

Eco Buzz

Edition #34

Term 2, May 2009

What's Inside?

- Zero Waste Challenge for schools
- WeedBusters
- Matariki
- Enviroschool updates
- Lots of school action!



Tena Koutou & welcome to EcoBuzz

Hopefully you'll find EcoBuzz full of interesting information, articles, activities and inspiring stories of what we are all up to in Nelson and Tasman in the Environmental Education/ Sustainability spheres.

Please keep up all the good work and help this magazine to be useful – give it to others, use it, send us feedback, contribute too! Or just read it!

Tênâ râwâ atu koe – thank you from the Councils' EE team –

Rob, Karen, Jo and Claire



Rob Francis.



Karen Lee.



Jo Martin.



Claire Webster.

Contact

Tasman District Council



– **Rob Francis**

Environmental Education Officer

Ph: 543 8484

email: rob.francis@tdc.govt.nz

– **Claire Webster**

Environmental Educator & Enviroschools Facilitator

Ph: 525 0020

email: claire.webster@tdc.govt.nz

Nelson City Council



– **Karen Lee**

Sustainability Coordinator

Ph: 546 0339

email: karen.lee@ncc.govt.nz

– **Jo Martin**

Environmental Educator

Ph: 5458728

email: jo.martin@ncc.govt.nz

Some Useful Websites:

www.bigpicturesmallworld.com

From the US and seriously amazing – experiential games and much more. Do check it out. This is for use globally.

www.arc.govt.nz/albany/main/council/sustainability-education

Has lots of information and worksheets – thanks Auckland Regional Council!

www.tfsnz.org.nz

The Trees for Survival website. All about “children growing trees for our future”.

Here is a programme that some of our local schools have taken up – it is based around a propagation unit which can be shipped to your school and set up in the grounds. Hira and Ngatimoti have these and Rotary is an official sponsor. For more information, visit the TFS website or contact Roger Waddell.

www.globeforum-ap.com/main.aspx?menuPath

An opportunity for teachers and students aged 13 and above to participate in an online forum about Climate Change. You do not need to be involved in GLOBE to be a part of this.

Arbor Day Activities 2009

Tasman District Council is planning to run a series of Arbor Day plantings from the 8-19 June. This year school groups are invited to come out to one of the many re-vegetation projects we have throughout the district. Other community groups will be lending a hand at some of the plantings this year.

If you have any enquiries please contact:

Kathy Tohill-Curnow

Ph: 03 543 8492

email: kathy.tohill@tdc.govt.nz

NEWS FLASH!! - Conservation Week 2009

DOC, TDC, NCC and the Brook Waimarama Sanctuary are planning a round robin of activities (based on the highly successful Seaweed event at Rabbit Island). The dates will be 15 to 17 Sept. More information will be coming soon.

READY TO TAKE UP THE MAY ZEROWASTE CHALLENGE?



In May this year, Waste Education Services are organising a Zerowaste Challenge for all schools in Nelson and Tasman. The aim of this challenge is to encourage schools to move forward in their waste minimisation journey, with a focus on REDUCING waste, and also to celebrate the positive steps schools are making.

Entry forms were posted out in April (and again with the posted version of this magazine): if you have not yet received your school's entry form for the challenge, together with all necessary information, please contact:

Sarah Langi

Waste Education Services
Nelson Environment Centre
215 Akersten St
P.O. Box 5007
Port Nelson 7043
Ph: 03 545 9176
email: sarahlangi@nec.org.nz

Golden Bay schools contact:

Claire Webster

TDC Takaka Service Centre
P.O. Box 74
Takaka
email: claire.webster@tdc.govt.nz



We look forward to receiving your school's entry before 5 June!

ZERO heroes!

Here are some more wonderful ideas to get those creative juices flowing. Thanks go to teachers and students at Salisbury School, Greenwood Kindergarten and Dovedale School for sharing their projects.

Bottle top Art

We made a frame and attached chicken wire to it. We saved different coloured bottle tops and with a hammer and nail we put two small holes in the top of each one. With fine wire we twist-tied the tops to the wire following our design.



Glad Balls

Everyday for a month we collected Glad Wrap from the children's lunches. We cleaned it and squashed it into a ball. We displayed the balls where parents could see them and the size of the balls is getting smaller and smaller.

Shoe Fun

As a fun art project we used old shoes from the Nelson Re-use Centre and turned them into different characters, like mice and bumble bees. You can always find another use for something – even a single shoe!



Bag Bags

This is made out of old shopping bags. For more exciting ideas on turning 'waste' into art take a look at www.makingfriends.com

Helping hands and a small but mighty chipper make light work of school's greenwaste

After last winter's big storm, a HUGE pile of tree prunings prompted Waimea Intermediate School to purchase a chipper to reduce the waste down so it can be used as mulch in the school grounds.

Graeme Fryer, the school's groundsman, feeds small to medium-sized branches into the chipper and piles it up. The bigger branches he simply cuts up and the teachers take them home for firewood. Every lunchtime, before he goes on his break, he takes a wheelbarrow and 3 shovels out of his shed. As soon as the lunch bell goes, three enthusiastic students, Stefan, Nathaniel and Scott, gather and set to work, shovelling the mulch into the barrow and carting it off to spread around the gardens. I asked them why they spend every lunchtime working like this. "We're very keen," they said. "We volunteered to do this. We like it because it's helping the gardens and instead of chucking it away we are reusing it, so it goes round in a circle. Come and see our path we made as well," they said. "We even made the stepping stones by pouring Quikcrete into Mr Fryer's wooden moulds. Before it was just bare dirt and now look at it!"

Disposing of greenwaste from school grounds can knock a big hole in a school's annual waste disposal budget. Two neighbouring schools estimate they have between 40 and 70 cubic metres each year to dispose of, at considerable cost.



Stefan Swindon, Nathaniel Edwards and Scott Couchman-Shaw spreading mulch on their school gardens.



Graeme Fryer with the trusty Hansa Brush Chipper!

The Hansa Brush Chipper was a good choice. It is small, easy to move around and very efficient. The chipper was purchased locally in Richmond at a cost of less than \$3,000. "Has it been worth the cost?" I asked Graeme. "It's been a godsend," he said. "All our greenwaste used to go out in trailerloads, but now we can deal with it all on site. It saves us quite a bit of money on waste disposal and the mulch is great for the gardens and saves us watering so often. But, what's more, the boys LOVE it! They'd do it more often given half the chance!"

Zero-waste throne project



Nelson South Kindergarten has come up with a very creative way to deal with non-recyclable waste. They have made a piece of furniture into treasure, almost entirely from items that would otherwise have been thrown away. Here are instructions so that you can undertake a similar project.



Step 1

Design and plan your creation. Collect lots of clean non-recyclable rubbish (such as chippie packets, plastic lunch wrap) and tetra-paks (mainly juice and milk boxes). Cut open the lids of the tetrapaks (they don't need to be the same size). Wash and dry thoroughly and then stuff them full of non-recyclables to make solid 'bricks'. Tape the lids shut.

1

Step 2

Make a base out of wood and secure an old chair to it with strong adhesive. The Nelson Re-use Centre is a great place to get old furniture from. Stack the bricks around the outside of the structure. The throne needs approximately 80 bricks. Fill any gaps with old plastic bags. Strap everything together using strong packing tape.



2



3

Step 3

Re-use packaging cardboard to give shape and structure to the item. Cover the structure with at least three layers of papier-mache, using old newspaper and a mix of two parts wallpaper paste to one part PVA glue. It is a good idea to allow each layer to dry for a few days before adding the next one.



4

Step 4

Cover the chair with a coat of sealer or undercoat paint. Leave to dry overnight. Add the top coats.

Step 5

Decoupage with coloured paper shapes and pictures from magazines (but not photos), coloured paper and add gemstones, stickers etc.



5

Step 6

Coat or spray with varnish to seal in the layers and make a durable, wipe-clean surface. Sit back and enjoy!



6

Many thanks go to Nick Kiddey, Emma Heke and the staff at Nelson South Kindergarten for sharing their process

Matariki



What is Matariki? Matariki is the Maori name for the group of stars also known as the Pleiades star cluster or The Seven Sisters; and what is referred to as the traditional Maori New Year.

When is the Maori New Year? The Maori New Year is marked by first new moon after the rise of Matariki. This next occurs on 24 June 2009.

What does Matariki mean? Matariki has two meanings, both referring to a tiny constellation of stars; Mata Riki (Tiny Eyes) and Mata Ariki (Eyes of God).

Why is Matariki important? Traditionally, depending on the visibility of Matariki, the coming season's crop was thought to be determined. Brighter stars indicated a warmer season and thus a more productive crop. It was also seen as an important time for family to gather and reflect on the past and the future.

Why do we celebrate Matariki today? Today Matariki means celebrating the unique place in which we live, and giving respect to the land we live on. Matariki is celebrated with education, remembrance and the planting of new trees and crops signalling new beginnings. Matariki was the optimum time to prepare for new harvests, and ceremonial offerings to the land-based gods Rongo, Uenuku and Whiro to ensure good crops for the coming year. It was also seen as a perfect time to learn about the land we live on and to remember whakapapa (ancestry) who have passed from this world to the next and the legacy they left behind.

Matariki and Primary Schools

For children Matariki is an important time to learn about whakapapa (ancestry), the land, the stars, and what it is to be Maori or to live in Aotearoa.

The Matariki stars were used to navigate, to keep time, know

what season they were in, and to learn about the legends of the stars.

Learning about family and whakapapa was also very important around the time of Matariki. It was time to come together to exchange stories, learn about ancestors who have passed from this world to the next, and hand down knowledge and practices to ensure the Maori culture is preserved.

The land and the preserving of it was a big part of Matariki. Crops were being planted for the next season, and learning about the land and forest was essential for everyone.

Matariki is a time when children can learn about and celebrate the unique culture that they are a part of through school, family and friends.

School activities associated with Matariki...

- Matariki month/arts and crafts
- Maori history/legends classes
- Projects on star constellations
- Planting of vegetable garden and New Zealand plants exercises
- School play performances
- Family days surrounding Matariki
- Cooking classes for whole family
- Whakapapa/family tree exercises
- School Hangi (Traditional Maori cooking) to celebrate the new moon/new year

Thanks to www.matarikinorthland.co.nz/matariki for this information.



Enviroschools

Contact the Regional Coordinator and Tasman Facilitator – Kate Cobb, Ph: 541 8293 or email: kate.cobb@hotmail.com
 Sarah Langi - Nelson Facilitator, Ph: 545 9176 or email: sarahlangi@nec.org.nz
 Claire Webster - Golden Bay Facilitator, Ph: 525 0020 or email: Claire.webster@tdc.govt.nz

It has been a wonderful, active start to the year for many of the Enviroschools in our region. Here are just a few highlights.

Greenwood Kindergarten, Tasman School and Mahana School have been getting ideas and opinions from students, staff and community members to create their whole school vision map. These maps are a great way of uniting current initiatives and can be used to identify future project areas. When placed in a central area they increase awareness of the environmental actions that are happening in your school, show what you are working towards and look great too!

Celebrations took place at Central Takaka School & Greenwood Kindergarten to mark them joining the programme. Students at CTS planted a tree to commemorate the event and made a large poster mural to promote their involvement with Enviroschools. We are really pleased to welcome such enthusiastic centres into the network.

Lead EE teachers from our Primary schools got together at cluster meetings in 3 locations across the region. These were really well attended, so thanks to everyone for coming and sharing your ideas. Further cluster meetings are being planned for Term 2, along with an opportunity for schools that are new to the programme to visit an established Enviroschool.

The incredible edible garden at Tahunanui School, in the shape of their school logo, is almost complete. Students and staff are looking forward to using the gardens as a learning resource across many curriculum areas.

The Envirogroup at Motueka High School is being rebranded. We look forward to seeing what the MOOSEs come up with this time!

Ngatimoti School, Salisbury and Nayland Primary have all registered for the eco-hut challenge and are ready to go. If you would like to take part in this too, there is still time. Contact andrea.ricketts@enviroschools.org.nz





enviroschools
Measuring Change
 Improving environmental outcomes

The EnviroSchools Foundation is set to launch a great web-based tool that will help measure the outcomes of environmental action in schools.

Throughout New Zealand hundreds of schools are taking action to make positive environmental changes. So how much change are these schools actually making? What difference does this make towards creating sustainable school communities and collectively, a more sustainable New Zealand?

The Measuring Change tool is available to all New Zealand schools to help monitor their progress towards sustainability goals. Whether your school has just started on its sustainability journey or is well down the track, the information and resources in the Measuring Change tool will help you find out how sustainable Waste, Water, Energy and Landscapes are at your school and then track your improvements over time. Schools will receive progress reports that can be used to acknowledge effort, celebrate achievements and to help get funding and support for further projects.

Measuring Change is available on the web so that you can download the resources you need to get going. Once you've collected your data, enter it into the online annual summary forms. You will receive reports for your school as well as comparisons to other schools in your area and in the rest of New Zealand.

www.measuringchange.org.nz

www.enviroschools.org.nz

One potato, two potatoes, three potatoes, four...

Thanks to Stoke Primary school for this delicious activity

You will need: old potatoes, bucket, soil, water

What to do:

1. Drill holes in the bucket.
2. Half fill the bucket with soil and shake it.
3. Place potatoes on the soil, shoots upwards.
4. Put more soil on top.
5. Water and put in a sunny place. Keep watering so it is moist.
6. Wait one month for little green plants to show.

Our potato diary

Friday 22 August: Mr Mullan came to show us how to grow potatoes. Levi, Matthew, Cody and Joel are our experts. Our sign:

Joel, Matthew, Cody & Levi are growing potatoes here. THANK YOU FOR NOT TOUCHING

Monday 1 September: We didn't have to wait a month! Seven shoots are showing. Should we put more soil on top? We decided to cover the shoots with straw – from the cross-country. Old potatoes are growing into new potatoes!

8–12 September: The green plants just got bigger every day. They pushed the straw up into the air. It rained every day. The potatoes kept on growing.

22–26 September: This is THE YEAR OF POTATOES. We found out potatoes need less water to grow than rice or wheat – so we didn't water them every day, but they are outside for sunshine and rain. Joel found out the healthiest part of the potato to eat is the skin.

13 October: We carried the bucket of potatoes around to the back of the bike sheds to leave them for the holidays. THEY ARE ALL DROOPY! It was like someone had sat on them.

20–24 October: Bigger and bigger. Now they are back outside the classroom. Fiona tucked more straw around them so they would stand up. Then the rain came! Now they look good.

3–7 November: We must keep watering the potatoes. No flowers yet but they are going brown.

The Great Potato Cook-off

First we harvested the potatoes from the buckets. Then we went to the computer suite and looked at recipes for potatoes. We voted for the ones we wanted. We had: Wedges, Potato salad, Hot chips and dip. IT WAS SO NICE!

By Dylan, Ryan, Elijah.

Tahunanui Primary School Enviroschool Update

Giant leap forward on schools' road to Enviroschool goals and zerowaste

It's been three short years since Waste Education Services (WES) for schools began in Nelson. To start managing their waste schools began by setting up systems to recycle paper and card, the easiest items to deal with first. Next came 'waste-free' lunches, challenging the kids to reduce plastic food wrapping in their lunchboxes, and taking the message home. Food scraps – the bane of all school caretakers' lives – were next on the agenda. Worm farms, bird feeders, compost bins and EM bokashi systems were promoted. Some schools opted to ask their students to take all their lunchbox left-overs home; one school gives food to Poppy the pig!

And now, a new wave is building – students are gardening! At least 12 of the 22 Nelson schools have set up food gardens, many with the help of the nutrition and physical activity fund provided by the District Health Board.

Fruit trees are being planted; pumpkins, potatoes and silverbeet flourish. Some schools sell their produce to staff and parents; some students serve up delicious soups and salads – the fruits of their labours.

One such garden is shown here – at Tahunanui Primary School, which has recently joined the national Enviroschools programme. The garden was designed by the students themselves, in the form of the school's logo: a big sun and waves. "Can't be done!" said some of the adults involved – "Impractical!" But thanks to the enthusiasm of the students, teacher and a couple of dedicated parents, one of whom was a landscape architect (LUCKY!), they have pulled it off.

"Getting buy-in from the whole school was a key factor in its success," said Shelley, who leads the school's envirogroup. "This is why we have involved every student in the school in filling in the garden beds with soil. Our next step is to put up a huge, detailed planting plan – we have a whole exterior wall set aside for this. The learning that will come from this is crucial and will be integrated into all curriculum areas, so that the students learn in a real-life context. And, what's more, the kids are loving it!"

Worries about economic recession and climate change, move aside – we are in good hands. Our young students are learning essential skills to grow food and care for the environment.



As always, we are here to help. If there is anything you need, please do not hesitate to contact us for advice and support.

From Kate, Claire and Sarah x

New School Travel Planner!

Nelson City Council and Tasman District Council have appointed a new School Travel Planner, who hit the ground running when she started in the job last term. Sarah Downs is originally from the UK and worked as a geography teacher for many years before relocating to NZ.

Sarah will continue the work started with Wakefield, Brightwater, Clifton Terrace and Stoke schools. At the start of term 2 2009 she will also start to work with Salisbury Road schools on their School Travel Plans.

Wakefield School launched their School Travel Plan in term 1 and some initiatives that will be happening soon include...

- Cycling skills courses for all 10-year-olds and those who are 10 this year.
- Development of Walking School Buses to start in Term 2.
- Kea crossing to be installed on Edward Street and built-out kerbs on Arrow Street.

Other activities have included supporting Feet First Walk to School activities at Nelson Central School, Walking School Buses at Enner Glynn School, and working with Nayland School to try and re-establish their Walking School Buses.

If anyone is interested in finding out more about School Travel Plans or projects/activities to promote walking and cycling to school in Nelson or Tasman areas, contact Sarah on 03 543 8542 or sarah.downs@tdc.govt.nz

It is not too late to join up!

Is it not too late to join the Feet First Walk to School project. This project now runs throughout the whole school year and schools can take part in just 1 term or for how many terms they want. To join just log into www.feetfirst.govt.nz and follow the instructions – it is easy and free, so give it a go!



Walk to School Every Week

Ia Wiki Hikoi Ki Te Kura



Funding opportunities:

www.wwf.org.nz

Go to NZ conservation, then grants. Next funding round closes 1st September.

www.pubcharity.org.nz

Regular funding rounds

www.waternz.org.nz/wherethereswater.html

Closing date May 15th

www.fletchertrust.co.nz

Four funding rounds a year for Children and Youth – no formal application form.

Of course you can find out more about these grants/funding opportunities and many more by using **www.fis.org.nz** yourself! You choose from a list of filters so you only read about funding opportunities appropriate to your project.

An Update from Roger Waddell

Education for Sustainability Adviser to schools

Hi – I am your local adviser based here in Nelson with the other advisers in Literacy, Numeracy etc. I work with primary and secondary and area schools on the curriculum aspects of the environment and sustainability. There are many valuable and exciting 'environmental' programmes existing in schools and I can help you embed these in your curriculum and operational practices. The NZ Curriculum has a SIGNIFICANT emphasis on sustainability and I work with both senior management and teachers in this area. I can also assist you with: **unit plans; enquiry learning models based on sustainability; recycling and waste management; linking schools with community agencies e.g. Fish and Game, Environment Centres; case studies from other NZ schools; Enviroschools partnerships; biodiversity; stream monitoring/restoration and kits (through GLOBE and National Waterways); Environmental Education Guidelines; activities in, about, and for the environment; policy documents; workshops (e.g. the new EfS achievement standards); EE/Science/Maths/Social Studies/Technology integration; wetlands; endangered species; energy efficiency/sustainability; biosecurity; Trees for Survival; heritage; teacher/staff PD and HEAPS OF RESOURCES and kits...**

Contact

- **Roger Waddell**
Education for Sustainability Adviser
UC Education Plus
University of Canterbury Nelson campus
86 Selwyn Place
NELSON
Ph: 03 5460584
Cell: 021 1671 246
email: roger.waddell@canterbury.ac.nz



Ecofest is coming!

August this year will see the nationally and internationally renowned Ecofest festival happening in Nelson again. For the last 5 years Nelson schools have profiled their environmental and sustainability initiatives at a special Education for Sustainability/Enviroschools stall at Ecofest – for the last 2 years the stall has won Best Stand Community. We would love to see you there. Please consider having a display of photos, things (penguin boxes, stream monitoring equipment, painted recycle bins, rodent traps, flax varieties etc...) and/or PowerPoints and/or scrapbooks and/or teaching plans.



Teacher professional development in Education for Sustainability

Local schools that opted for PD in the NZ Curriculum based on sustainability have been working with me, the EFS adviser. I concentrate on teaching and learning tools in EFS. Sometimes I work alongside programmes that bring the NZC alive, such as EnviroSchools, EMAP, Waimaori, TFS.

This EFS PD programme provides free teacher relief days and workshops centred around sustainability and the new curriculum, 'hands-on' action, planning and implementation etc. Please consider your school applying for the programme for 2010 – details will be out in November this year.

Secondary School EFS.

Local schools using the new EFS achievement standards – such as Nelson College, Nelson College for Girls, Nayland College, Marlborough Boys – will begin some PD in EFS from term 2. These standards provide NCEA credits that may be part of their Geography or Science or Economics or Technology course of study.

As part of their Sustainable Cities programme in Level 2 Geography, one group of girls worked with mentors in the business community to reduce waste within the hospitality industry. They were the first in NZ to secure a discount pledge from coffee retailers if customers brought their own coffee cups – a reduction from \$4 to \$2.75 from some retailers!

The girls were doing NCEA achievement standard 90810 'Take Action' as part of an enquiry unit within their Geography course. This has caused much interest from around NZ as it is an excellent way of bringing the NZ Curriculum to an authentic context, and brings in E4E (Education for Enterprise) and partnerships with local NGOs and businesses. Contact me for more information.



Resources

I have resources on most areas you might use for your teaching units on the environment/sustainability e.g. climate change, waste, biodiversity, action planning. There are:

- Books with photocopy masters
- DVDs (e.g., Wa\$ted, An Inconvenient Truth)
- Kits (e.g., the Cent-a-meter – measures energy usage)
- Graphic organizers
- Unit plans



EMAP

The Environmental Monitoring and Action Programme (EMAP) is operating in some of our local schools. This offers stream or atmosphere or soil monitoring – a great way to embed relevant science investigations in your school. I am the local EMAP facilitator and can take your class monitoring your local stream or weather. Results can be loaded on to the www.globe.gov website (good for maths/IT/science and sister-school links).



What is a weed?

Where do we find them?

What can we do?

A weed is a plant growing in an area where it is not wanted and has a harmful impact. Weeds have been introduced to New Zealand and have become so abundant that they have negative impacts on our activities like farming or recreation, our native environment or our health.

Weedy plants have some or all of these characteristics:

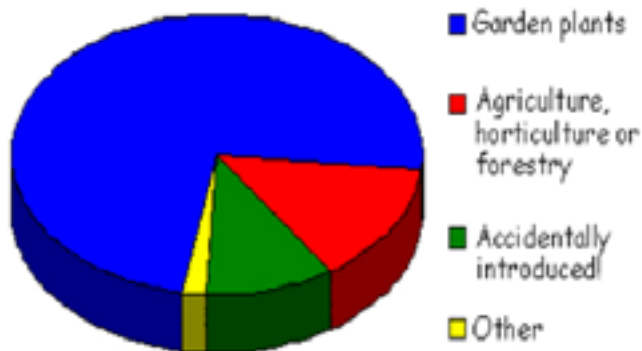
- Produce lots of seed
- Seeds are spread by birds or wind
- Grow from fragments of root, stem or leaf
- Form dense masses
- Grow fast
- Are hard to control

Weeds can invade anywhere that plants can grow, including native bush, beaches, farmland, gardens, roadsides, streams, lakes and waterways.

Really bad weeds can invade pristine habitats and out-compete the native plants, changing the nature of the ecosystem, e.g. wilding pines in tussock grassland areas.

There are 40,000 plant species in NZ – only 2400 are native, 2100 are introduced plants that now grow wild in NZ and that leaves 35,500 plants still in our gardens – how many are going to become more weed problems!

This is the make-up of plant species in NZ presently:



Weeds spread in one or more of the following ways: people dumping garden rubbish, gardeners planting them in their backyard; and then there is dispersal of seeds, dispersal of plant fragments, creeping growth habit expanding the size of an infestation.

Some weeds are harmful to economic activities such as agriculture or forestry. They can replace crops and pasture grasses, and cost New Zealand approximately \$40 million in lost production, productivity or control costs.

Biodiversity:

Biodiversity is the number and variety of all life, plants, animals and micro-organisms, the genes they contain and the ecosystems they form. Biodiversity is important because it is essential to the ecosystem processes that make life possible. Introduced plants and animals are the biggest threat to New Zealand's biodiversity.

There is often a flow-on effect within the ecosystem when the weed puts it out of balance, threatening other insects, plants and animals in a ripple effect.

Many people value our natural environment in the sense of cultural identity (traditional Maori uses of native plants for medicinal, craft and everyday uses), recreation (tramping, photography), tourism or economics (farming and horticulture). Each generation of people has the responsibility to act as kaitiaki (guardians) of our biodiversity and natural resources to ensure our country remains unique.

Check out these two websites for lots more information and activities:

<http://www.landcareresearch.co.nz/education/weeds/weedinfo.asp>

http://weedbusters.co.nz/weedbusters_in_schools/index.asp

ACTIVITIES

Weed Wipeout! – Time: 20 minutes

This experiential game is about the threat of weeds and the effect they can have on an ecosystem when there are no controls in place.

Round One Wipeout – The impact of weeds on native plants

- » Mark out an area approx. 15m x 15m.
- » Designate two people to be weeds.
- » The rest of the class are all native plants. They are allowed to walk within the boundaries.
- » Let the two weeds loose among the native plants. The weeds hold hands and start running around tagging native plants with their free out-stretched hands.
- » The tagged native plants then die and join the line of weeds. Still holding hands in one big line the weed group moves forward trying to catch the remaining native plants, with the two people on each end of the line being the only weeds able to tag. When the weed group becomes more than three they break off to form pairs.
- » As more native plants are tagged their numbers decrease until none are left.

At this point STOP the game and facilitate a discussion:

Discussion & Reflection

Why are the weeds so destructive? Answers may include: they strangle and cover native plants; the large numbers eventually kill all the plants.

Why are the native plants so important? Answers may include: they are special to New Zealand; they provide a habitat for the creatures that live there; they are important to Maori cultural traditions etc.

What will happen if weeds are not controlled? Biodiversity (the variety of living things) will decrease. Plants, animals and micro-organisms only found in New Zealand will be lost. Ecosystems will be destroyed.

Round Two Wipeout – Weed Control!

Set out the area as in round one

Start out with two weeds tagging the native plants. This time introduce **one** of the **weed control measures** below. The person who is designated to carry out the control measures runs around the boundary markers and at a predetermined point enters the playing area and tries to reduce the weed numbers in the following ways;

Biological Control – person ‘flies’ around and tags weeds, who then become native plants.

Herbicides – place a small white disk on the ground in the playing area. If a weed stands or runs over the disk they die of poisoning and rejoin the game as a native plant.

Mechanical (weeders!) – person enters the playing area and walks around tagging weeds, who become a newly planted native plant.

Stop the game after five minutes to see what effect the measure has had.

Start again by introducing a second measure. Stop, process, and introduce a third and so on until the plants are obviously on top. The overall effect is that the plants will be more likely to survive.

Discussion & Reflection

What role do biological control, herbicides and weeders play? They make the population sustainable by helping to stop the spread of weeds.

How much energy do the control measures expend running around the boundary? More than the weeds.

What are some of the problems we face with weeds? There are no natural enemies to help keep weed numbers down. Weeds like the climate and soil of New Zealand and reproduce easily.

Do we want weeds taking over our native plants? No. Weeds threaten the biodiversity of our country and can cause health and economic problems.

Finish!

A bundle more Activities about Weeds

- 1 - **Go outside** as a class and check out your school environment. Find plants that you think are weeds. Compare the weeds with native plants. How can we tell the difference? Why are weeds introduced plants? Brainstorm the meaning of the word 'weed'. What do the students understand about the word weed? Where have they heard it being used before? What does the dictionary say?
- 2 - **Explore** the ideas about why weeds may grow in particular places. (This idea could be followed up on the Weed Walk where children are in the environment and can see the actual weedy places.)
- 3 - **Invite** a local farmer, gardener or horticulturist into your class to share their experiences with weeds. Students could create an interview sheet so they can find out the views the guest speaker has about weeds.
- 4 - **Newspaper Critique.** Find three newspaper articles about weeds and weed control activities in your area. Identify some of the views different groups have about weeds by conducting a newspaper search. From the articles, put together a storyboard of people's views about weeds in your region.
- 5 - **Investigate** the traditional uses of native plants by Maori, for example, herbal remedies, weaving and food. What impacts could weeds have on some of the traditional uses of these native plants?
- 6 - **Weed Collection** – make a collection of dried specimens of local invasive weeds.
- 7 - **What Weed Am I?** Students will need to be familiar with the descriptions of the weeds used. Write the names of the 10 common invasive weeds on individual sticky labels (repeat labels so there is one for each child). Stick one name onto each student's back. The aim of the game is to find out which weed you are by asking only Yes/No questions e.g. Am I a spiky weed? Do I smother plants? Challenge students to guess their weed name in less than 10 questions.

Waste Timeline

Adapted from initial activity by LYNETTE BROWN – Environmental Education Facilitator

Objective:

To give students a visual representation of the time it takes for various materials to break down by relating the time to concrete examples. To identify those materials that could be recycled or re-used instead of becoming waste.

Materials:

- 10 m piece of coloured string or a piece of chalk
- metre ruler or tape measure
- clothes pegs or labels (100, 200 - 1000 years)
- variety of waste materials
- labels saying "Today" "People"

Instructions:

Round One: Creating a timeline (working in groups)

- a) Place a 10m timeline across the room or along one wall, or alternatively use chalk and draw a line along the concrete outside.
- b) Using the pegs or labels, on the timeline mark out every 100 years (1m=100 years)
- c) Label the beginning of the line TODAY!
- d) Give each group a Round One card and a "People" label. Answer the questions on the card.

Answers to Round One Questions:

1. (80 years)
2. (less than 10% or less than 1/10th)
3. (e.g. measuring skills, co-operative skills etc)

Round Two: How Long to Rot

- Give each group a range of waste items (select from the list below).
- They are to discuss and decide how long they think it will take the article to break down (under ideal conditions).
- Place (or hang) their articles on the timeline showing their estimate.
- Give each group a Round Two card. Answer the question.

Round Three: According to the Statistics

- Now give each group the card showing the real time for the articles to break down.
- Get the students to move their articles along the timeline to place them at the estimated time to break down according to the statistics given.
- Answer the questions on the Round Three card.

Round Four: What can be recycled?

Ask participants to return to their waste timeline and remove all the articles they could re-use and/or recycle.

Reflection / Evaluation of the Activity:

- What was the purpose of doing the activity?
- What skills were practised and developed in the activity?
- How could you modify this activity to use for your work
 - With children
 - With teachers or educators
 - With other adults (community groups)

Article	Time to break down
Apple core	2 months (in water)
Aluminium cans	200 - 500 years
Cardboard box	2 months (in water)
Cigarette butts	1-5 years
Disposable nappy	450 years (in water)
Fishing line	600 years (in water)
Glass bottles	forever
Leather	Up to 50 years
Nylon fabric	30-40 years
Orange or banana peel	Up to 2 years
Plastic bags	Between 20-1000 years
Plastic bottles	forever
Plastic-coated paper	5 years
Plastic film containers	20-30 years
Plastic six-pack holders	100 years
Styrofoam	forever
Tin cans	50 years
Wool socks	1-5 years

Question Cards

Round One: Creating a Timeline

1. How long are most people expected to live? Place the “People” card on the timeline to show this age.
2. How does this age compare with the total length of the timeline?
3. What skills did you use to create the timeline?

Round Two: How long to rot?

1. How did you decide where to place the items on the timeline?

Round Three: According to the Statistics

1. What surprised you?
2. What did you learn?
3. How could you use this knowledge?

Round Four: Re-use and Recycle

1. Explain what you could do with the materials you removed.
2. What materials were left on your line?
3. Would there be alternatives to these materials that you could use that might be recyclable or re-usable?

TODAY

PEOPLE

EcoBuzz is created with the help of many contributors – thank you to you all