

# EcoBuzz

EcoBuzz Edition 53

Term 1 2014



*Sustainable actions at Victory School  
Details on page 9*

## IN THIS ISSUE:

- Offers of support for 2014
- Moturoa Mission – student challenge
- Calendar
- Class activities
- School updates

## Ringling the changes

There have been several recent changes to environmental education staff within both Nelson City and Tasman District Councils.

At Nelson: Towards the end of last year Jo Martin was seconded to manage a significant hazards project for Nelson City Council.

Richard Frizzell is now the contact for the Nelson City Council with Lindsey Fish taking on the Enviroschools Coordination role in addition to her Enviroschools Facilitation work for Nelson City.

At Tasman: Adie Leng and Claire Webster continue their roles to support Tasman schools and enviroschool communities. I am sure you would like to join us in thanking Rob Francis for his support of environmental education over the 6 years he was with the Tasman District Council.

No doubt the new school year has heralded many changes in schools too – we wish you all the best for 2014. We hope you are excited about the information and ideas you read in EcoBuzz and want to pass it around (paper or electronic) – and let everyone know they just need to contact any of us to be added to the email list to receive their own personal copy.

*Thanks Adie, Richard, Lindsey and Claire*



### “All about school grounds

In the past, school grounds were often characterised by featureless expanses of asphalt and grass. However, it is now commonplace to see these areas transformed into social and educational areas, often with links to the curriculum.

It is increasingly common for schools to teach more of the curriculum in an outdoor environment, which makes good design important.”

From EcoSchools – Scotland

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## The Team

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### Nelson City Council



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## There's something in the water

An issue that both Nelson City Council and Tasman District Council have been grappling with over summer is the presence of cyanobacteria in our rivers.

An alert against swimming in and allowing dogs to drink from the Maitai and lower Waimea Rivers was announced in November and January due to very high levels of the toxic, blue-green algae.

Since then, those levels have reduced considerably due to low rainfall and low river flow. Whilst the rivers currently present no immediate risk to public health, people still need to be careful with dogs and young children as there are still small patches of the brown or black coloured mats of cyanobacteria in the river.

Ingesting even a small amount can be harmful. Signs along the Maitai provide information with photos.



A river is a dynamic environment – it's constantly changing and it's hard to predict what may happen next. It is possible that cyanobacteria may re-emerge this summer but for now the water is safe for swimming.

The Councils are constantly monitoring the rivers so if there is another emergence of cyanobacteria, people will be notified.

Further information on cyanobacteria along the Maitai is available on Nelson City Council website at:

<http://www.nelsoncitycouncil.co.nz/environment/water-3/freshwater-2/cyanobacteria-toxic-blue-green-algae/>

And for Tasman rivers:

<http://www.tasman.govt.nz/environment/water/rivers/river-water-quality/monitoring-toxic-algae/#status>

## Tours starting at Richmond Resource Recovery Centre and Landfill at Eves Valley

These tours will offer a chance to find out what happens to the recycling that is collected and where rubbish ends up. The Richmond Resource Recovery Centre, locally known as the Richmond Recycling Centre, is offering tours of the recycling facilities and transfer station. At present, tours will only be held Thursday afternoons from 1pm, starting March 6th. The tour can take up to 40 minutes. The Eves Valley Landfill tour is available Monday, Tuesdays and Wednesdays and is more effective after the recycling centre and transfer station tour to experience the full waste journey from pick-up to landfill.

**All bookings** are to be made through Adie Leng via Customer Services 03 543 8400 or email, [info@tasman.govt.nz](mailto:info@tasman.govt.nz). Please be clear in your email that you wish to book a tour of the Richmond Resource Recovery Centre/Recycling Centre and/or Eves Valley and add preferred days and times.

Please book well ahead in time. Adie will contact you to confirm the date, provide you with the information and safety requirements. Claire and Adie are the Waste Minimisation educators for Tasman and are available to support your classroom planning and actions aiming for best use of resources aiming for zero waste.

*Waimea Intermediate Wastebuster students pushing a card & paper bale – How much do you think it weighs?*



## All Tasman Schools and Early Childhood Centres

Did you know that you can request Tasman District Council's educators, Claire and Adie to assist you, at no cost, with support for planning & learning for environmental action at your school?

We offer a range of services including:

1. The Enviroschools Programme:

- A whole-school approach of learning and action for a more sustainable future
- Student-directed process of exploration, decision making, action and reflection
- Action projects with environmental and educational outcomes that benefit the school and wider community.
- Fantastic resources including theme areas of Zero Waste, Energy, Living Landscapes, Ecological Buildings and Water of Life.

2. Advisory service for projects or programmes:

- Planning and curriculum links
- Professional development and workshops on any environmental theme area
- Resourcing e.g. education resources and equipment
- Links to funding

3. Specific support for learning for action areas:

- Best use of resources – waste minimisation education
- Stream care – in partnership with Waimāori e.g. Tamariki Wai
- Biodiversity – animals and plants (in partnership with DOC)
- Bio-security – plant and animal pests
- Waterways – health and monitoring of wetlands, estuaries, streams, lakes and rivers
- Stormwater, water conservation and waste water
- Air quality

4. Workshops for school caretakers

5. EcoBuzz quarterly newsletter for teachers, joint with Nelson City Council

We especially like to support teachers and classes taking long term actions that benefit our shared environment and achieve shared District outcomes.



Nelson City and Tasman District now have separate

**Enviroschools web pages** on The Enviroschools website:

Check out [www.enviroschools.org.nz](http://www.enviroschools.org.nz)

Whether you are an enviroschool or not, the Enviroschools website is very much alive with wonderful activities happening in schools around the country, just check out the regional pages and newsletters. Contributions from local enviroschools are always welcome.

If you wish to access the Members page, please ask your facilitator for the password.



## Nelson Enviroschools Environmental Action Project Fund 2014

Applications are now open for funding of up to \$500 per project for a student led activity in a Nelson or Early Years enviroschool, which meets the environmental vision of the school or centre.

Examples of successful projects last year were rain water harvesting systems, recycling systems, a thrift shop and building edible garden beds.

For details and an application form contact Nelson Enviroschools Facilitator: Lindsey Fish

[lindseyfish@extra.co.nz](mailto:lindseyfish@extra.co.nz) or 021 1460247

Applications close: 1st March 2014.

Project funding to be spent by 30th June 2014

*Revitalised garden beds, composting and potting table—an action project at Hampden Street School*

## Tasman Enviroschools Action Project Fund 2014

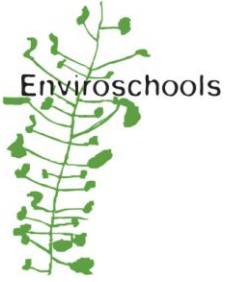
Applications are now open for funding of up to \$500 per project for a student/children led activity in any Tasman enviroschool.

Following on the success of Nelson enviroschools successful action projects last year, (see below) Tasman enviroschools now have a similar opportunity.

For details and an application form, contact your Tasman Enviroschools Facilitator: Claire Webster or Adie Leng

Register interest by 1 March and complete application form by 28 March

Project funding to be spent by 23rd June 2014



## New Reflection Section for Kit

Last year, or early this year, the Reflection section of the Enviroschools Kit was delivered to you. Thank you for your patience on this section. Various facilitators and teachers had been working on the draft reflection section for many years. We hope you make time to explore the different aspects of this section comprising supporting documents to reflect on your projects as well as the holistic reflection addition to review where you are on your enviroschools journey. It's great with the number of enviroschools reflecting on their journey this year with the support of their facilitator. Look out for enviroschool celebrations.

*Parklands School staff working through the Journey keywords as one of the activities to help with their holistic reflection this year.*



### Nelson Tasman Enviroschools Teacher Workshop

***What is sustainability?***

***He aha te mahi whakauka?***

An exploration of the concept of sustainability

Te kaupapa he āria i ngā mahi whakauka

5<sup>TH</sup> April 9.00 am- 2.30 pm

Victory Community Centre

At the workshop you will:

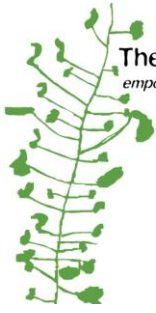
- Develop confidence in your own understanding of sustainability and how you might use this understanding to excite students.
- Motivate and inspire you.
- Reinforce the Enviroschool's kaupapa in relevant and meaningful ways.
- Leave with opportunities for networks and partnerships.

***Open to all sectors***

*Morning kai and lunch provided*

**For details and to register, contact your Enviroschools Regional Coordinator  
by March 21**

*This workshop will also be run for Golden Bay and Motueka teachers in Term 2.*



The Enviroschools Foundation  
*empowered students...sustainable communities*



*Young Hampden Street finalist Ollie showing Sarah his verdant garden*

## Enviroschool Dates for Diary 2014 Term 1

**20th Feb:** Youth Leadership Hui at Garin College

**1st March:** Applications for Nelson and registration of interest for Tasman, Enviroschools' Environmental Action Fund 2014 close.

**13th March:** Nelson Kit and Coffee session at Nayland Primary School, a Green-Gold enviroschool (3.30-4.30 pm)

**20th March:** Moturoa Mission sustainability challenge for Years 5-8 (Teacher release available)

**5th April:** Teacher workshop: "What is sustainability?" Open to all enviroschool teachers in Nelson and Tasman.

\*\*\*\*\*

**8-10 October:** National Enviroschools Energiser Hui, Cambridge: open to all enviroschool teachers

## Garden Champions!

Hampden Street Enviroschools lead teacher, Simon Ashby, successfully organised the 2nd Nelson Enviroschools Interschool Garden Competition; this year expanding it to include other Nelson enviroschools. Thanks to sponsorship from Mark Steyn at Ray White, entrants were provided with free seeds to start them off in September, as well as prizes and a cup for the winners. Eight finalists were chosen by their schools from 150 entrants. They were judged in December by Sarah Langi (KEGS -Nelson Environment Centre) and Lindsey Fish (Regional Coordinator Nelson Enviroschools). Participating schools were Nayland Primary School, Clifton Terrace School, Hampden Street School and Tahunanui School, all with a strong background in school based edible gardening.

The competition was aimed at encouraging a love of gardening and large scale participation by pupils at all levels. It proved a successful way to encourage communications with families and to build strong pupil/parent/teacher relationships. It also allowed the students to show what they had learnt from home and school.

The judges were very impressed by the successful gardens of the entrants. Overall winners were Jed (Yr1) and Isabel Lyttle (Yr 4) of Tahunanui School. The judges were impressed with the sheer variety and productivity of the lush garden, as well as their understanding of garden concepts such as composting, green crop and companion planting. Judges liked the way Jed had set up growing experiments independently. They also made use of lots of recycled materials. Isabelle had told her mum that she hadn't realised gardening would be so much fun. They had a strong student voice, real passion and weren't adult led.

Runners up were Emily and Ritchie (Yr 1 and Yr 0) from Nayland Primary school.

# Regional Enviroschools



## The Moturoa Mission 2014 Thurs 20<sup>th</sup> March

**Teamwork Sustainability Learning Adventure Fun**  
**Teams of 4 students– from Sch Yrs 5 to 8**





2 hour event – navigate to as many checkpoints as possible and complete the tasks



Mix of running or trekking, navigation and sustainability based challenges

Activities will require research, teamwork and strategy to gain maximum points



Prizes for the top scoring teams and spot prizes too





**Rabbit Island 10am till 1pm March 20**

To register and for more information contact : Adie- [adie.leng@tasman.govt.nz](mailto:adie.leng@tasman.govt.nz)  
or Lindsey- [lindseyfish@xtra.co.nz](mailto:lindseyfish@xtra.co.nz) or Claire – [claire.webster@tasman.govt.nz](mailto:claire.webster@tasman.govt.nz).  
Thanks to Enviroschools and all the other organisations supporting this event!



## What's been happening in Nelson Enviroschools?

Congratulations to Clifton Terrace School on their Silver Enviroschool status and Tahunanui and Victory Schools who achieved their Bronze status in Term 4 2013.

In a Bronze Enviroschool:

- The school has started getting to know their environment better and is creating a whole school vision
- Students are exploring options and finding ways to take action for a sustainable future
- The school community knows they are an enviroschool

The Guiding Principle tree at Tahunanui School



Freya and Iris from the Envirogroup presenting the outcomes of their reflection to the Board of Trustees at Victory School



The Green Ninjas at Tahunanui School talk about their actions, recorded on their silver fern



Sustainable actions at Victory School



## Tasman School - Monitoring the Recovery of the Moutere Inlet after the Muddy Buddy Adventure Run

- Judged Winner of the Tasman Nelson Environment Award for Intermediate Schools at the Cawthron Nelson Science and Technology Fair, 2013
- Tasman student science display answered the question, “Does the Muddy Buddy Adventure have an effect on the plants and marine animals and environment of the Moutere Inlet? If it does, what is it?” Year 6, 7 & 8 students at Tasman School spent 18 months monitoring the estuary for impacts.
- They knew that people (mostly from the urban areas) have a lot of fun running around a course through the mud. However, many people, in the community, including Tasman School students are concerned that the run may be harmful to the birds, plants and marine life that live in the Moutere Inlet.



Working with the Department of Conservation, Megan Wilson of Experiencing Marine Reserves and Mel McColgan of Waimaori, the students planned and undertook scientific research to

monitor the numbers of crabs, snails, plants and other marine life inside and outside of the area used for the run. They did this before the run and have continued every three months since.

From what the students found out they made recommendations, and even joined, the race organising committee to change the course, reduce litter and contain the participants to less impacted areas, to reduce any damage.

The students learnt that:

- The estuary is not just mud. There are lots of marine creatures living in the estuary that are all part of the biodiversity of the estuary.
- The estuary provides food for birds, filters water from rivers and streams, and it is where shell fish and fish spawn and young fish grow.
- People do have an impact on the estuary. On the Moutere Inlet there are places where people drive cars, ride quad bikes, write their names with the rocks and run in the Muddy Buddy. When they do this they may be walking on snails, compacting crab holes and messing up the mud so that the snails can't live there. People need to think about the impact of what they do on the estuary.
- It was mainly the soft muddy bits that were the most impacted. The crabs, snails and plants are recovering but we don't know how long it does actually take for the estuary environment to completely recover from the Muddy Buddy Adventure run.
- There are Inanga (a native fish) living in Fields Stream and they spawn where the saltwater mixes with the freshwater on the very high tides from February to May. The eggs are laid down in the grass by the stream and at the following high tide (a month or two later) the larvae hatch and swim out to sea. The larvae spend the winter at sea growing and then swim back through the estuary and back up Fields Stream as whitebait in the spring. In Fields Stream they grow into adult Inanga. We do not



## Victory students take action to Council

Student representatives from Ngā Mana Kākano o te Wairepo, the whānau classes at Victory Primary School, made an impressive plea to Nelson City Councillors at the end of their inquiry into the York Stream which runs behind the school. Tamariki presented a petition asking the Council to help tidy up the polluted waterway. (See the cover photo)

Pupils spent a term investigating the water quality of the stream as part of an environmental studies inquiry and took their concerns to Council. At the Council meeting they sang waiata, spoke about why they were worried about the stream, and presented Mayor Rachel Reese with a petition signed by six classes from the Māori medium unit. Cleaning up the stream had already been highlighted in the Envirogroup's vision map as priority for all children at the school.

Enviroschool lead teacher, Suzy Garlick, was proud of the pupils who sang and spoke so well in a "nerve-racking" situation. She said the group came away feeling empowered and she was impressed with the Councillors' response.

Students have been working with Nelson City Council Monitoring Officer, Paul Fisher, to monitor the temperature of the stream, investigate stream life and develop a planting plan. They have requested initiatives including new fencing and a fish ladder.

The classes had also created an interactive wall presentation about their term's work, which is on display at Elma Turner Library, Nelson.



*The interactive wall presentation at the Elma Turner Library, Nelson*



*A Hampden Street School student tending the potato patch*

## Hampden Street School

The garden at Hampden Street School is being carefully tended by a dedicated group of students who have opted to take part in KEGS for their Passions Day (a Friday activity option). The students say they have learnt heaps, but planting is their favourite activity.

The garden was certainly prolific—huge cauliflowers and cabbages were everywhere and their growth trial of potatoes grown in 4 different ways was about to reveal all: the following week was the great potato harvesting and cooking. The potatoes were boiled, fried, mashed, made into artificial whitebait fritters—you name it, they did it.

The beans they planted were growing very fast indeed. These are no ordinary beans, the seeds were provided by Mr Munslow, whose neighbour brought them back from Italy 70 years ago at the end of World War II. He brought them back for their flavour and the fact that they are fast-growing. The students very carefully save these special seeds to keep the strain alive for the future.

The school is committed to its garden and knows the value of the gardening programme for the school; to spread the message to the wider community, the lead teacher ran a home garden competition in early December. It was great to see the passion and skills that the winning entries from the school had gained from KEGS.

Sadly, however, at the end of term, Grace, the facilitator left, but the school will continue the garden, hopefully making it part of the new gardener's role. Grace will take over the KEGS garden at Auckland Point School, so she will still be able to pass her wonderful skills on to local children.

## Ngatimoti School students achieve the long term Vision for their Stream

At the end of 2013, Ngatimoti students finally completed the path from the road to the footbridge beside their local school stream. Ten years earlier, the stream was adopted by the students and with the generosity of the landowners, it became the schools.

As part of their enviroschools journey, the students at the time created a vision of what they wanted to do with the stream. Achieving the vision, over the years, involved lots and lots of weeding, growing native seedlings, planting, monitoring of stream health and bird life as well as trapping. Add to that changes of students and various applications for funding, the many students and teachers worked and enjoyed the stream, making progress on the vision. It also had its frustrations with flooding and invasive, prickly weeds continuing to overwhelm. Funding from Air New Zealand's Kids Restore and stream bank protection by Tasman District Council, in 2013 gave an impetus to the Envirogroup's and teacher, Steve Dunn's efforts for the final flourish to complete the students' long term goals. It looks wonderful and there's more to come, no doubt.



*Joe, one of the stalwart Envirogroup workers, proudly showing off the completed weedmat path and riparian planting.*



*Envirogroup students planting a totara, one of the many riparian seedlings.*

## Nelson Intermediate: the new garden!

At Nelson Intermediate School, huge changes are underway. As part of the envirogroup's vision for the school, a large space was allocated for a new whole-school garden and cleared. Bunnings generously built a storage shed, 3 large garden beds and a large composting system. They supplied all the materials and the labour, with 20 regional managers working together as a team-building exercise, equivalent to 40 hours of labour. This is a huge gift to the school. The garden will be a learning area, used by science and food technology teachers and other teachers wanting to use the garden as their living curriculum, in the true spirit of enviroschools.

Last term, the KEGS students raised seedlings in a wee greenhouse: scarlet runner beans, strawberries, tomatoes, lettuce, courgettes, yellow squash, corn, sunflowers, silverbeet and more and their garden is full, with the biggest strawberries ever. The new KEGS facilitator Sarah Garlick said it was due to all the excellent soil preparation done by the students under her predecessor Fay Vaughan's careful supervision. Earlier in the term they harvested broad beans for the food technology students to cook and were looking forward to harvesting those strawberries!



When visited recently the KEG group made cauliflower au gratin, which involved a lot of measuring and weighing, and involved learning how to make a professional roux. Sarah gave them information sheets about the nutritional content of the meal and the cost too, so they learnt that cooking fresh from the garden was a cheap and healthy way to eat. They all wanted to eat the raw cauliflower stems and when what they would do with the left over leaves, they all said "Compost of course!"

It was impressive to see that the students photographed the session for their own KEGS blog that they have created. They also keep a class diary. They really enjoyed cooking and eating the meal. "We're like real chefs!" they said, laughing.

## Victory School: planting, harvesting & yummy broad bean dip!

The students of Victory School have been very busy. They propagated the seeds from Egmont Seeds with great success: black and yellow zucchinis, pumpkins, lettuces, tomatoes, beans, peas and more, and planted them out in the garden. The day of the photo, they were in the rain harvesting the things they would need to make a broad bean dip: broad beans, parsley, red onion, garlic and mint. They podded the beans, skinned them (that took ages!), "smashed" them in the mortar with the pestle, snipped the mint and parsley with scissors in cups and mixed it all with lemon juice and cream cheese. They then made garlic butter and toast to dip into the mixture. They took large platefuls to share with their classes. "It's awesome" said one boy who had not had any breakfast. When asked if they enjoyed being in the KEGS group. "We love it, we get time out of class and yummy food to eat; we've started a garden at home now", said one girl.

The Principal came in to see what they were up to. "I smelt something delicious. What are you making?" he asked.

The value of the programme is recognised throughout the school.

The links with the Community Garden's worm farms and composting is vital for keeping a huge amount of food scraps out of the skip.



## Teacher professional development opportunity Down the Drain

What happens to your waste water once you flush the toilet, do a load of washing, or pull the plug on the sink after doing a load of dirty dishes?

Visit the Nelson Waste Water Treatment Station and see how waste water is processed before passing through treatment wetland and discharged to sea.

An informative afternoon for Teachers of all levels in Nelson and Tasman to be held at the Nelson Waste Water Treatment Station, Boulder Bank Drive

Experiences will include: a visit to the Treatment Wetland to see how the wetland works; Waimaori and Up the Pipe programmes, as well as observing the large number of birds now in residence.

Activities and resources for class visits will be shared and discussed.

**Tentative date and time 2 to 5 pm on Thursday April 3rd**

For further information and to register interest please contact:

John Campbell – Educator, Nelson Provincial Museum [john.campbell@museumnp.org.nz](mailto:john.campbell@museumnp.org.nz)

Museum: 548 9588 Mobile: 027 203 3200

Organised by the Top of the South Environmental Educators – TOTSEE

Education Programmes | Term 1 2014  
[www.nelsonmuseum.co.nz](http://www.nelsonmuseum.co.nz)



December 11 2013- May 31 2014



STARTING WITH PLANTS showcases some of the special qualities of plants. The plant world today contains the largest and oldest organisms that have ever lived. The ways that plants have adapted to their environment are interesting and in some cases bizarre. There are many complex relationships between plants and animals and some of these can be seen on our doorstep such as at the Brook Waimarama Sanctuary. The role that plants play in the ecosystem is basic for understanding life on earth.

Waste Education Services (WES) funded by Nelson City Council, can support Nelson schools working towards becoming zero waste.



## Zero Waste Schools: be the best - ever!

This is the year to revitalise your school's REDUCE, REUSE, RECYCLE programme and take the next step towards creating a sustainable school

- Be the school that makes the most progress along the road to zero waste
- Carry out the whackiest idea for waste minimisation
- Have the most efficient waste minimisation scheme
- Involve the largest percentage of pupils

### You can do it!

- Create a whole-school 'waste-wise' policy
- Put info on litter-less lunches in your school newsletter
- Ban plastic wrap
- Send lunchbox litter home
- Make your own paper from old (come to the Small Planet paper-making workshop, details below)
- Measure your waste (call me to help!)
- Compost ALL your food waste and scrap paper
- Sell your seedlings grown in your garden
- Set up a school thrift shop and a free book exchange at school
- Make an outdoor dance floor with re-used timber and sound system
- Make bird feeders from recycled materials for fruit scraps
- Make a sculpture using recycled materials
- Make musical instruments from the reuse shop and set up a school band (see photo)
- Share your success with your whanau: give them a zero-waste music and dance performance of a lifetime; make a video and enter it for the Outlook for Someday Film Contest; share it with the world on YouTube
- Use non-recyclable rubbish to make an earth bench, or plastic bottles to build a raft or greenhouse

#### Contact:

Sarah Langi

Email: [sarahlangi@nec.org.nz](mailto:sarahlangi@nec.org.nz)

Phone: Nelson Environment Centre:  
545 9176 ext 1 [www.wes.org.nz](http://www.wes.org.nz)



## Get your students thinking outside the square!

### Small Planet: small people making a big difference! Agenda for 2014

A date for your diaries:

A workshop on making paper is the first workshop this year.

It will be run on the art-exchange day for May: **May 21 at 3-4.30pm at Nelson Environment Centre.**

The Artbox art exchange will be open as usual on the 3rd Wed each month at 3.30-4.30pm, starting Feb 19th. Please note, this is also open to schools

It needs as much paper and card as we can get, so please ask your networks if they have any spare.

Sarah is also available to support you with any environmental projects you have in mind: worms, composting, gardening, waste-free lunchboxes, energy saving – the sky's the limit, so get your requests rolling in.

Looking forward to the best year yet! Contact Sarah Langi

## Kids Edible Gardens in Schools (KEGS) Programme

Currently, four schools are participating in the Nelson Kids Edible Gardens in Schools (KEGS) Programme: Auckland Point, Victory, Nelson Intermediate and Hampden Street schools. We also support other schools with active food gardens by giving them any surplus seeds and inviting them to our KEGS facilitators' end-of-term meetings. This year, our funding is uncertain, and all the schools are contributing funds to keep this important programme running. Nelson Environment Centre is committed to supporting KEGS and is continuing to seek funding, as we'd love to see the programme expanded to new schools, given the growing demand.

This term, Egmont Seeds generously donated free seeds that will last till Dec 2014; these were distributed to the 4 main schools and 5 of the associate schools. Bunnings were approached with a request to provide some seedlings, they responded with an extraordinary offer to build a large garden for Nelson Intermediate School as part of their annual get together of 21 managers from across NZ. In one afternoon they built 3 huge compost bins, a large shed and 3 large raised garden beds and filled them with compost and potting mix! As they walked off the site, having completed their mammoth task, they dropped their tools—yet another donation to the school. The Nelson Mail covered the story, which was published on 8/11/13. **HUGE THANKS to Bunnings and Egmont Seeds!**  
**By Sarah Langi, Nelson Kids Edible Gardens Coordinator**

## What's on at Cawthron

### 3-9th March Seaweed

- 5th March -Teacher workshop: 'NZ fisheries' by Cawthron scientist Ben Knight and MPI 4-6pm @ Cawthron Institute, pre booking essential [Cristina.Armstrong@cawthron.org.nz](mailto:Cristina.Armstrong@cawthron.org.nz)
- 6th March-Public lecture "Looking Beneath the Shell" by Norman Ragg 6pm @ Cawthron Institute, pre-booking essential [Cristina.Armstrong@cawthron.org.nz](mailto:Cristina.Armstrong@cawthron.org.nz)
- Seaweed photo-competition (17th Feb-9th March)  
To enter go to Friends of Cawthron Facebook page. Fantastic prizes  
4 Categories 1) Sea Treasures 2) Fragile Seas 3) Family Fun 4) Under 13's (sea theme)

### 15th March Havelock Mussel Festival

- Cawthron will once again have a stall at this fun community event. Our scientists will be on hand to share some of the amazing work carried out at the Cawthron Aquaculture Park.  
We'll also have touch tanks for children and adults to get up-close with some the marine species we research including mussels, oysters, geoduck, urchins, starfish and seaweed. For more information on the event visit [www.havelockmusselfestival.co.nz](http://www.havelockmusselfestival.co.nz)

## CORE Education Travel Scholarship application 2014

Applicants' wondering/inquiry/research question is about an innovative topic. CORE is about pushing the boundaries. In this instance, this means supporting the production of knowledge and practice which is cutting edge. It must also have the potential to produce significant change in effective and equitable teaching and learning. There should be a gap in current local practice or knowledge. Addressing this gap with the proposed project should result in significant change.

## International Mud Day June 29

*I like mud I like it on my clothes I like it on my fingers, I like it on my toes  
Dirt's pretty ordinary, and dust's a dud. For a really good mess-up, I like mud. (By John Smith)*

Mud is so rich there is even an International World Mud Day, which this year is on June 29th.

Mud is wet soil and soils are different in different places. Potters use wet clay to create pottery and kids make mud pies! Research confirms now that playing in mud can be really good for us. The benefits include improved immune health, connectivity to nature, creativity and physical strength and you just can't beat the fun aspect. As teachers we just need to ensure that the mud is not polluted.

In some early childhood centres and schools they are now digging holes and creating mud puddles on land and the kids love it. This is good mud to play in. Check out early childhood mud play:

[http://www.muddyfaces.co.uk/mud\\_kitchens.php](http://www.muddyfaces.co.uk/mud_kitchens.php)

However, there is also the mud that is not meant for play because it is the home of many living things. These muddy areas are part of the important wetland ecosystems. Mud flats, or tidal flats, in particular are coastal wetlands that form when silts, clays and marine animal detritus are deposited by tides or rivers in bays, lagoons, and estuaries. Most of the sediment within a mudflat is within the intertidal zone so is submerged and exposed approximately twice daily. These tidal flats support a large population of wildlife, and are a key habitat for shorebirds which migrate from breeding sites in the northern hemisphere to non-breeding areas in the southern hemisphere. The mud is also of vital importance to national migratory birds, as well as certain species of crabs, molluscs and fish and all that they feed on. In many countries, mudflats are now classified as a priority habitat. Sadly in the past, they were considered unhealthy and economically unimportant areas so it became okay to dump rubbish into or dredge to develop agricultural land or extend cities.

We are very lucky to share the awesome variety of rich and changing tidal flats and river estuaries on the coasts of Nelson and Tasman. We all have a role to care for these places and support Councils, Department of Conservation and local Iwi who are charged with ensuring any regulations are followed to protect them on our behalf. For the best mud play stick to making your own mud puddles.



This is a new website hosted by Landcare Research, aimed at helping members of the community answer three questions:

- 1) How do I find and collect freshwater algae?
- 2) How do I identify freshwater algae?
- 3) How do I interpret the results?

<http://fwalgae.landcareresearch.co.nz> This project was funded by the [Community Environment Fund](#).



<http://bothsidesofthefence.org.nz/>

Explore the great outdoors through this site, and discover the stories and people on both sides of the fence



# Calendar

	Date	Events	Contact
February		Bike Wise Month	<a href="http://www.bikewise.co.nz">www.bikewise.co.nz</a>
	2	World Wetlands Day	<a href="http://www.wetlandtrust.org.nz">www.wetlandtrust.org.nz</a>
	12	Go By Bike Day	<a href="http://www.bikewise.co.nz">www.bikewise.co.nz</a>
	17 – 9 Mar	Seaweek photo competition (17th Feb–9th March). To enter go to Friends of Cawthron Facebook page. Fantastic prizes	<a href="http://seaweek.org.nz/events/tasman/">http://seaweek.org.nz/events/tasman/</a>
	19	NEC Artbox for all primary schools and ECE centres for free recycled materials for art. (3.30–4.30pm third Wed of each month)	Sarah Langi 545 9176
	20	Enviroschools Leadership and Action planning Hui for Nelson and Tasman secondary students	Lindsey Fish Adie Leng
	25	Early Years Enviroschools Hui	Helen Durbridge 0272461008
		Have your say: Tasman's Open Space Strategy questionnaire closes March 14	<a href="http://www.surveymonkey.com/s/open-space">www.surveymonkey.com/s/open-space</a>
March		Whio Awareness Month	<a href="http://www.whioforever.co.nz">www.whioforever.co.nz</a>
	1	Deadline for applications to Nelson Enviroschools Environmental Action Project Fund AND Registration of Interest for Tasman Enviroschools Action Project Fund.	Lindsey Fish <a href="mailto:lindseyfish@extra.co.nz">lindseyfish@extra.co.nz</a> and <a href="mailto:Adie.Leng@tasman.govt.nz">Adie.Leng@tasman.govt.nz</a>
	1–9	Seaweek – Theme: Our fragile, finite taonga – Kia Mataara! Tiakina te au o te moana, he kōpīpī tōna	<a href="http://www.seaweek.org.nz">www.seaweek.org.nz</a>
	2	Children's Day including fun interactive games day at Rabbit Island	<a href="http://www.childrensday.org.nz">www.childrensday.org.nz</a> and <a href="http://itson.co.nz/2014/6923-choice-childrens-day">http://itson.co.nz/2014/6923-choice-childrens-day</a>
	3–9	Parks Week (Australia & New Zealand) Theme: Connect with nature	<a href="http://www.parksforum.org">www.parksforum.org</a>
	12	Walk2Work Day: Everyday walking for health	<a href="http://www.livingstreets.org.nz">www.livingstreets.org.nz</a>
	13	Nelson Enviroschools Kit and Coffee session @ Nayland Primary School. Come and see what a Green-Gold enviroschool looks like	Lindsey Fish 0211460247
	16	Brook Waimarama Sanctuary Open Day, featuring Ruud Kleinpaste 'The Bugman'	Rick Field <a href="mailto:rick.field@brooksanctuary.org">rick.field@brooksanctuary.org</a>
	19	TOTSEE meeting, Cawthron Institute, 3.30pm	<a href="mailto:Cristina.Armstrong@cawthron.org.nz">Cristina.Armstrong@cawthron.org.nz</a>
	20	Moturoa Mission: Enviroschools Sustainability Challenge For years 5–8 and leadership day for secondary enviroschools. Teacher release may be available	Lindsey <a href="mailto:lindseyfish@extra.co.nz">lindseyfish@extra.co.nz</a> Adie <a href="mailto:adie.leng@tasman.govt.nz">adie.leng@tasman.govt.nz</a>
	21	World Forestry Day	<a href="http://www.fao.org/forestry/en/">www.fao.org/forestry/en/</a>
	22	World Water Day	<a href="http://www.unwater.org">www.unwater.org</a>
	28	Deadline for Tasman Enviroschools Action Project Fund	Adie Leng 543 7222
	29	Earth Hour (8.30pm): Uniting people to protect the planet	<a href="http://www.earthhour.org">www.earthhour.org</a>
April	3	Teacher PD – Wakapuaka Waste Water Treatment Plant visit, organised by Nelson Provincial Museum	John Campbell <a href="mailto:education@museumnp.org.nz">education@museumnp.org.nz</a>
	5	Nelson/Tasman Enviroschools Teacher workshop: What is sustainability?	Lindsey Fish 544 5302 Adie 543 7222
	17	Term 1 ends	
	22	Earth Day – Green cities	<a href="http://www.earthday.org/greencities/earth-day-2014">www.earthday.org/greencities/earth-day-2014</a>

# Calendar

	27-31	27 Sir Peter Blake Youth Environment Forum	<a href="http://www.sirpeterblaketrust.org">http://www.sirpeterblaketrust.org</a>
May	5	<i>Term 2 begins</i>	
	7	Early Years Enviroschools Hui	Helen Durbridge 0272461008
	19-25	Primary Science Week: Out Of This World: a focus on things Astronomica	<a href="http://www.royalsociety.org.nz/teaching-learning/aps/primary-science-week-2014-2/">www.royalsociety.org.nz/teaching-learning/aps/primary-science-week-2014-2/</a>
	21	Making paper workshop, Nelson Environment Centre, 3-4.30pm.	Sarah Langi 545 9176
	22	International Day for Biological Diversity: Island Biodiversity	<a href="http://www.cbd.int/idb/2014/">www.cbd.int/idb/2014/</a>
June	5	World Environment Day	<a href="http://www.mfe.govt.nz">www.mfe.govt.nz</a>
	5	Arbor Day	<a href="http://www.arborday.org">www.arborday.org</a>
	8	World Oceans Day: Together we have the power to protect the ocean!	<a href="http://www.un.org">www.un.org</a>
	12	Nelson Enviroschools Kit and Coffee session. Introducing Inquiry units for theme areas	Lindsey Fish 021 146 0247
	19	School Caretakers Workshop	Sarah Langi 545 9176
	15-21	National Volunteer Week	<a href="http://www.volunteeringnz.org.nz">www.volunteeringnz.org.nz</a>
	28	Matariki – Maori New Year	<a href="http://www.mch.govt.nz/nz-identity-heritage/matariki">www.mch.govt.nz/nz-identity-heritage/matariki</a>
July	4	<i>Term 2 ends</i>	
	21-27	Te Wiki o te Reo Maori. Māori Language week begins Theme: The word of the week	<a href="http://www.korero.maori.nz/news/mlw">www.korero.maori.nz/news/mlw</a>
	21	<i>Term 3 begins</i>	
Aug	3-7	Shark Week	<a href="http://sharkweekcountdown.com/">http://sharkweekcountdown.com/</a>
Sept	2	Nelson school/home garden competition opens	Lindsey Fish 0211460247
	3	Early Years Enviroschools Hui	Helen Durbridge 0272461008
	7-13	Conservation Week	<a href="http://www.doc.govt.nz">www.doc.govt.nz</a>
	12	Entries close for Outlook for Someday Film Challenge	<a href="http://www.theoutlookforsomeday.net">www.theoutlookforsomeday.net</a>
	14-20	Keep New Zealand Beautiful Week	<a href="http://www.knzb.org.nz">www.knzb.org.nz</a>
	21	Nelson Enviroschools Kit and Coffee session	Lindsey Fish <a href="mailto:lindseyfish@xtra.co.nz">lindseyfish@xtra.co.nz</a> ;
	22-28	Get Ready Week	<a href="http://www.nelsontasmancivildefence.co.nz/">www.nelsontasmancivildefence.co.nz/</a>
	26	<i>Term 3 ends</i>	
	28	World Rivers Day	<a href="http://worldriversday.com">http://worldriversday.com</a>
	28	Daylight savings starts	
Oct	4-10	World Animal Week	<a href="http://www.wspa.org.nz">www.wspa.org.nz</a>
	4-10	World Space Week	<a href="http://www.worldspaceweek.org">www.worldspaceweek.org</a>
	6	World Habitat Day	<a href="http://www.unhabitat.org">www.unhabitat.org</a>
	8	Disaster Reduction Day	<a href="http://www.whatstheplanstan.govt.nz">www.whatstheplanstan.govt.nz</a>
	8-10	Enviroschools National Hui and Energiser, Cambridge	<a href="http://www.enviroschools.org.nz">www.enviroschools.org.nz</a>
	13	<i>Term 4 starts</i>	
	13	Nelson Enviroschools Kit and Coffee session	Lindsey Fish 021 146 0247
Dec	11	International Mountains Day	<a href="http://www.un.org/en/events/mountain-day/">www.un.org/en/events/mountain-day/</a>
	15	<i>Term 4 ends</i>	

## Activity 1

### Mini-world water cycle

#### A water cycle demonstration model in a box

A demonstration water cycle in a transparent box, using materials readily available in the classroom

Age range of pupils: 5 – 11 years

Time needed to complete activity: 15 mins

Pupil learning outcomes: Pupils can:

- ◆ describe how warming water increases evaporation
- ◆ describe how cooling humid air causes condensation
- ◆ point out areas of evaporation and condensation in the model;
- ◆ link these to examples of evaporation and condensation locally and globally

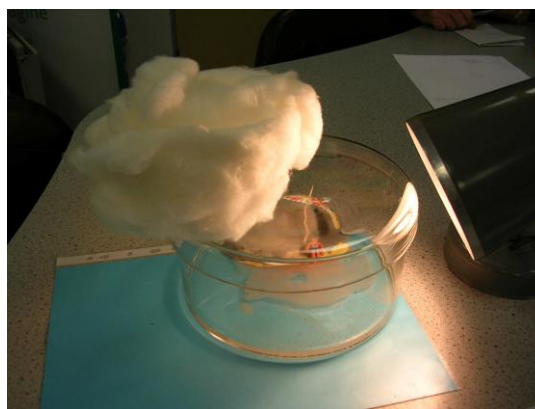
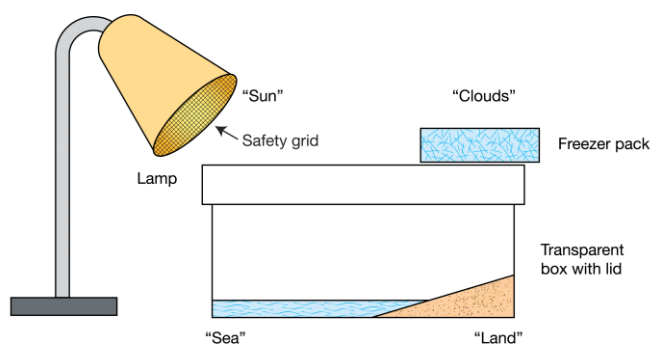
Demonstrate the water cycle in your classroom by setting up the apparatus like this:

Make a sandy 'beach' in the box and add the shallow 'sea'. Switch on the lamp ('Sun') and wait for a few minutes for the water to become warm (or 'cheat' by adding warm water from the kettle). Add the freezer pack to cause the effect of cooling air which will form 'clouds'. After a time, the water droplets that condense on the underside of the box lid beneath the cool 'clouds' grow, and fall to the beach as 'rain'. So, the water cycle is demonstrated in a box by the 'Sun' causing warming of the 'sea'. This causes increased evaporation of water particles (molecules) from the liquid water surface into the air as water vapour. As the air absorbs more water vapour it becomes humid. Eventually the water condenses from the humid air onto the cooler parts of the box. The freezer pack speeds up this condensation, which begins as droplets, growing into drops. When the drops become large enough, they fall as 'rain'. Brighten up the mini-world by standing it on blue paper to make the 'sea' blue, adding a Plasticine™ sunbather with a sun shade to the sandy 'beach', and cotton wool to the freezer pack to make fluffy clouds, as in the picture below. But beware – the sunbather will have to leave when it starts to rain!

Use questions like these to increase the understanding of your pupils:

- ◆ Why is there more rain in most tropical areas than in cooler areas? (*more solar energy, greater evaporation*)
- ◆ Why is there more evaporation from the sea than from the land? (*greater surface area of water*)
- ◆ How can water evaporated over the sea cause it to rain on the land? (*humid water from over the sea is moved across the land by air currents i.e. wind*)
- ◆ How does water rained on the land return to the sea? (*by flowing downhill in rivers and by flowing underground through soil and rock*)
- ◆ Does it only rain on the land or can it rain on the sea as well? (*it rains on both*)
- ◆ Which parts of the water cycle can be seen in our school area? (*all of them*)

From *Earth Learning Idea* – <http://www.earthlearningidea.com>



## Activity 2

### Seaweek 2014 — Fact Sheet Papier Mache Recipe and Tips

The Papier Mache technique makes beautiful structures out of inexpensive materials. Forming the basic structure from wire mesh and cardboard then smoothing the shape with layer upon layer of torn newspaper pieces is a basic recipe for success.

#### What you need

- Cellulose wall paper paste
- fine wire mesh to make the basic internal structure
- cardboard boxes, egg cartons etc to cut up to make fins
- newspaper torn into strips for the first layer
- smaller pieces of torn newspaper for subsequent layers
- masking tape
- brushes for pasting
- damp cloth to clean your hands
- White matt household emulsion paint (use this for your first coat of paint)
- Coloured paints, glitter etc
- Brushes for painting
- Varnish or PVA glue will add strength shine and durability

#### Method

Find a visual reference of the creature

1. Form your structure by bending wire mesh to the desired shape
2. Use tape to secure the wire
3. Cover the basic shape with strips of torn newspaper dipped in plain water

#### Allow to dry.

4. Add cardboard fins and other features to your model using tape
5. Mix the cellulose paste with cold water
6. Dip paper pieces into the paste and layer them on to your model
7. Continue to add paper overlapping the pieces until it is completely covered. Allow to dry
8. Repeat steps 6 and 7
9. Paint a layer of white emulsion. Allow to dry
10. Paint with bright colours and varnish when dry

Or make a fish any other way, send your entry into our awareness raising display and be in to win great prizes!



## Activity 3

### Environmental Care Code

#### What is a Care Code?

A Care Code is your environmental mission statement to demonstrate in a clear and imaginative way, your centre/school's commitment to improving its environment in a way that becomes memorable and familiar to everyone in the school.

See Case Studies in the Enviroschools Kit, pp13-29

#### What can a Care Code contain?

- Agreements on how your school wants to care for the local environment, students and the future.
- When students play a key role in the development of the Code, they will have a greater sense of responsibility for the values the Code represents.
- Regular reminders of the Code's content will provide good opportunities to highlight the values and meaning of the Care Code.
- The content of the Code can be reviewed on a regular basis to ensure that it continues to reflect the school's environmental (social and natural) aims and targets.

#### What form can the Care Code take?

- The format of the Code is entirely up to the school. It could be a list of statements, a poster, song, rap, poem or sculpture. The format needs to be appropriate for the age and ability of the students concerned; easy when they are involved in creating it.
- The Care Code can be updated annually to reflect changes.
- The Care Code can be prominently displayed throughout the school; in every classroom, artistically in communal areas, on internal and external notice-boards and in the staffroom. If possible, it can be included in your school website and newsletter.



*Tawa Montessori's Care Code*

### Salisbury School Environmental Care Code

Developed by students and staff and revisited each year

- Put rubbish in the right bins
- Pick up any rubbish that you see lying around
- Use things that are renewable and reusable
- Try to buy New Zealand made products
- Turn off lights when you leave the room to save power
- Open the curtains to let the light in
- In winter when heaters are on keep the doors closed so you are able to keep the warmth in
- Turn off the fan heaters when not in room
- Replace blown light bulbs with energy saving bulbs
- Existing trees are to be looked at on an annual basis to make sure that they are safe and not causing damage to pipes
- We accept that some trees may need to come out and be replaced elsewhere with more suitable sized trees; not necessarily in the same place
- Remember water is precious and use it wisely
- We need to question and investigate bad environmental practices in the school



*Pou of Key Values  
Beachlands School*