate. We are a large school and it would be great to do a series (eg year 3 waste, year 4 water, year 5 catchment and yr 6 sustainability).
13. Fantastic! Maybe have them move a bit more. Bit more whole class.
 - Our workshops are broken up with activities and movement throughout. There does need to be some educator directed speech especially with this class in question - an infant's class with a weaker knowledge base therefore requiring more direction.
14. Show pictures of drains that have the sign on it that states where the drain drains to...

- Waste Watchers teaches in 47 council areas state-wide and it would be impossible to provide this aspect for all the areas we visit. This specific information could be obtained from Council by the school. Students are told which creeks and rivers their school drains lead to and this forms an integral part of the workshop. As each student adds their pollution to the aquarium, the path it has taken to get there is repeated and their local creeks and rivers are identified.
15. Our location lends itself to a program near the river embankment. Anything be done there?
 - Perhaps include this as an environmental issue identified within the school and manage this through the use of a SEMP. Council could assist with this?
 16. Include IT, PowerPoint or sound effects.
 - These resources are included on the resources CD given to each school for follow up after our visit. We are an interactive program and come fully self resourced for hands-on activities with the children.
 17. Perhaps ask the teachers to form groups earlier so that more discussion could be promoted.
 - This was obviously an issue for this particular class and teacher. Planning for groups could have been organised previously but would have changed on the day anyway with students away - you work with what you have.
 18. Use scientific / technical terms (eg condensation/precipitation).
 - These terms are part of the workshops for older children but not for a year 1 class. The basic concepts are used here and a role-play to further strengthen student understanding of these processes.

Question 8

Student comments and responses were recorded by teachers in regard to the program. These were positive and showed that students were interested and enthusiastic about the workshop and its content. These comments also show that our program is informative and provides fresh information with a sense of humour that is taken back home with the students.

Students thoroughly enjoyed themselves, particularly during the hands-on activities like playing a character in a catchment story, or working in groups to devise water saving strategies for a variety of everyday household and lifestyle routines. Students were encouraged to question and investigate the material presented to them.

For specific student comments, please refer to prior sub-sections of this report – 6.0 Evaluation of the Program.

7.0 Conclusion

Overall, the program was a great success and stimulated much discussion amongst students and teachers. Participants' enthusiasm and responses to the issues raised indicated their interest. Discussion with teachers revealed a great appreciation of the program being hosted by the City of Ryde Council. The program is always well received in the schools and supports four of the curriculum areas making it a valuable experience for teachers and students alike.

Waste Watchers has enjoyed visiting the Ryde area since 2007 and values the new relationship between the City of Ryde Council and Keep Australia Beautiful NSW. Many students remembered the program from previous years and asked if we are coming back again the following year.

The 17 schools that registered were very happy with the program – it was well received and supports four of the curriculum areas making it a valuable experience for teachers and students alike. Schools that have a past history with Waste Watchers have obtained an extensive knowledge base during this time. Retention of this information from year to year has been impressive! One school was very keen to participate but regretfully pulled out (Ermington PS) as they requested a module change which we were unable to service.

This year the City of Ryde Council again offered schools a choice between the Catchment Chronicles and Water Welfare modules. Schools appreciated and benefited from the choice enabling certain classes to fit the module into their current school topics.

However, schools are starting to request other modules as they also fit into curriculum needs and they have experienced the two water related ones already. Waste Watchers suggests the City of Ryde Council chooses a different module from Water Welfare or Catchment Chronicles for its next booking.

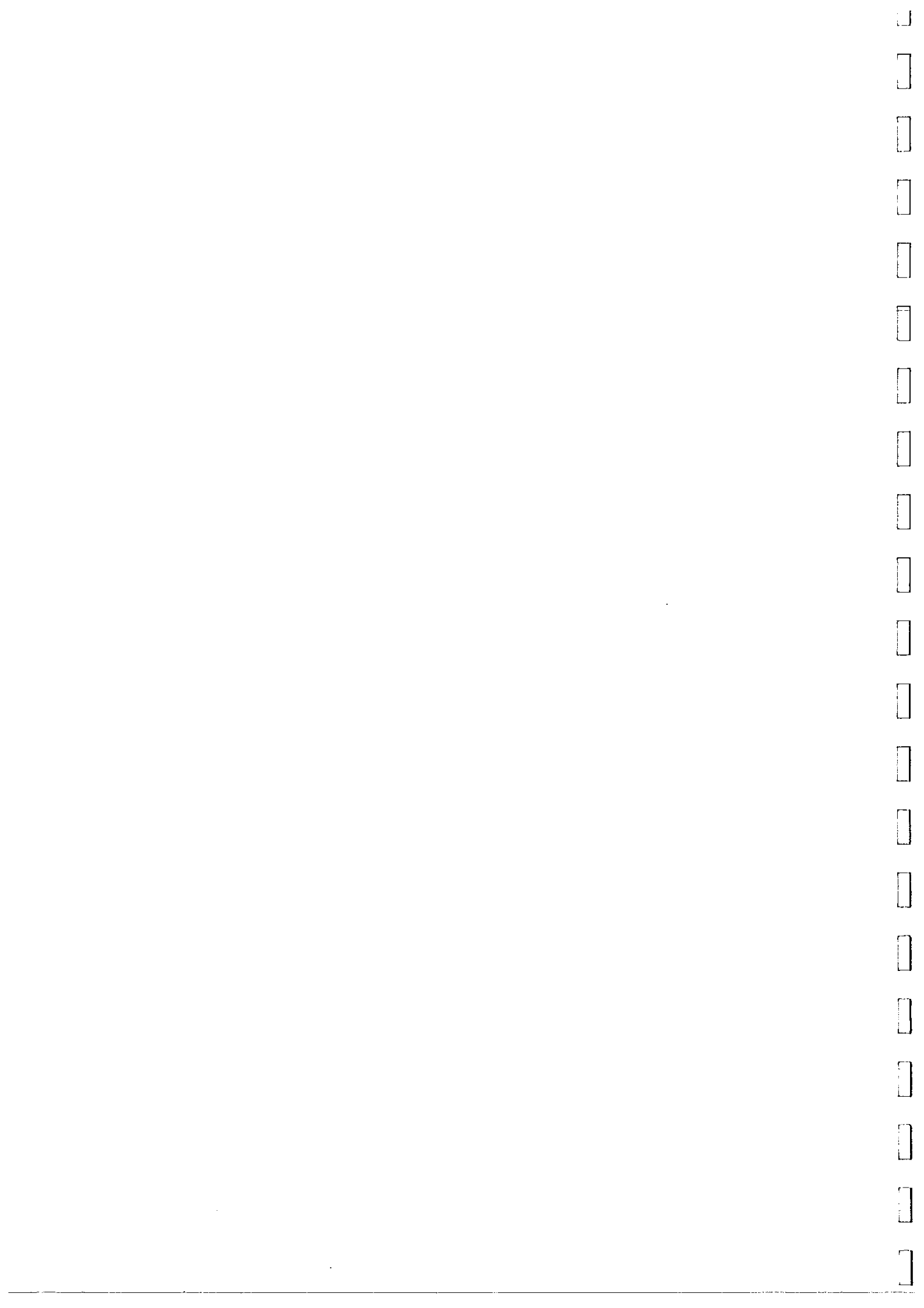
All modules continue to extend the environmental education delivery of Council. They also continue to deepen school and community awareness of the local situation within broader issues. We are excited to be able to offer a new and exciting range of modules for your next booking which will focus on sustainability, resource use and energy efficiency.

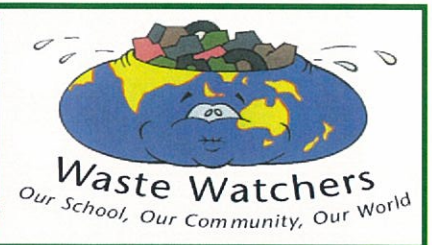
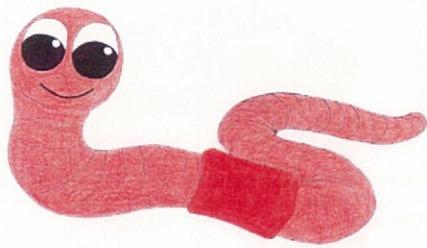
This report may be of interest and benefit to a number of other Council Departments. Please feel free to refer its contents to the appropriate staff member or council department.

Please feel free to call and discuss your waste education needs.



For further information please contact our Environmental Education Officers (02) 9633 3380





Waste Watchers offers five informative modules



Wide World of Waste

Participants analyse potential waste items and consider how to reduce/avoid creating waste. Issues such as correct bin usage, sorting waste, landfill, recycling and composting are explored. The program is engaging for all students. It provides a fun way to reinforce and extend existing knowledge and foster behaviour change in the important area of waste disposal. Various types of plastic are inspected and their recyclability is determined. The reprocessing of all recyclables into new products is investigated.



Catchment Chronicles

This clearly demonstrates negative affects of inappropriate behaviours in a catchment. It is interactive and informative. Students role-play the harmful activities carried out by characters in a catchment story. Observing this cumulative affect, it is readily seen that even small, seemingly insignificant actions at home can have a major impact on water quality and biodiversity. Participants are challenged to adopt environmentally friendly practices to protect our fragile waterways. Students also discover the difference between sewage and stormwater.



Mechanics of Organics

Students investigate the differences between composting, worm farming and mulching, and the benefits they provide. Action based activities mean that participants learn while they are having fun. Sessions cover problems that occur if organic waste recycling is not conducted and the valuable resources that are produced if it is. Participants view a working worm farm which consolidates these concepts. The life size 3D cut-away models of a compost and worm farm are valuable components which allow students to study these systems further.



Water Welfare

Activities conducted help students understand the natural processes of the water cycle, how we use and allocate water, and the need to use it wisely. The importance of caring for and conserving our water is highlighted. Water is a universal need and sharing strategies are investigated. Students have fun examining and assessing appropriate strategies and behaviours. The module provides a thought provoking challenge as students investigate just how precious and limited our water is.



Sustainability Sleuths

Students will discover the limited resources available on Earth and ways that they can help look after them. Renewable and non-renewable resources are explored before students consider the impact of their actions on the environment. A fun 'footprint' game and role plays allow participants to identify simple changes they can make at home and school to consume less and become more sustainable.

Waste Watchers sponsors:



Keep Australia Beautiful NSW
Phone: (02) 9633 3380
Fax: (02) 9633 4402



Waste Watchers

NSW Syllabus Links



Strands & sub-strands	Early Stage 1	Stage 1	Stage 2	Stage 3
ENGLISH				
Talking and Listening <i>Talking and Listening</i>	TES1.1 Communicates with peers and known adults in informal situations and structured activities dealing briefly with familiar topics.	TS1.1 Communicates with an increasing range of people for a variety of purposes on both familiar and introduced topics in spontaneous and structured classroom activities.	TS2.1 Communicates in informal and formal classroom activities in school and social situations for an increasing range of purposes on a variety of topics across the curriculum.	TS3.1 Communicates effectively for a range of purposes and with a variety of audiences to express well-developed, well-organised ideas dealing with more challenging topics.
HUMAN SOCIETY AND ITS ENVIRONMENT				
Environments <i>Patterns of Place and Location</i>	ENES1 Gathers information about natural and built environments and communicates some of the ways in which they interact with, and can care for, these environments.	ENS1.5 Compares and contrasts natural and built features in their local area and the ways in which people interact with these features.	ENS2.5 Describes places in the local area and other parts of Australia and explains their significance.	ENS3.5 Demonstrates an understanding of the interconnectedness between Australia and global environments and how individuals and groups can act in an ecologically responsible manner.
<i>Relationship with Places</i>	Outcome ENES1 also applies here.	ENS1.6 Demonstrates an understanding of the relationship between environments and people.	ENS2.6 Describes people's interactions with environments and identifies responsible ways of interacting with environments.	ENS3.6 Explains how various beliefs and practices influence the ways in which people interact with, change and value their environment.
Social Systems and Structures <i>Resource Systems</i>	SSES1 Identifies ways in which their own needs and the needs of others are met, individually and cooperatively.	SSS1.7 Explains how people and technologies in systems link to provide goods and services to satisfy needs and wants.	SSS2.7 Describes how and why people and technologies interact to meet needs and explains the effects of these interactions on people and the environment.	SSS3.7 Describes how Australian people, systems and communities are globally interconnected and recognises global responsibilities, cultural influences and their contribution to Australian identities.
<i>Roles, Rights and Responsibilities</i>	Outcome SSES1 also applies here.	SSS1.8 Identifies roles and responsibilities within families, schools and the local community, and determines ways in which they should interact with others.	SSS2.8 Investigates rights, responsibilities and decision-making processes in the school and community and demonstrates how participation can contribute to the quality of their school and community life.	SSS3.8 Explains the structures, roles, responsibilities and decision-making processes of State and federal governments and explains why Australians value fairness and socially just principles.
SCIENCE AND TECHNOLOGY				
Content <i>Built Environments</i>	BEES1.1 Explores and identifies ways in which built environments suit their users.	BES1.1 Creates, modifies or models built environments to suit the needs of users.	BES2.1 Creates, models and evaluates built environments, reflecting consideration of functional and aesthetic factors.	BES3.1 Creates and evaluates built environments, demonstrating consideration of sustainability and aesthetic, cultural, safety and functional issues.
Living Things	LTES1.3 Identifies ways in which living things are different and have different needs.	LTS1.3 Identifies and describes ways in which living things grow and change.	LTS2.3 Identifies and describes the structure and function of living things and ways in which living things interact with other living things and their environment.	LTS3.3 Identifies, describes and evaluates the interactions between living things and their effects on the environment.
Products and Services	PSES1.5 Recognises the relationship between everyday products and people's needs.	PSS1.5 Grows, makes or processes some products using a range of techniques and materials.	PSS2.5 Creates and evaluates products and services, considering aesthetic and functional factors.	PSS3.5 Creates and evaluates products and services, demonstrating consideration of sustainability, aesthetic, cultural, safety and functional issues.
Processes <i>Investigating</i>	INVES1.7 Investigates their surroundings by observing, questioning, exploring and reporting.	INVS1.7 Conducts guided investigations by observing, questioning, predicting, collecting and recording data, and suggesting possible explanations.	INVS2.7 Conducts investigations by observing, questioning, predicting, testing, collecting, recording and analysing data, and drawing conclusions.	INVS3.7 Conducts their own investigations and makes judgements based on the results of observing, questioning, planning, predicting, testing, collecting, recording and analysing data, and drawing conclusions.
PERSONAL DEVELOPMENT, HEALTH AND PHYSICAL EDUCATION				
Content <i>Personal Health Choices</i>	PHES1.2 Displays basic positive health practices.	PHS1.12 Recognises that positive health choices can promote well-being.	PHS2.12 Discusses the factors influencing personal health choices.	PHS3.12 Explains the consequences of personal lifestyle choices.

2 December 2008

Dear Principal / Environmental Education Coordinator,

Invitation – FREE ENVIRONMENTAL EDUCATION PROGRAM

Keep Australia Beautiful and the **City of Ryde Council** are pleased to announce that the Waste Watchers program will be visiting local schools in **Term 1, 2009**. You are warmly invited to **register now** so that your students may participate in this respected and important environmental education program.

Waste Watchers provides a fun, interactive experience for K – 6 students. Waste issues such as correct use of bins, recycling, landfill, organic waste, stormwater and litter may be covered in the hour-long class workshops (Maximum 4 workshops / day – 1 class / workshop). Content supports NSW Syllabus outcomes including English, HSIE, Science and Technology, PDHPE, and DET Environmental Education Policy. A qualified, experienced teacher conducts the workshops at your school. An indoor location is needed.

Keep Australia Beautiful has developed the content and focus of the workshops in consultation with Council. This ensures that the program is relevant to your area, addresses local needs, and includes local information.

Council is offering your school a choice between two modules:

- **Catchment Chronicles:** analyses behaviours that can impact negatively on our fragile waterways, and investigates appropriate alternative behaviours in the catchment.
- **Water Welfare:** examining the water cycle, our use of water and the importance of caring for and conserving our water.

Please indicate your choice of module on the enclosed Registration Form.

Schools receive a set of resources, a certificate of participation and a newsletter. Participating class teachers receive a teacher pack containing posters, brochures and follow-up material.

Waste Watchers is one of the State's leading environmental education programs. Last year 39 205 participants from more than 319 schools in 36 local government areas benefited from the activities in this informative and stimulating program.

Waste Watchers is proudly hosted by City of Ryde Council

IT IS FREE TO YOUR SCHOOL.

- ✓ Council encourages your school to take advantage of this offer.
- ✓ Please register early. Complete the enclosed form and fax it to us by the due date.
- ✓ We will advise you of your allocated day and request a timetable for our educator.

Thank you for your time and we look forward to visiting you soon!

Sincerely,
Deborah Kelly
Waste Watchers Program Support

Waste Watchers proudly sponsored by:



Macquarie Generation





Waste Watchers

Registration Form 2009



Hosted by City of Ryde Council – FREE TO YOUR SCHOOL

School: _____

Address of School: _____

Phone Number: _____ Fax Number: _____

Email: _____

Number of classes in K: 1: 2: 3: 4: 5: 6: _____

Choice of Module (please circle): Water Welfare Catchment Chronicles

Principal's name and signature:

Contact person for the visit:

School Administration Manager:

Dates of the program visit:

Term 1, 2009:

- 31 March – 3 April
- 6 April – 9 April
- 28 April – 1 May
- 4 May – 8 May
- 11, 12 and 15 May

Dates that are not suitable:

Please note:

- There is a maximum of 4 workshops per day (1 class per / 1 hour workshop).
- An indoor central location is required for the duration of the visit.

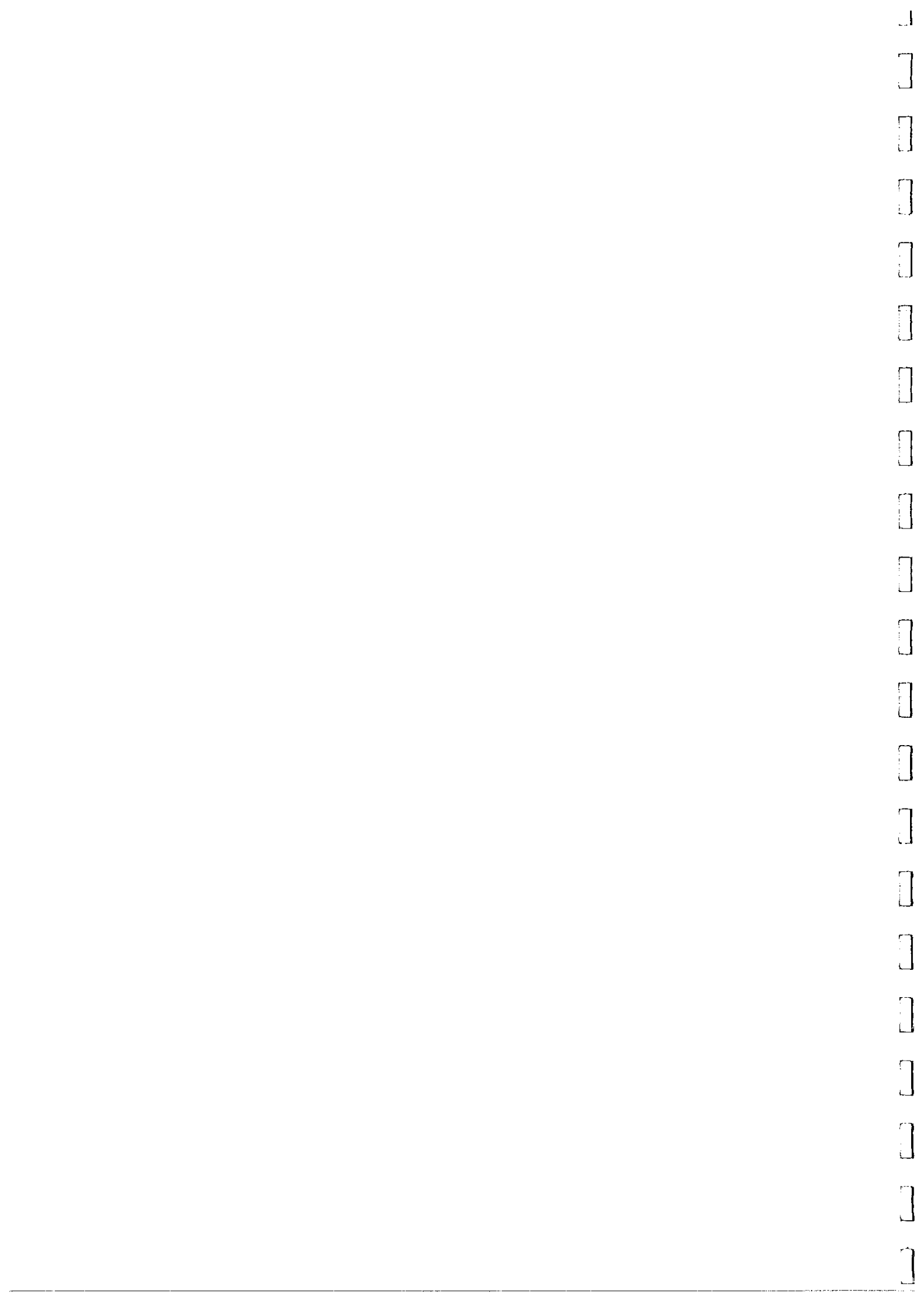
Waste Watchers proudly partnering with:



Our sponsors and supporters may be able to provide your school with information and services that support a better environment. Tick here if you do not wish to receive this information.

Register with Keep Australia Beautiful by 19th December 2008.

Fax completed form: (02) 9633 4402. Phone enquiries: (02) 9633 3380



During term 1 and 2, school students in the Ryde area will explore water conservation and catchment issues with the Keep Australia Beautiful, Waste Watchers environmental education program.

Did you know?

Everything that ends up on the ground can end up in our creeks. So EVERYBODY needs to be careful.

Sydney Water still has level 3 water restrictions (March 2008)....These restrictions help people reduce their water use outside. You can do your part to help everyone share the water in Warragamba Dam. A \$220 fine applies to people caught breaking water restrictions.

Level 3 Water Restrictions

- ❖ Hand-held hosing of lawns and gardens and drip irrigation is now allowed only on Wednesdays and Sundays before 10 am and after 4 pm
- ❖ No other watering systems or sprinklers are to be used at any time
- ❖ A permit from Sydney Water is required to fill new or renovated pools bigger than 10,000 litres
- ❖ No hosing of hard surfaces including vehicles at any time
- ❖ No hoses or taps to be left running unattended, except when filling pools or containers

What can you do at home and school to use less water and protect our Catchments?

Bathroom

- Put a plug in the bath before turning water on.
- Turn off water whilst brushing teeth.
- See how quickly you can shower and still come out clean
- Keep the shower at a lower water pressure.

Kitchen

- Wash the dishes in the sink rather than with the water running.
- Keep a bottle of water in the fridge for cold drinking water.
- Operate the dishwasher with a full load only.
- Wash fruit and vegetables using a minimal amount of sink water.

Laundry

- Use the washing machine load setting that matches the amount of clothes you have to wash.
- Don't put clothes in the wash until they're actually dirty.

Throughout the house

- Check all taps inside and outside of the house for leaks.
- Pour extra water from baths, cooking etc. on plants or in the garden.

In the Yard

- Place mulch around the bases of trees and in flower and vegetable gardens to hold water in the soil and help control weeds.
- Avoid splashing water out of swimming pools.
- Wash cars on the lawn.
- Use a broom rather than a hose to remove debris from the driveway.
- Remember that no chemicals are to be poured down the drain or gutter.
- Nutrients from garden waste and lawn clippings can add nutrients to our waterways if they go down the drain and this can cause major problems for our creeks and rivers.

At school

- Wash paint brushes in a bucket/ice cream container
- Report leaking bubbles and toilets to teachers
- Nominate water monitors to check for leaks
- Tell your friends to save water, too
- Design signs to go near taps and bubblers to tell everyone at school



Waste Watchers is proudly partnered with:





Waste Watchers

Invitation to Lunch

Keep
Australia
Beautiful

NSW



Dear Parent / Student,

Recently the Keep Australia Beautiful program Waste Watchers visited your school and a number of classes were lucky enough to participate. Activities conducted during the visit helped students understand more about waste, the impact of waste disposal on our environment, and the role they play in it.

Waste Watchers challenges us all to consider how our individual actions affect the amount of waste we create, and the affects of that waste disposal.

We seek your help in supporting and extending your child's understanding of this important issue. Please consider the following suggestions for a Low Waste Lunch.

Low Waste Lunches and snacks have:

- ✓ Lunch boxes and containers that are reusable.
- ✓ Drink bottles that are refillable and reusable.
- ✓ Food packaging that is reusable (eg small containers for snacks), compostable (eg fruit peels), or recyclable (eg paper lunch bag).

Low Waste Lunches and snacks do not have:

- × Pre-packed, portion-controlled packets (eg chips, cheese and bikkie combos).
- × Lollies in individual wrappers.
- × Sandwiches / rolls in plastic food wrap (eg Clingwrap, Gladwrap). Use compostable greaseproof paper instead.
- × Drinks in throw away cartons with straws (these boxes create 3 pieces of rubbish each).

Low Waste Lunches and snacks give many benefits:

- ☺ Reduced waste to landfill = a healthier planet.
- ☺ Recyclable material sent for recycling = less pressure on our limited natural resources.
- ☺ Compostable materials utilised in compost / worm farms = less green-house gas (methane).
- ☺ Less chance of waste becoming litter = a cleaner environment for all.
- ☺ Low Waste food often = low cost food!
- ☺ Low Waste food often = low waist food!

Kind regards

And happy Waste Watching!

- Rosemary Hadaway
- Peta Notari
- Anthony Richard
- Natalie McReady
- Deborah Kelly

Waste Watchers sponsors:



Wsn ENVIRONMENTAL SOLUTIONS Macquarie Generation



Welcome to Waste Watchers

Keep Australia
Beautiful

NSW



Welcome to Waste Watchers

We hope that you and your students enjoy the Waste Watchers workshop.

Waste Watchers is a Primary School education program. This unique service assists Councils to educate their local children on a wide range of waste management issues. Children are the caretakers of the future and through the *Waste Watchers* program we teach them about caring for the environment and the simple but vitally effective measures they can take to protect and conserve our natural and built environments.

Waste Watchers has been operating since 1995 and now challenges approximately 30, 000 participants each year. 120 students a day enjoy fun, hands-on activities through interactive sessions and a creative learning environment. Four informative modules are available:



Mechanics of Organics



Catchment Chronicles



Wide World of Waste



Water Welfare

Please find enclosed, your **FREE Environmental Education Resources CD.**

The contents of this CD can be found overleaf.

We are certain it will form an important part of your resource library.

Please take the time to complete the enclosed evaluation form as it will aid further development of the *Waste Watchers* program.

The Waste Watchers team thanks you for your time!

- ☺ Rosemary Hadaway
- ☺ Peta Notari
- ☺ Anthony Richard
- ☺ Natalie McCreedy
- ☺ Alyson Grant
- ☺ Deborah Kelly

Macquarie Generation

wsn
ENVIRONMENTAL SOLUTIONS

WRIGLEY

Cartridge World

ALCOA
FOUNDATION

Fax: (02) 9633 4402

Environmental Education Resource CD

(Some activities included on this CD are designed as 5 minute fillers only)

Contents

1. Environmental songs and raps

2. Organic waste

- a. KAB *Mechanics of Organics* (module activities)
 - i. *Mechanics of Organics* Boardgame
 - ii. *Mechanics of Organics* Stage 2 activities
 - iii. *Mechanics of Organics* Stage 3 activities
- b. EPA's Down to Earth Learner's Guide (selected worksheets)
- c. Reln worm factory education booklet (selected worksheets)
- d. Websites

3. Stormwater

- a. KAB *Catchment Chronicles* (module activities)
 - i. *Catchment Chronicles* Boardgame
 - ii. *Catchment Chronicles* Early Stage 1/ Stage 1 activities
 - iii. *Catchment Chronicles* Stage 2 activities
 - iv. *Catchment Chronicles* Stage 3 activities
- b. Websites

4. Waste and recycling

- a. KAB *Wide World of Waste* (module activities)
 - i. *Wide World of Waste* Boardgame
 - ii. *Wide World of Waste* Early Stage 1/ Stage 1 activities
 - iii. *Wide World of Waste* Stage 2 activities
 - iv. *Wide World of Waste* Stage 3 activities
- b. ACI Glass Packaging fact sheet
- c. Websites

5. Water conservation

- a. KAB *Water Welfare* (module activities)
 - i. *Water Welfare* Stage 2 activities
 - ii. *Water Welfare* Stage 3 activities
- b. Our Water Our Future (selected worksheets)
- c. River Murray Urban Users Committee (selected worksheets)
- d. Sydney Water's "Every Drop Counts in Schools" (selected worksheets)
- e. Yarra Valley Water (selected worksheets)



Certificate of Participation

Presented to

St Kevin's Primary, Eastwood

Hosted by

City of Ryde Council (2009)

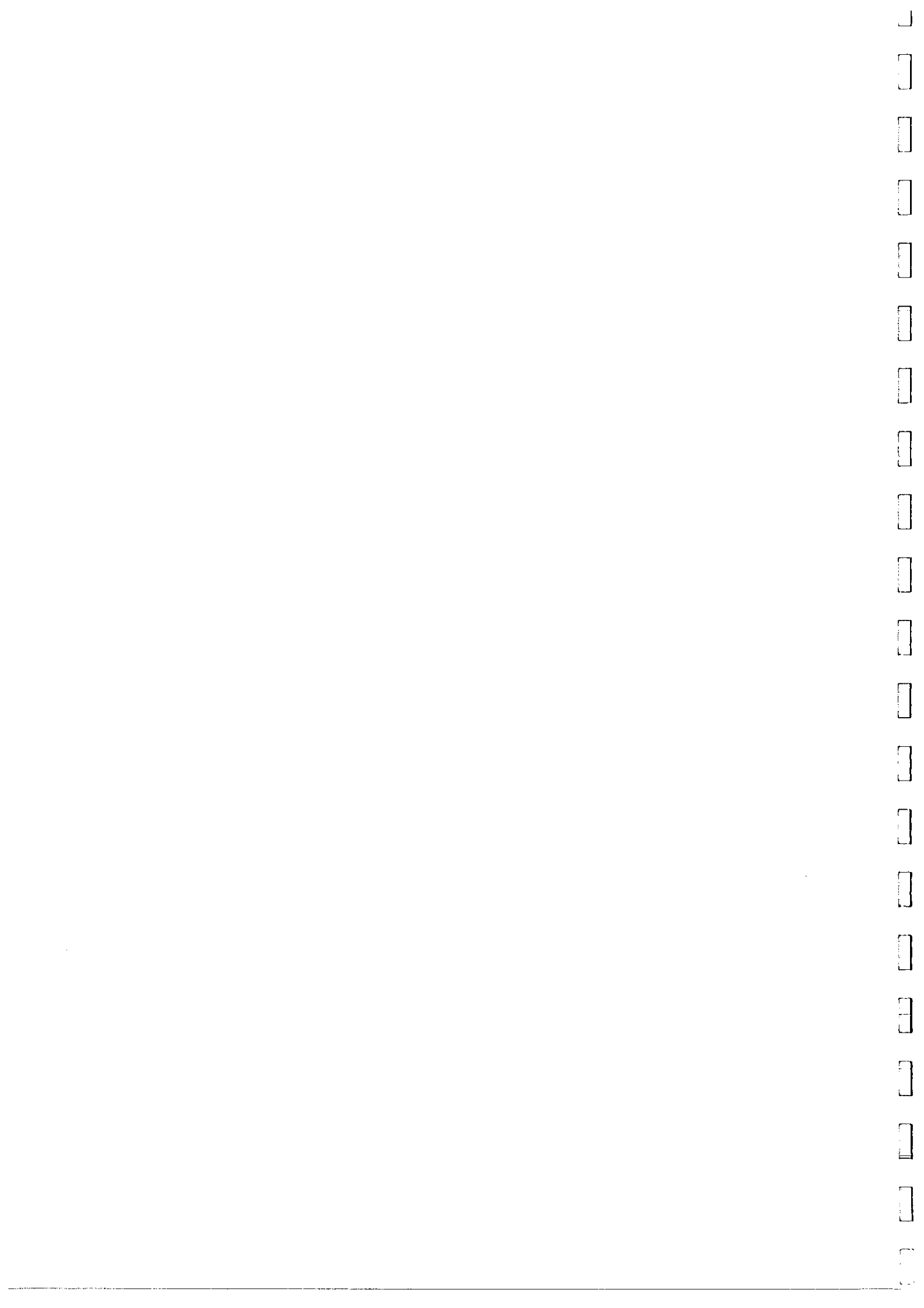


Wide World of Waste

Mechanics of Organics

Catchment Chronicles

Water Welfare



Waste Watchers

Practical follow-up ideas

Keep
Australia
Beautiful

NSW



Wide World of Waste:

- ☺ Research magazines and advertising, and create a collage of recyclable items. Glue the found pictures onto an outline recycle bin. Devise a slogan to give a recycle message.
- ☺ Write a letter to the SRC / Principal / Parent organisations, recommending that a school recycling system be set up. Give clear reasons that explain the benefits.
- ☺ Select an item that is not recyclable (eg plastic food wrap). Explain why it is beneficial to reduce our use of it. Brainstorm ideas for how to reduce our use of that item. Select one idea and use text types to teach people the benefits.
- ☺ Survey the rubbish that has been littered in the school playground:
 - Map the location of litter. What does the data tell you? Can you draw any conclusions? Present findings.
 - Collect the litter and sort it into recyclable, compostable and rubbish (WEAR GLOVES). What does the data tell you? Can you draw any conclusions? Present your findings
- ☺ Research Alternate Waste Technology (AWT) and then debate 'That landfill is better than AWT'.

Catchment Chronicles:

- ☺ Write your own class Catchment Story in a picture book format.
- ☺ Investigate the school site and map stormwater entry points. Show the surrounding surface on the map.
- ☺ Design a poster to prevent stormwater pollution at school.
- ☺ Walk to your local creek; observe the condition of the water and habitat. Use text types to describe and report.

The Mechanics of Organics:

- ☺ Research magazines and create a collage of compostable items. Glue the found pictures onto an outline compost bin. Devise a slogan to give a compost message.
- ☺ Plant some seedlings in two planter boxes and water them all. Mulch one planter box and not the other. Observe and record the differences as the seedlings grow.
- ☺ Draw a garden. Glue found grass and leaves onto the picture as mulch. Explain how the mulch is helping the soil and plants in your picture.
- ☺ Start class worm farm. Use free foam boxes from fruit shop. Raise money to buy worms. Sell worm tea fertiliser.
- ☺ Conduct experiments with items that claim to be biodegradable (use your worm farm).

Water Welfare:

- ☺ Design a poster / brochure about water conservation and encourage water saving behaviours. Display.
- ☺ Write a letter to the principal to suggest the adoption of water saving measures within the school. Present ideas in an informed and persuasive manner.
- ☺ Brainstorm wise / unwise uses of water at school, develop a class chart. Extend to include water uses at home.
- ☺ Water is recycled around and around for billions of years. Write a tale of water travelling through time! Your water drop may have been caught in a polar ice cap for a million years, or lapped up by the rainbow serpent in the Aboriginal dreamtime! Your ancestors might even have had a glass of water with your drop in it!
- ☺ Walk around the school and locate the taps (bathrooms, staffroom etc). Note all dripping ones; calculate the amount of water wasted from these taps in a minute / day etc. Graph results.
- ☺ Present a 10 point water saving checklist to the school as an assembly item.
- ☺ Role play appropriate / inappropriate water using behaviours. Be creative!
- ☺ Find the school water meter and research how to read them. Check the meter reading late on Friday afternoon and then again early Monday morning to determine weekend water use or leaking taps.

A further range of exciting teaching resources can be found on your complimentary CD





Ryde Kids Participate in Catchment Chronicles Workshops!

The Keep Australia Beautiful NSW mobile education unit, *Waste Watchers*, will be visiting 18 local schools in 20 days during the month of May. Today *Waste Watchers* will visit Holy Spirit School for an interactive lesson in 'Catchment Chronicles.'

Waste Watchers is the leading face to face environmental education program in NSW and an initiative of Keep Australia Beautiful NSW. The workshops teach school students vital environmental management skills and are an important component of Ryde City Council's overall strategy to increase environmental awareness in local students.

"Ryde City Council's first hosted the *Waste Watchers* lessons for schools in 2007, and due to the popularity and relevance of the program, we have been invited back each year since. This ongoing investment in environmental education by Ryde City Council represents a dedication to passing on their knowledge and passion by teaching children about how to minimise their environmental footprint." Keep Australia Beautiful Chief Executive Officer, Peter McLean said

"*Waste Watchers* educates primary school children to 'do the right thing' by teaching them best practice environmental management by introducing a number of small positive steps that they can take toward helping the environment. The workshop will be an extension of the initiatives already being undertaken by students at Holy Spirit School such as recycling, the use of a water tank and the development of a "harmonious habitat" which encompasses companion planting and will be incorporated into the curriculum." Peter McLean added.

Les Zolyomi, franchise owner of Cartridge World in Ryde, believes their partnership with *Waste Watchers* is an important way for Cartridge World to give back to the local community.

"Cartridge World recognises the importance of supporting the local community in which we operate. We see *Waste Watchers* as a great way for us to support the environmental education of the younger generations who should learn from an early age that water is a universal need, gain an understanding of the water cycle, and learn inappropriate and appropriate water usage."

Waste Watchers educator, Peta Notari is extremely proud of the program which was developed by Keep Australia Beautiful NSW especially for school children.

"The *Waste Watchers* lessons are very interactive with lots of games and quizzes to help the children learn about protecting their local environment. The kids start to understand the environmental challenges faced by our society but are empowered by the small yet significant steps that they can take to help keep Australia beautiful," Peta Notari added.

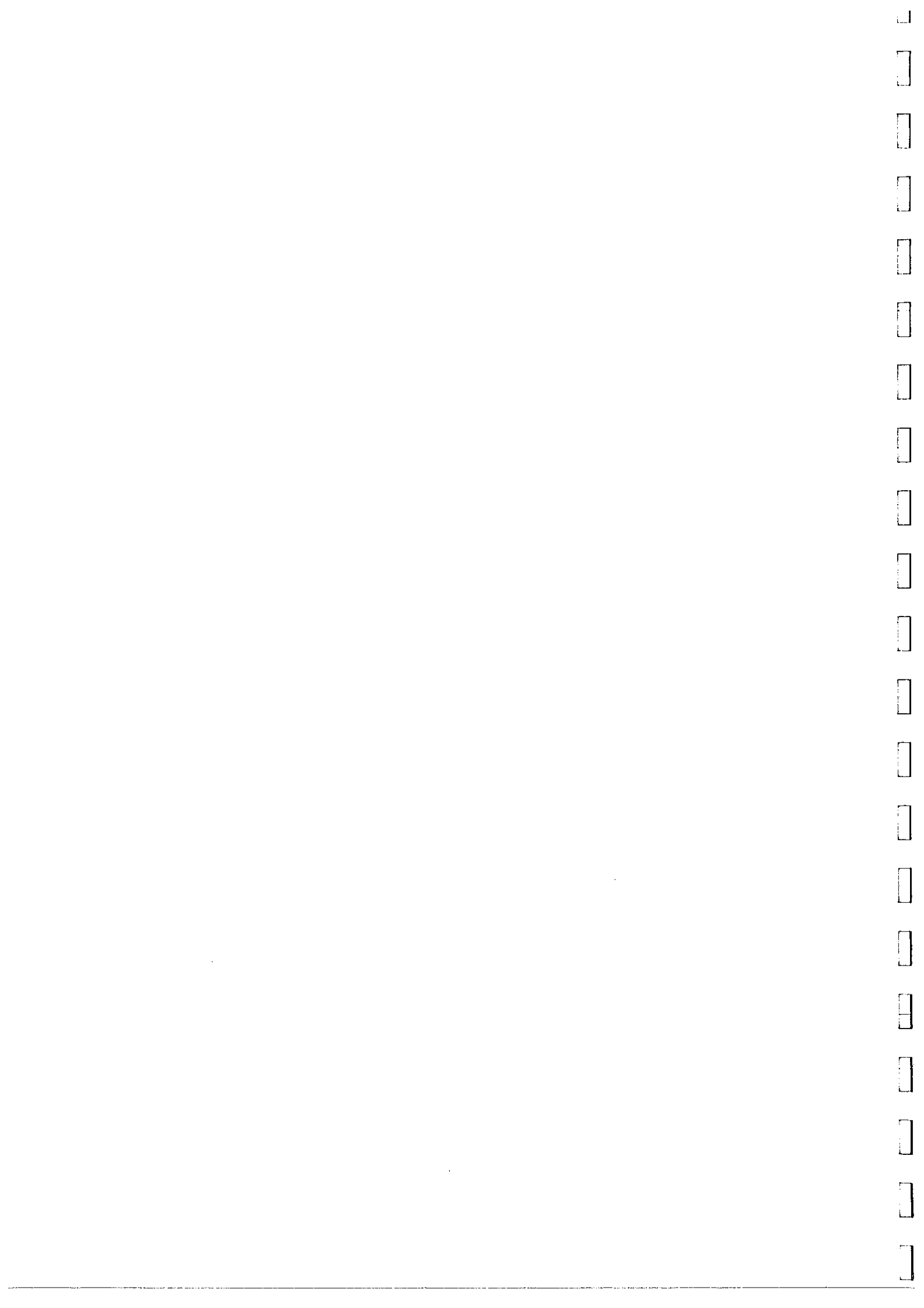
For information on how to become involved in environmental initiatives in your area, please contact Ryde City Council on 02 9952 8222 or visit www.ryde.nsw.gov.au

*****END*****

**Media are invited to see a *Waste Watchers* lesson in action at: Holy Spirit School, North Ryde.
On 13th May 2009 at 9:55-10:55am. Please report to the School Office.**

For information regarding this media release please contact Elizabeth Jarrett, Media and Communications Manager at the Keep Australia Beautiful NSW office on 02 9633 3380. For media comment please contact Education Officer, Peta Notari on 0414 603 399 or CEO Peter McLean on 0416 227 158.

The *Waste Watchers* program is generously sponsored by Alcoa Foundation, Cartridge World, the Wrigley Company, Macquarie Generation and WSN Environmental Solutions. Any mention of their involvement would be greatly appreciated.



North Ryde Public School Newsletter

Your Child's Future



Find us at: Cox's Road North Ryde 2113 T 9878 1673 or 9878 1008 northryde-p.school@det.nsw.edu.au

Term 2 Week 1

29 April 2009



Welcome to a new and exciting term

I hope everyone had a lovely holiday time with their family and is feeling refreshed and ready for a new and exciting term.

A sincere welcome to our new permanent librarian, Ms Kate Bowyer. I know Kate is very happy to be starting at North Ryde and is looking forward to getting to know all the members of our school community. As with

previous librarians, she will be here on Mondays, Tuesdays and Wednesdays.

Welcome back to Mrs Melissa Speed, a valued member of our support staff, who missed most of last term because she broke her leg. We are all very pleased to have you back.

Mrs Yvonne Daymond, our Monday ESL teacher, will be working everyday for the next three weeks, while Mrs Jenny Ross is on leave.

Staff development day

Yesterday all teachers benefited from the opportunity to be involved in professional development focussed on *Accelerated Literacy* and mathematics. Teachers also had valuable team planning time. Some of our support staff also attended important regional professional training.

ANZAC Day

Thank you to our SRC and Mrs Sylvia Curl for representing the school at North Ryde RSL's ANZAC service. Mrs Curl, who has attended many ANZAC ceremonies, said that she was very impressed by the service and the participation of so many of our community.



Our SRC and other students who attended the ANZAC service, proudly wearing their school uniform

Our school ANZAC service will be held on Thursday 30 April at 2.20pm in the hall. Visitors welcome.

P&C- thank you for the air-conditioning!

During the holiday C block (3C, 5/6C & 5/6S) had air-conditioning installed. A big thank you to the P&C for raising the funds for this project. It is greatly appreciated.

Video conferencing facility installed too

During the holidays we also had video conference facility installed in the multi-media room. This is part of the state government's connected classroom initiative. It will provide wonderful opportunities for our students. Can't wait to use it!

Serious incident averted

A huge thank you to the school's neighbour, Rev John Chappell, for being so alert. During the last evening of the school holidays there was a potentially a very serious incident on the school grounds. Fortunately John became aware of the problem and contacted the emergency authorities. The whole school community appreciates your efforts, John.

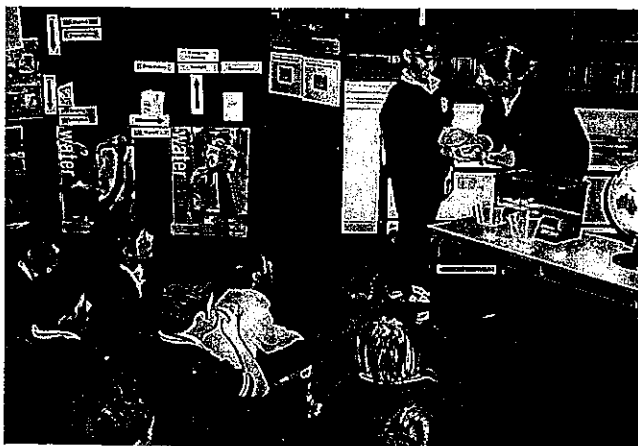
A reminder that if anyone notices anything suspicious within the school grounds please call the police or school security on 1300 363 778. Thank you

Boogie With Your Buddy!

The disco held on the last day of last term was a great success. Students wore their one piece of "bling" and had a terrific time dancing with their buddies. Thank you to the SRC, Miss Sue Chiddy and Ms Michelle Caruso for coordinating the event. It was a fun way to end the term.

Waste watchers here today

Today Stage 2 and 3 classes participated in the Ryde Council's Waste Watch program. This is a free project that helps students understand how we can care for our environment and keep Australia beautiful.



Coby and 3C learning about the world's water resources



Appendix 2 Evaluation Forms

- Completed evaluation forms.

