

Towards a 'waste-wise' school

A guideline for Principals, Board of Trustees members and teachers



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Acknowledgements

This booklet is adapted from the Palmerston North City Council (PNCC) publication: *Managing to be Green and Setting a Green Example for Life* by Alan Fielding, Waste Strategy Leader, PNCC. EnviroSchools information is from www.enviroschools.org.nz and Regional EnviroSchools Coordinator.

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because recycling doesn't cost the Earth.**

Waste Education Services

Waste Education Services (WES) is a free programme for schools and businesses funded by Tasman District Council (TDC) and Nelson City Council (NCC) as part of their commitment to sustainable resource management and minimising the waste going into local landfills.

WES provides information and education to assist schools and businesses to reduce the amount of waste going to landfill. This service is provided by TDC and NCC through a contract with Nelson Environment Centre. A waste educator is available to work with schools in Tasman and Nelson to set up systems to Reduce, Reuse and Recycle their waste.

For schools, WES can provide:

- advice on how to conduct a waste audit to find out the amount and type of rubbish produced.
- help with setting up systems for a school-wide approach to minimise the amount of waste to landfill.
- workshops for teachers and students in waste minimisation, composting and worm farming.
- curriculum support and resources for teachers to educate students about reducing the 'waste stream'.



"The whole community works towards waste minimisation and a sustainable Nelson."

Nelson City Council Waste Management Plan Vision

"... ensuring that the whole community is involved in the implementation of improved waste management practices."

**From Tasman District Council Waste Management Plan,
Principle 4: Partnerships in the Community**

**Contact us for more ideas, activities and resources:
Waste Education Services (WES)**

Nelson Environment Centre

1 Braemar Place, Upper Franklyn Street, Nelson

info@nec.org.nz

www.wes.org.nz

Ph: (03) 545 9176

The World of Yesterday



LANDFILL
CIRCA 1999

LANDFILL

CIRCA 1999

A hole in the ground where valuable resources were needlessly buried.

This practice was ended in the early 2000's with the introduction of **ZERO WASTE.**

Towards a 'waste-wise' school

Schools play an important role in developing sustainability. One important step in this process is educating students and the wider community about reducing the amount of resources that we needlessly throw into landfills. While individual staff can do a lot to make their school less wasteful, better results are achieved when the whole school makes a commitment to minimising waste.

Schools have the additional and vital role of establishing sustainable living habits for the community. Future thinking is all about sustainability. As resources dwindle, the more imaginative and smarter solutions that you and your students can create for today's problems, the better the chances of creating a less wasteful and healthier world for the generations to come.

A 'waste-wise' school is a school in which everyone is involved: students, caretakers, teachers, administration staff, principal, board of trustees and families are working together to:

- **reduce waste,**
- **reuse all possible resources, and**
- **recycle what remains.**

These actions conserve precious resources and promote a healthy environment and a sustainable lifestyle for all.

Working towards a less wasteful workplace has many positive outcomes, such as building better public relations and a sense of team-work (not to mention saving money).

Educate!

To ensure success in your venture it is essential to educate students and their families about resources, waste management, the natural environment and the reasons why we need to minimise waste. Waste education also helps meet the Key Competencies and Values of the new curriculum.

Contact your WES schools facilitator who can assist with classroom learning and resources. Check out the *Waste Not* Education Kit for information and activities.

Enviroschools

You may wish to consider joining the EnviroSchools Awards scheme – 125,000 NZ students are part of this. This scheme can help guide you and incorporates excellent resources and good teaching/learning at the same time. (See the page on EnviroSchools at the end of this booklet.)



Starting out...

Step 1: Get the right people involved

Who should be involved? Pretty much everyone!

Everyone who is going to be responsible for using and maintaining the system needs to support it and be involved.

Don't be tempted to leave all the work to one person or a very small group of people, as the commitment to the programme will be lost if these people leave. The most effective and successful programmes are those developed with wide involvement and support.

- The caretakers and grounds staff need to be behind it right from the start; they are responsible for much of the real work, such as emptying bins, checking material is not contaminated and looking after compost bins.
- The Board of Trustees and the Principal need to support it, especially as it helps meet the Key Competencies and Values of the new curriculum.
- Administration staff need to participate in the work and manage waste and recycling contracts.
- The teachers need to set an example and constantly remind students to use the system correctly in the classroom.

- The students need to take action and use the system correctly. It's crucial that the system is easy and fun to use, and that it is supported in the classroom by good education on reducing waste and saving precious resources.
- The PTA or Canteen Committee play an important role in choosing items with reduced or recyclable packaging for sale at the school canteen.



Who will take the lead?

Let the students be responsible:

Someone needs to drive the waste minimisation scheme: conducting surveys, taking videos, addressing school assemblies, organising the collection of recyclable paper, analysing results of funds saved, etc. This is best done by a group of enthusiastic students, encouraged by staff members. Encourage them to talk to all the important people in the school, starting with the caretaker.

These three models have all worked well in local schools. You may find a better one to suit your school.

You may be surprised by the energy and enthusiasm you unleash by letting the students find their own solutions to the school's waste issues they have discovered. Listen and learn from their imaginative and practical ideas for turning waste into profit for the environment and the school's budget.

1. Set up a 'waste-wise' group

Setting up a group of enthusiastic students, perhaps working with a keen teacher aide, caretaker, parent or teacher, can be really effective, especially if it is part of a long-term school strategy based around effective teaching and learning.

2. Appoint classroom 'waste-wise' monitors

Appoint a couple of keen volunteers from each class, e.g. "paper chasers", who empty the classroom paper box each day into the central bin for recyclable paper. These positions can be made a special privilege and earn rewards.

3. Designate a 'waste-wise' class

One local school has a class that collects all the recyclables each day from the whole school. They begin 5 minutes before the end of school and, after 2 years, have got it down to 3 minutes! Each class member has a designated responsibility, e.g. one student collects the box of recyclable paper from the computer room to take to the central recycle bin; another collects the food-scrap bin in the playground to take to the composting area.



Tips for getting people involved

The following ideas from local schools have proved helpful in achieving success. You may come up with others that suit your school better. Be creative!

- Let people know what is going on right from the start. Announce it at school assemblies and staff meetings. Advertise it widely: in library displays, noticeboards, posters, newsletters and more.
- Ask everyone for their ideas and input. Senior students could formulate and give out a simple questionnaire or survey form to encourage input.
- Stress the benefits for the environment, community, school and everyone involved of making the school 'waste-wise'.
- Create incentives and benefits for people to be involved, e.g. use the savings from waste disposal to buy products/ services that are less harmful to the environment, such as recycled paper, environmentally approved cleaning products and energy-saving light bulbs.
- Monitor the results of your work and display them graphically on noticeboards or in newsletters.
- Publicise what is happening so everyone involved will be proud to be part of the team effort.

Step 2: Develop a vision

Deciding what the school wishes to ultimately achieve is an important first step. Brainstorm ideas; ask the whole school, from students to top management, to contribute to your vision for becoming a 'waste-wise' school.

For example, a vision statement could be similar to the following:

Our school vision

"Everyone at our school working together:

- **as kaitiaki, or guardians, of Papatuanuku, Mother Earth, to use all our resources thoughtfully as precious taonga, or treasures**
- **to reduce, reuse and recycle all our paper and card**
- **to reduce the amount of paper we need to purchase by 50%**
- **to compost all food scraps and garden waste to enrich our school garden."**

Once you have completed your vision statement, you can begin to write your policy and action plan. Continually relating policy and action back to your vision will ensure that you have a clear sense of direction to reach your goal.



Step 3: Take a look at what you are wasting

Getting some accurate information on the resources your school is wasting will help you:

- decide what waste reduction measures you should take
- measure your progress and your savings

A waste audit can be as simple as appointing a team (e.g. the 'waste-wise' group) to walk through the school, recording what they see happening, or making a giant pie chart of the school's rubbish. A larger school may choose to employ a consultant to conduct a full-scale audit.

Whichever method you choose, one which allows the students to come up with solutions to the problems they have discovered will increase their sense of ownership and responsibility. Presenting the findings to everyone, including the Board of Trustees, school assembly, and families via the school newsletter, will strengthen support for and interest in the programme.



Do-it-yourself mini audit

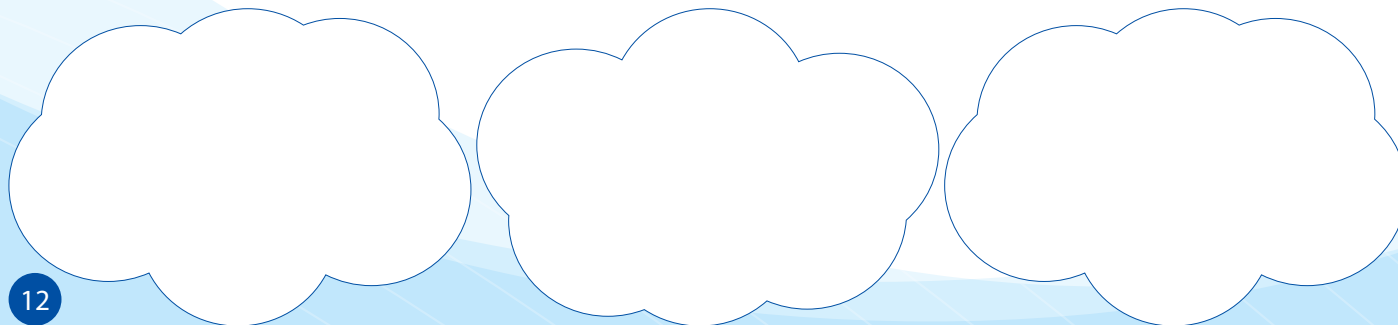
- Check how much waste paper, cardboard, plastic, cans and food is being put into rubbish bins. (See the instructions for creating a giant pie chart on page 13.)
- Check how often paper is used only on one side and then thrown out.
- Find out how much of your money is being spent on skips/ bins, waste collection services and waste disposal.
- Find out what happens to green waste from the school grounds. Is it composted? If not, do you buy in compost or fertilisers instead?
- Find out about purchasing policies. Are you buying products that help minimise waste and are non-toxic for the environment?



**Collecting some simple information at the beginning can be useful to monitor your progress.
A data sheet could include the following information.**

Profit/loss from recycling	
How much rubbish do we send to landfill per week?	bins/skips/kg
What does this cost per week to dispose of?	\$
How much of this can we reduce, reuse, recycle per week?	bins/skips/kg
What will this cost per week?	\$
How much will we save per week?	\$
How much will we save per year?	\$

Ideas for spending any dollars saved by reducing, reusing and recycling.

Three empty cloud shapes arranged horizontally, intended for writing ideas for spending saved dollars.

Create a giant pie chart of rubbish!

Make a giant pie chart out of one day's rubbish. This waste audit visually displays how much waste you are creating and which waste items are causing problems.

To make the pie chart, you need:

- a whole day's waste saved from the previous day.
- your school hall or other large indoor area. (Outside is NOT suitable as the slightest breeze blows the rubbish everywhere!)
- six helpful students with good protective gloves.
- a large tarpaulin on which to make the pie chart.
- information on what you currently pay to dispose of your rubbish.
- information on how you dispose of it (e.g. skip, wheelie bin, etc.).

Invite your WES facilitator in to address the whole school (seated around the pie chart) about finding smarter solutions.

Involve: students, the groundsman/caretaker, teachers, parents, school principal and Board of Trustees.



Taking action...

Step 4: Commit to a 'waste-wise' policy

Saving money and resources

Remember, all wasted resources eat into your school budget! Waitaki Girls High School reduced its rubbish from one skip per week to one per month. Wanganui High School saved \$14,000 through reducing its waste stream.

50% less paper purchased means:

- **you save money to spend on something exciting!**
- **you save trees (one tonne of paper uses 13 trees).**
- **your students develop a sense of pride and achievement.**

Embedding waste minimisation practice into your school policy will ensure that it becomes part of the school's daily culture and will be an ongoing practice. Committing to a school policy on waste management signals to the wider community that the school supports local and national government initiatives to reduce the amount of resources wasted and create a healthier environment. It also indicates to students that the school management is committed to taking action to minimise waste.

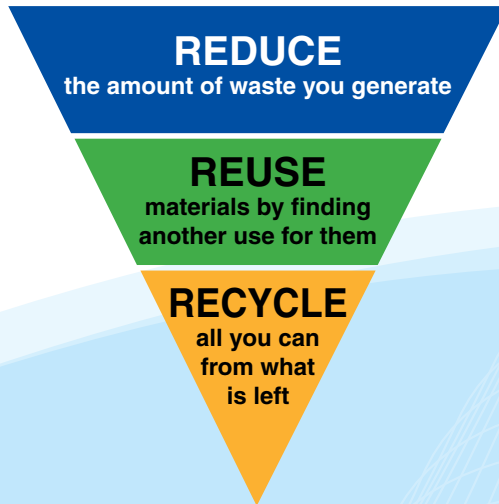
To set the direction and the goals that will allow you to achieve your vision, it is important to develop a 'waste-wise' policy. Involve the whole school from students to top management (Principal and Board of Trustees). Everyone concerned needs to have input into and commit to this policy.

Develop a 'waste-wise' policy statement that explains to all staff, students, parents and suppliers where the school stands on waste.



The hierarchy of waste management

It is easy to focus on recycling alone. Remember to incorporate the waste management hierarchy into your planning and put highest priority on REDUCING your waste first:



1. **Reduce** – The first and most important priority is to REDUCE the amount of waste entering the waste stream.
2. **Reuse** – Reusing items keeps them out of the waste stream and prolongs their useful life.
3. **Recycle** – Recycling products diverts waste from the waste stream. However, recycling is not complete until the collected materials are turned into new products and these new products are purchased, a process often called “closing the loop”. Recycling is the last process to consider in the hierarchy because it costs money and energy to make the new products.

A 'waste-wise' purchasing policy

A 'waste-wise' purchasing policy helps to establish the school's commitment to taking action to reduce waste at source and to communicate the action to parents, staff and students.

When deciding what to purchase, you may wish to consider products that are better for the environment. For example, if you need to buy disposables, choose the biodegradable type, such as recycled paper products, which can be composted.



The Environmental Choice New Zealand scheme makes deciding easy – approved products carry a green tick symbol as an eco-label.



A sustainable purchasing directory designed to help staff and students to make informed purchasing decisions has been developed by the EnviroSchools Foundation in partnership with [greenlist.co.nz](http://www.greenlist.co.nz) <http://www.greenlist.co.nz/Channel/1/EnviroSchools.aspx>. A useful procurement guide is also available on our website at www.wes.org.nz/business-resources.

Recycling only works if people buy the recycled products!

The following is an example purchasing policy for you to adapt to your school's needs:

Our school will:

Reduce:

- Only buy things we really need
- Buy items that are long lasting, e.g. reusable cloth or synthetic bags
- Buy in bulk
- Print double-sided
- Print hard copies only when necessary.

Reuse

- Reuse everything we can:
 - the back of used paper
 - envelopes
 - newspaper
 - yoghurt pots
 - food scraps.
- Buy products that are packaged in reusable materials.

Recycle

- Recycle as much as possible of what we cannot reuse: printer cartridges, paper, plastic containers

- Buy products that are recycled and/or recyclable:
 - unbleached, recycled printing paper, envelopes, stationery, photocopying paper and toilet paper
- Buy products that are packaged in recyclable materials, such as paper and cardboard
- Take non-recyclables home.
- Use biodegradable plastics where possible.

Recognise

- Recognise the efforts and achievements of everyone involved in the waste reduction programme.

Revise

- Revise our policies and practices yearly to make sure we are reducing waste as efficiently as we can.

Record

- Record any changes we make in purchasing and calculate the savings – both environmental and financial.

Rejoice!

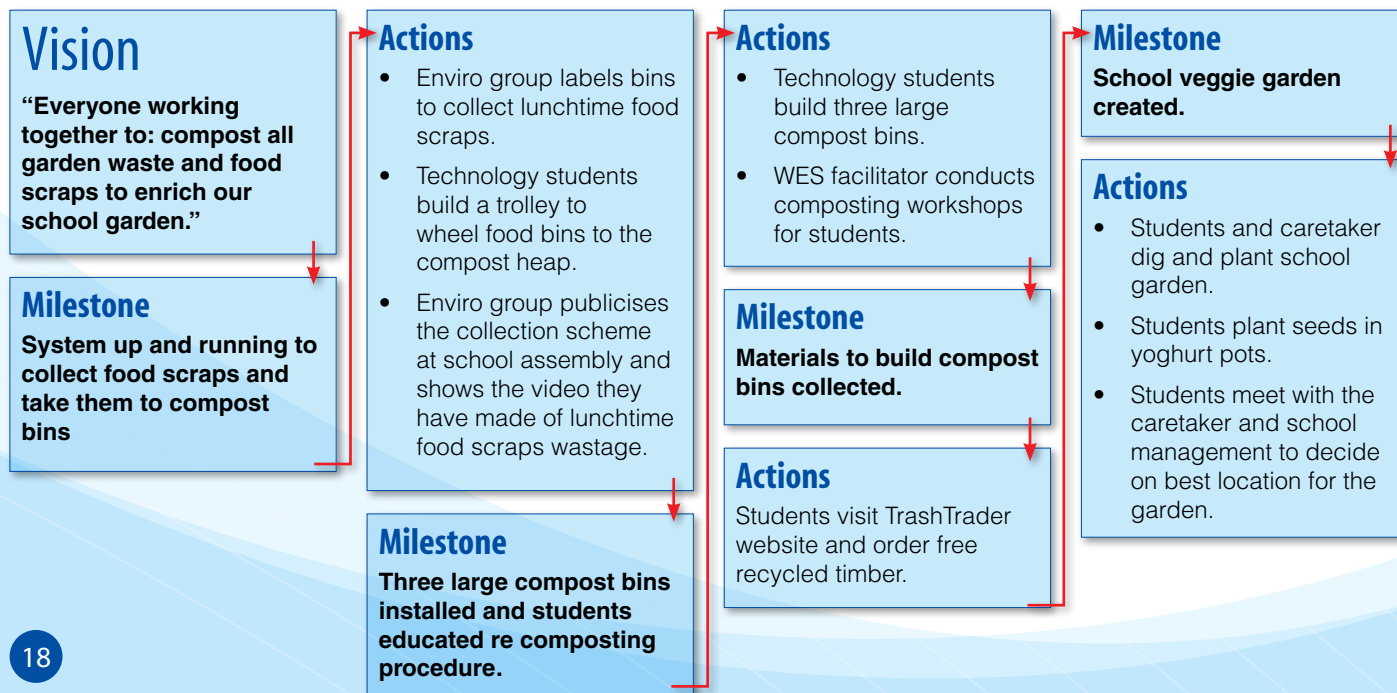
- Publicise our success and celebrate.

Step 5: Make an action plan

After conducting the waste audit, getting ideas for improvement from everyone involved, developing a vision and writing a policy, your 'waste-wise' team or whoever is driving the scheme can draft an action plan. This will determine the actions you will take in areas such as purchasing, paper recycling and composting.

Encourage the thinking that any kind of waste is a loss of valuable resources. Be creative in your solutions!

Begin with your vision statement and work backwards to determine the milestones towards achieving the vision. Then decide on which action will achieve each milestone. Remember to celebrate reaching each milestone along the way!



Make sure your action plan is specific and realistic. Start with a simple step like setting up a box in each classroom for collecting paper. Once you have one system successfully up and running, you can introduce the next step, e.g. collecting food scraps to feed the caretaker's chickens.

Include in your plan:

- **How** will you achieve each planned action?
- **Who** is responsible for carrying it out?
- **How** will you measure results?
- **How** will you know when you've got there?
- **How** you will celebrate your success?

Then present your plan to the Board of Trustees and Principal for them to approve and adopt.

Why waste anything?

Along the way...

Step 6: Think health and safety

As with any activity, there can be risks involved with recycling and it is important to firstly identify them, then eliminate, isolate or minimise them. You will need to go through a formal hazard identification procedure and incorporate the measures you take into your school's health and safety procedures.

Some of the hazards that you may need to be aware of, together with suggested actions include:



Hazard	Possible Action
Hygiene issues from separating out rubbish for waste audit	Wear protective gloves and wash hands thoroughly after audit is completed.
Lifting of bins and bags	Avoid lifting heavy bins. Use more than one person if necessary. Bend the knees.
Tipping over of wheelie bins	Store/place bins away from the play area.
Odour issues from decomposing organic wastes	Seek advice on current composting procedures.
Hygiene issues from dirty bins	Clean bins regularly.

Hazardous substances

If you have small quantities of hazardous waste at your school, such as garden chemicals, batteries or cleaning and pool chemicals, these need to be correctly disposed of. Tasman District Council has an arrangement with the Nelson City Council Transfer Station in Pascoe Street, which has facilities for dealing with hazardous chemicals. Small quantities may be able to be dropped off free. Schools in Golden Bay should contact the Takaka Service Centre.

For details contact:

Nelson City Council Transfer Station: Ph: (03) 548 5760

Tasman District Council Takaka Service Centre:

Ph: (03) 525 9516.

Leftover paint and empty paint cans can be taken for recycling to Resene Paints in Nelson and Richmond, and the Takaka Resource Recovery Centre. Schools can also get free recycled paint from Resene—particularly useful for painting over graffiti.



Evaluate and communicate...

Step 7: Check if it's working and communicate any results

After the plan has been adopted, the 'waste-wise' team or those responsible need to assess how the new policies are affecting work habits.

- Talk to the caretaker, secretarial and teaching staff, students, Board of Trustees, school principal and parents.
- Listen to their comments.
- Ask for any more ideas.

After an agreed length of time, students can monitor results:

- How many recycling bins does the school fill each week? Has this number increased? By how many?
- How many wheelie bins/skips of mixed rubbish (for landfill) does the school put out each week? Has this number dropped? By how many?

A local primary teacher reported that after their waste audit her students were so keen that their classroom rubbish dwindled from one large rubbish bin per day to one ice cream container.

Remember to publicise your results. Everyone has joined in the action to minimise waste, so everyone needs rewarding!

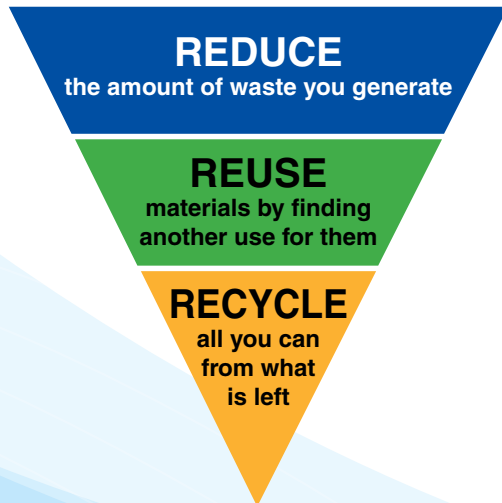
Step 8: Celebrate your success together!



What schools can do

Reduce, Reuse, Recycle

When making your waste minimisation plan, it is important to keep in mind the hierarchy of waste management options:



Reduce

- Encourage staff as well as students to use minimal and reusable-packaging for products used at school, including lunches. (At the very least, packaging should be recyclable, e.g. paper used to wrap sandwiches can be composted.)
- Challenge the staff and students to bring a 'rubbish-free' lunch once a week on a designated day and have prizes for the winners.
- Buy in bulk to reduce packaging.
- Buy durable products. Avoid anything disposable.
- If disposables are really necessary, consider paper, cornstarch or potato-starch plates, which can be composted.
- Make sure all staff members know how to make double-sided photocopies: set the machine to double-sided as default.



Reuse

- Reuse everything possible, e.g. yoghurt pots for art or seedlings.
- Reuse the backs of sheets of paper before recycling it. Set up a 'reusable paper' box and a 'recyclable paper' box in classrooms, beneath each computer, beside the photocopier, in the office.



Repair and Reuse

With the support of a good do-it-yourself caretaker, your school will be able to minimise waste and save money every week.

Recycle

- Set up a paper recycling system. Paper is the easiest product to collect for recycling and makes a good starting point for a whole-school recycling programme.
- Set up clearly labelled bins for all your recyclables and a storage area.



Composting

- Set up bins for food scraps only and have these collected by a parent with chickens/pigs, or use them as compost for the school gardens.
- Plant plenty of trees: they're not only good for shade but they also use the compost, completing the natural cycle. They also 'lock up' carbon in a 'sink' or reservoir.
- For maximum educational value, compost food waste in a worm farm bin.



- Ask your WES facilitator about the E.M. Bokashi composting system, which is a simple and effective method that works well for schools.
- Help students to build wooden compost bins or find one to suit your situation; many types exist, from oil drums with holes drilled in to sophisticated, layered, black plastic ones.
- If you have a compost bin or a worm farm that is no longer in use, contact WES for advice and assistance with setting it up and managing it.
- If you don't have a compost system set up yet, a good option is to dig a trench and bury the organic waste or make a heap in a back corner of the gardens.

- Join forces with a neighbouring preschool, community gardens, sports club or retirement village and have a larger, communal compost centre.
- Recycled plastic bottles of worm juice, labelled Liquid Gold and healthy compost can be sold as a fundraising venture.

Build three large, wooden-slatted bins to compost the large amounts of prunings and lawn clippings from the school grounds, together with food scraps. (These 3 bins can be rotated, so one bin is receiving fresh stuff, the second is covered and 'cooking', and the third is full of ready-cooked compost for mulching the gardens.)

Curricular activities

Setting off on the path towards a 'waste-wise' school provides a wealth of learning opportunities. Science, technology, history, maths, language skills, social studies and design, are just some of the curriculum areas that are covered as the students learn more about taking care of Planet Earth and her precious resources. Check out the *Waste Not* Education Kit and the Enviroschools Kit and DVD for curriculum links and activities. Look at the annual Enviroschools scrapbook for ideas and inspirational photos submitted by schools' envirogroups.

Contact us for more ideas, activities and resources:



Waste Education Services (WES)
Nelson Environment Centre
1 Braemar Place, Upper Franklyn Street, Nelson
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Ph: (03) 545 9176
www.wes.org.nz



Enviroschools - the bigger picture

Choosing a school-wide policy to minimise waste may be seen as a first step in the process towards becoming a sustainable school. Another step may be to adopt a school focus on sustainability as outlined in the curriculum and then, through a process based around good teaching and learning, choose a theme such as waste minimisation.

One such process is the Enviroschools Programme, which has been adopted by over 700 schools in New Zealand and is supported by most NZ local bodies. Enviroschools helps embed sustainable procedures into the operational and organisational practices of the school, as well as in the curriculum.

Enviroschools aims to equip young people with the competencies they need in order to be active citizens in a world where sustainability is a critical issue. The programme is based around critical thinking and the action learning cycle. Students begin the process by exploring the whole environment and contributing to a whole-school vision. Some schools prefer to work through the Enviroschools Awards process and move on to a whole-school approach later. Over 15 schools in our region are currently doing just that.

The five Enviroschools themes are:

- 1. Zero Waste**
- 2. Water**
- 3. Energy**
- 4. Landscapes**
- 5. Ecological Buildings.**

For more information on Enviroschools:

Nelson schools please contact:
Sustainability Co-ordinator
Nelson City Council
Ph: 03 546 0339

Tasman schools please contact:
Environmental Education Co-ordinator
Ph: 03 543 7222

