

EcoBuzz

EcoBuzz Edition 66

Term 2 2017

IN THIS ISSUE: Many schools in action, Community Awards, Arbor Day, Parihaka learning, Evolocity, a making rain activity, and more...

Nelson Intermediate about to start their recent waste audit – “What do we throw away?”



Kia ora tatou

We hope you have had a great term, happy new year, the maori new year that is and may the stars of Matariki be shining brightly upon you.

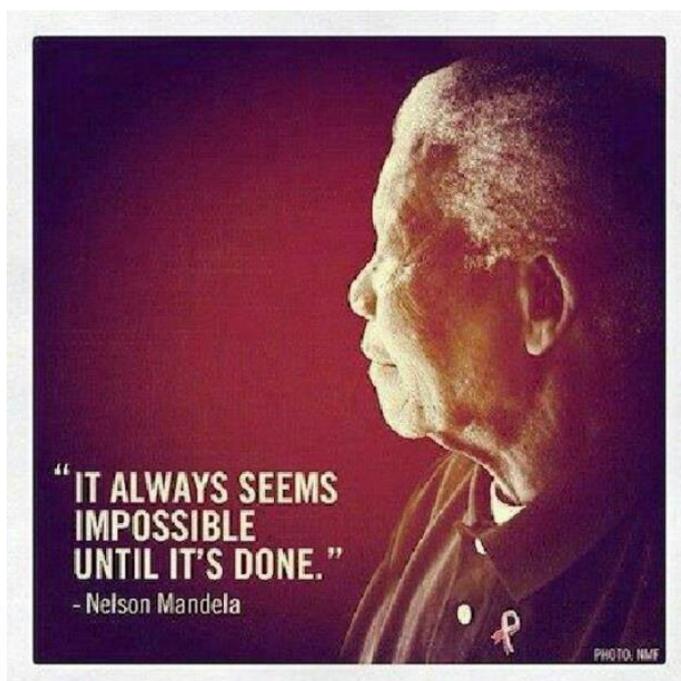
As part of strengthening our Maori perspectives and historical knowledge we are delighted to give an early indication of an exciting event. The story of Parihaka, is told in the 2012 documentary, Tatarakihi, The Children of Parihaka.

Internationally Parihaka is synonymous with peace and revered as a model of social justice, yet not many New Zealanders know about this attribute. A commitment was made as part of the Crown reconciliation this year, to get this aspect of the story out to New Zealanders, especially the values, to promote a more peaceful and sustainable country.

The period October 29th to November 5th this year is being mooted as New Zealand's Peace Week. Sometime during this week, Nelson Tasman will be hosting Maata Wharehoka to run a workshop with teachers on the legacy of Parihaka to bring peaceful action into your schools or ECE.

We are planning to show the film in Term 3 so that you, the kaiako have time to decide how/if you might support this idea in your schools/centres during the week before 5 November. We will be in contact next term.

Thanks Heather, Adie, Karen and Claire



'The universe is made of stories, not of atoms'

(Muriel Rukeyser)

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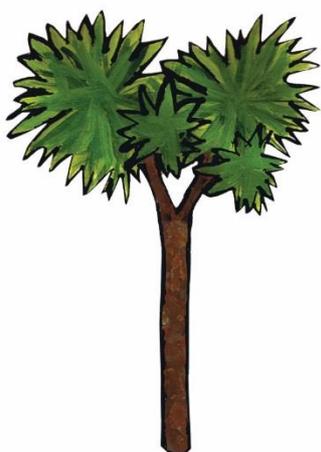


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Arbor Day isn't just a day for Richard

Meet Richard Hilton. He knows his plants, is a bit of a legend with the native plant loving community and enjoys a joke if you can understand his accent. You may have already met him. Richard is one of the wonderful Horticultural Officers working at Tasman District Council and he is very busy at this time of year. He loves native trees and winter is the best time to plant trees. He orders the trees way ahead of time for the dozens of sites he plants up with natives, organises the contractors to prepare the sites and invites the schools (and community) he has worked with in previous years to help plant the many hundreds of trees over this time. He also ensures the areas are maintained for the rest of the year.

The schools' tree planting opportunities in Tasman have come under the umbrella of Arbor Day planting for a very long time. Richard's area includes Richmond, Waimea, Moutere, Brightwater, Wakefield, Tapawera, Lake Rotoiti and Murchison and parks and reserves in-between.



Last week, Richard was out planting with Wakefield School's teacher, Isabel Ford, students and parents in the area he had prepared at Faulkner's Bush, joining on to where they had planted, three Arbor Days ago. Everyone got dirty, eventually, planting about 175 trees and protecting them with greensleeves, stakes and thick mulch. Check out the area on the east side of the Bush close to the school next time you are there. Thanks goes to all the school teachers and students that have worked with Richard planting native trees to help re-establish the indigenous heritage our region desperately needs.



Lower Moutere School planting along the edges of the Moutere River in June. Story on page 11.



Share your story

A way to maximise the positive impact your action can make!

A great way to celebrate the action you/your school/ your group have taken is to find ways to share your story and in doing so inform inspire and empower others to take action in their own ways too. There are so many ways to make a difference so let's showcase the diversity of approaches and breadth of engagement that exists in our communities.

It is also a great opportunity to bring real and relevant topics to your class curriculum

Here are some key points to consider when recording your story:

- What was the **vision**/ what issue or question arose – that you wanted to explore?
- What observing/ measuring of **current situation** occurred?
- How did you **explore alternative** options/ discuss different **perspectives**?
- Experiments/ experiences/ experts/ research on options
- What learning did the adults do?
- How was the knowledge developed with children?
- How was a decision for **action** made and who was involved?
- What happened then?
- What were some of the responses/observations/conversations as things progressed?

Measurable outcomes? Reflections?

Enviroschools Guiding Principles evident?

Benefits?

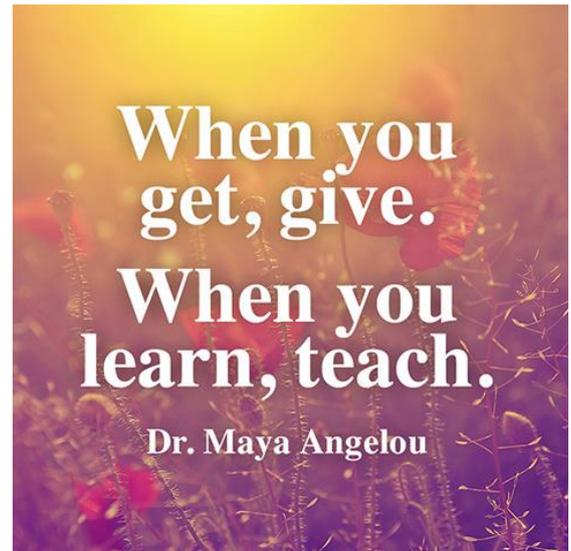
Were the links with other theme areas obvious?

And what happens now?

Next steps?

Other things to include

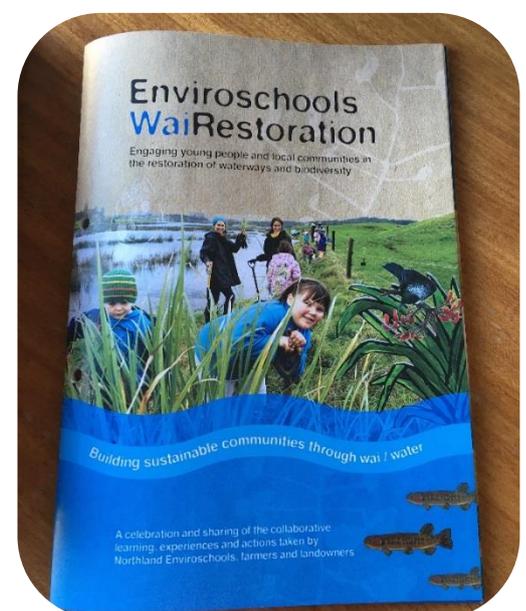
- High resolution photographs (consent for use gained) that clearly illustrate participation in the journey.
- 1-3 quotes e.g. student voice/ teacher voice/ whanau, community voice that captures an element of shift in understanding or behaviour or is just inspiring or fun!
- Be creative and display your story however you like. However, it is great to also have a simple word doc and a file of images, which (if you are willing) enable other people to re-share your story in publications.



Revised and new Enviroschool Resources – Workshop 4 August

Enviroschools have revamped the Theme Areas and have a new Kit to house them all. Zero Waste & Water of Life are the first off the press with Living Landscapes, Energy! & Ecological Buildings to come. Much care, collaboration and consideration has gone into these gems. Each theme area has an easy-to-use lift out booklet and follows with inspiring case studies at ECE, primary, and secondary level. Diary 4 August for a workshop to unpack these.

We are also excited to announce that the WaiRestoration resource is printed and ready for sharing around our beautiful motu! Enviroschools WaiRestoration is engaging young people and local communities in the restoration of waterways and biodiversity, building sustainable communities through wai/water.



Tremendous Makeover Granted

As you may be aware, our very own Nelson Central School was successful in being one of 4 schools to granted a \$10 000 makeover this year. As part of this, I had the opportunity to sit in on a visit from Rudd Kleinpaste, the other day, while he was here supporting the school with the final steps on their makeover journey.

Here are some pretty special words from Rudd (via the newspaper article he was featured in) that I thought were worth re-sharing...

“Known as the "Bugman", Kleinpaste is on a mission to educate New Zealanders about nature.

“I'm trying to create nature-literate New Zealanders; kids that understand that we depend on everything nature does.

Because at the moment we have raised a whole generation in complete absence of nature, which is a sad thing.”

He said he was training teachers to be nature-literate so that they could pass their knowledge on to their pupils.

Kleinpaste said if the children took away anything from his workshop, he hoped it would be to respect nature.

“That you have respect for the fact we live on a very generous planet, with generous other people, wildlife and plants and systems that we can learn so much from.”

“That is really what it is about, learning from nature, not learning about nature.”

If your school is looking to take on a nature makeover or even a smaller scale project here are two links to funding pathways that support environmental projects.

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

Tremendous School Makeovers, a joint initiative between the Mazda Foundation and Project Crimson, teaches children about the importance of caring for the environment through the development of outdoor classrooms.

Would your school like to receive a \$10,000 Tremendous Makeover? Head to the [application page](#) and tell us how a specific area could be transformed into an educational space with native trees and plants. This can be in 500 words more or less, as a short DVD or picture storyboard.

<http://mazdafoundation.org.nz/applying-for-funding/>

The Mazda Foundation Trust aims include (but are not limited to) the provision of financial aid to individuals and causes which may qualify for income tax deductibility for gifts and which provide:

Assistance towards the maintenance and improvement of the natural environment

Assistance in the advancement of culture and education to achieve excellence at all levels in the community

Assistance to young people through advancement of education and employment skills development, with particular emphasis on children from deprived backgrounds

Assistance in the arts where the goal is to educate and expose the NZ public on NZ culture

There are three closing dates for funding rounds every year: 31 March, 30 June and 30 September. Applications can be submitted for any of these rounds by sending us a submission before the due date.



Trustpower Community Awards

Volunteers are the backbone of our community and the Trustpower Community Awards is a chance to recognise and celebrate the amazing efforts of our volunteers.

This year we received numerous wonderful applications, including the Mapua School Tane's Ark project. Thirty Mapua School students volunteer 150 hours of their time per month to help restore Aranui Park's lowland coastal forest.

As a part of this project, Mapua School students performed their community service element of their leadership programme by spending the day weeding and mulching. Furthermore, students led groups around the Mapua wetlands and Tane's Ark areas as part of the International Wetland Symposium.

Students also gave guided tours to members of the public through restoration areas and organised a whole school activity afternoon.

Additionally, they organised and facilitated a whole school Arbor Day planting at Aranui Park along with Richard from Tasman District Council.



Through this project, Mapua School students have learnt a lot about the local ecosystem:

- Plant identification
- Plant propagation and planting
- Caring for plants through mulching and weeding
- The importance of trees for the environment
- Local ecosystem history

From the success of this project, the Mapua/Ruby Bay community now have an evolving area of lowland wetlands, a place to wonder through and appreciate the native plants and increasing birdlife. This area has become a resource for Mapua School where teachers educate children about conservation, restoration, native plants and the importance of biodiversity. More and more people are utilising this area due to the outstanding work of the Mapua School Tane's Ark Team.

The Trustpower Community Awards ceremony was held on 26 June 2017. This was a chance for volunteer organisations to connect with each other and get a healthy dose of inspiration and community spirit. It was a chance to recognise and celebrate the immense contribution volunteers make to their community and to announce the award winners for this year. This year Mapua Tane's Ark was the winner of the Heritage and Environment section!

Check out the photos on

https://www.facebook.com/pg/TrustpowerCommunity/photos/?tab=album&album_id=1729138477102540 to see whom else you know has won this year.



Enviroschools – Census 2017

What's happening?

In Term 4 of this year, Toimata Foundation will be conducting a Nationwide Census in Enviroschools. The last census was in 2014, where we achieved an exceptional 73% response rate resulting in an immensely rich pool of data. A huge mihi to those Enviroschools that were able to contribute.

The 2017 Census questionnaire will include questions relating to:

- the range and number of people within the school or centre participating in the Enviroschools Programme
- the range of projects and practices the Enviroschool has been undertaking in 2017
- perceptions of how sustainability outcomes in the school or centre have been influenced by involvement with the Enviroschools Programme

Why is the Census important?

Feedback from the 2014 census highlighted that both the process and the results are important in a number of ways, including:

- supporting each Enviroschool to reflect on their engagement in a wide range of sustainability activities and undertake future planning
- providing Toimata Foundation and regional teams with key data to better understand the impacts of the programme and inform future planning
- strengthening relationships with funders and encouraging them to continue their support of facilitation for schools and ECEs
- building on relationships between Enviroschools and their facilitators

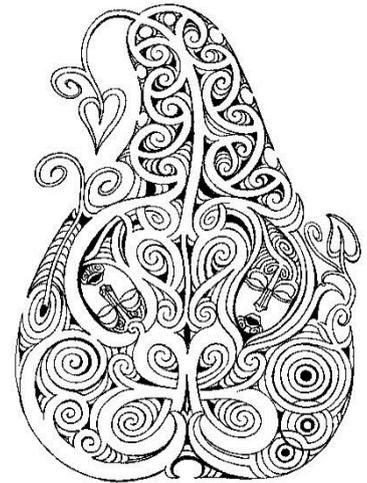
What is the process?

At the start of Term 4, a hard copy of the Census questionnaire will be sent to the lead teachers of each Enviroschool. There are a range of ways the survey can be completed. Examples include:

- a teaching team completing it in a staff meeting
- a group of adults from a school or centre completing it with the support of their Enviroschools facilitator
- an Envirogroup providing their perspective on some of the questions with staff also providing their perspective
- an Enviroschools Facilitator working with a group of lead teachers from a range of Enviroschools as a cluster to begin their questionnaires before taking them back to their school or centre to complete
- integrating the questionnaire into the holistic reflection process

The more people involved in contributing to completing the questionnaire the better. Remember to include caretakers and parents.

Each Enviroschool will be asked to keep a copy of their completed questionnaire for their own reference before returning the questionnaire in the envelope provided. The data will be used to provide national and regional information which will be available to regional teams in 2018



Hine Putehue



Writers walk

Hampden Street SCHOOL

Always reaching for the stars



Hampden Street Enviroschools' lead teacher was inspired by Wellingtons Writer Walk and the way a local school had brought the concept to life.

After sharing the idea with his Enviro Ninja Warriors group, they too were inspired and keen to have a go at bringing the concept to life at their school. Here is their story

We wanted to encourage people to get out walking with their families and to school.

A writing competition idea was developed with the theme of "the wild outdoors", we set a 150-word limit based on the amount of room we would have on the signs. The idea is to display the winning entries on signs to share how people feel about nature.

We were not certain that everyone would come on board but we wanted the whole school involved! Teachers say that the students' presentations about the project at assembly really helped build interest not only with students but also with the teachers who were coming and asking how their class could participate.

The project has created lots of discussions about what people are writing and teachers have noticed those students, not usually interested in writing, have been busy. No more groaning at writing time!!

The topic has engaged everyone: from picking flowers, horse riding and orienteering to mud-caked faces and hunting with grandpa! It seems that everyone has had something to say about nature! There have been no rebellious acts! None of, I don't like nature! We were very pleasantly surprised.

It is exciting. Even the teachers are asking to put in an entry and asking students to read their drafts and give comments!

The entries are now coming in the turnout has been great and we have 300 so far!! Entries close soon and after that students and teachers will do a short listing, with a final decision made by Guest Judges not associated with the School.

Teachers are now exploring how to acknowledge the many amazing efforts, as only 20 will make it to the Writers' Walk, as there has been strong writing coming from unexpected students. It is important to acknowledge these personal bests!

Watch this space for an update after the completion of the project.

Simon Ashby – Enviroschools Lead Teacher, Evie Harris, Leila Macalister, Cara Bryant, Tom Irvine – Enviro ninja warriors!

Links to the original inspiration, <http://www.wellingtonwriterswalk.co.nz/>

It combines a stroll along Wellington's waterfront with the discovery of sculptural quotations from some of New Zealand's best-known writers. Like a series of intriguing pronouncements – often in surprising and unexpected places – the quotes take the form of contemporary concrete plaques and inlaid metal text on wooden 'benchmarks'.

On any day, be it dark or dazzling, they lift the spirits and tie literature to landscape.

Link to a school in Wellington that runs a curriculum focus around the Wellington Writers Walk

<http://www.avalon.school.nz/urban-safari-writers-walk/>

Pariwhakaoho Awa trip for Golden Bay Kindergarten



On Monday 22nd May 2017, we took a group of our older tamariki by bus to our Awa, Ko Pariwhakaoho, in Puramahoi, so our kaiako could introduce this significant place to our whānau, & familiarise the children with their whakapapa. This is particularly important at the moment, as we are creating the awa (ko Pariwhakaoho te awa) in our Kindergarten's garden. We went in two Farewell Spit buses & were joined by John Ward Holmes & Chrissy (local iwi representatives), Matua Syd & Whaea Taria, Claire Webster (Enviroschools Facilitator) & whānau members. The bus arrived at Patons rock beach & drove to te Awa.

We gathered together, Matua Syd blew a very special horn / Putatara made from a shell. Whaea Taria called / Pao before John spoke. We all supported his speech with our Kindergarten waiata "Waikoropupu". John said a karakia, then Anne lead the waiata she taught us at Kindergarten 'Pariwhakaoho'. We said our Kindergarten Karakia, & Rebecca thanked everyone for supporting this special trip. From the Awa, we could also see another significant place, Ko Parapara to Maunga, our Mountain. Claire set a trap the night before to see what she could catch. She explained that she did this because most the bigger critters only come out at night. Rory shared his knowledge by adding 'nocturnal'. She caught a small tuna/eel, cockabilly and mayflies, to name a few. She separated them into many ice-cream containers with critter identification cards & magnifying glasses so we could examine them in more detail. Claire also explained how tuna swim to Tonga to lay their eggs where they hatch, then swim back to te Awa. Then we got the opportunity to go fishing ourselves with small nets. Claire taught us how to lay our nets downstream in the water & carefully lift up a rock in front of the net so critters may swim into the net.

We also collected toka/river rocks & shells in our kete/flax bags. We plan to use the toka in the creation of our Awa at Kindergarten. Keana & Aaro caught Common bully, Sunny and his Dad caught two tuna & Thomas caught a fish too! We noticed tuākana-teina relationships happening in te Awa, where more experienced tamariki/children shared their knowledge & skills with other less experienced tamariki – Ataahua, this was beautiful to see! Anne Harvey taught us that if these critters are in te Awa, then the water is healthy / wai māori. All critters were released back into te Awa.

On the way back to Patons Rock beach, the buses made circles & zigzags in the sand, which was so much fun.

Richmond School planted reeds at Borck Creek

"I planted 4 all by myself." "We planted 7." "It was fun in the mud on the edge of the pond but the ground underneath was stoney and hard to dig." In May, Richmond School's excellent Enviroteam and parents, led by teacher Grant Irvine enthusiastically planted 75 tall *Juncus maritimus* reeds beside Borck Creek. The Enviroteam have been monitoring different aspects of Borck Creek in the previous few years and it was great for them to be connected in a hands-on way.



Over the last year or two Borck Creek has been engineered to look more like a natural waterway with wetlands and flood plain areas instead of the straight narrow drain it had been beside Headingly Road down to the estuary. Water is healthier when it can meander. About 1,500 trees have been planted along there so far by contractors.

This is another of Richard Hilton's patches and he organised the *Juncus* plants and helped the students understand the 'Pukeko Pull' to test if, once planted, they will survive the bird pulling out game. So far, they seem to be surviving very well.

Evolocity is Revving Up at Waimea

Waimea College students' active interest in Evolocity has grown from 1 team in 2015, 4 teams in 2016 to 10 teams from Years 9 to 13, this year. Technology and Design teacher, Will Taylor, opens the technology workshop on Tuesdays after school. No notices go out nor reminders, yet the workshop is filled with keen students every Tuesday after school along with up to five teachers in support, covering mechanical engineering, physics and electronics. They are busily designing and building a variety of bikes or carts, as well as developing the circuitry and programming so their vehicles with electric motors are ready to race and manoeuvre. There are a range of competitive elements the students need to consider to foster as many qualities in their vehicle as possible, ready for the races in November, both regional and national.

Last year, the Waimea College Hornets won both the fastest street circuit for bikes and rolling resistance events, Waimea College Unleashed also won the fastest street circuit for karts and were a very close second in the rolling resistance.

Jake Mirfin, built a go-kart from scratch in class last year to enter into the Kart races at Tapawera and that led him to join Evolocity this year with three of his mates. The vehicle is an upcycled old trike and sack barrow from home. Jake and Blake are responsible for the mechanical engineering requiring drawing and designing, bracing, welding and testing and Carlos is responsible for the electronics and circuitry. Reilly is responsible for the programming. Carlos says he builds the electrical circuit and Reilly makes it work. Together they are working on ensuring their bike can do tight corners, longevity, speed and manoeuvrability. Good luck to all teams.



Taking Action for Moutere River



In Term 1, Room 6 at Lower Moutere School went and tested our local River, the Moutere, to check its health with Mel McColgan from Waimāori.

The water health was ok, but we still thought it needed assistance. The amount of rubbish on its banks was disgusting and after participating in Experiencing Marine Reserves Programme, we didn't want rubbish to go out to sea when the River flooded.

We set about in groups coming up with ideas and then made plans to take action to help the River. The students came up with the need for signs, barriers, rubbish bins, an information board, boot-washer and a clean-up day.

Working closely with Giles from the Tasman District Council we have actioned the clean-up day, the information board and the signs. We had our clean-up day last Thursday, collecting 2/3 of a skip of rubbish in an hour! Thanks to Lee from BinGo and Giles for helping with the skip. We also got the opportunity to help Giles with some riparian planting on the River banks.

In addition, the boot-washer will be ready to put out during the white-baiting season.

The Moutere River flows close to our School so we will continue to check on it as kaitiaki.

By teacher Mike Lynch



MOTEC costumes excel at Kai Fest

Year 8 Parklands students were inspired to portray the element of Earth and its food produce for Motueka's Kai Fest to celebrate the local harvest, in early April. They decided to create six Earth costumes to represent Maori Atua, Papatūānuku, the Earth Mother, Rongomātane, the Atua of cultivated foods, kumara and peace, and the four seasons.

MOTEC teacher Megan Wilson had one term to help the student have the costumes ready to lead the opening parade. They were wonderfully assisted with ideas, time, skills and resources by Jenny Ayers, Nita Henry, Renee Kaipara and women from the Matariki Pacifica Hub to help evolve the costumes from the first designs.

The six beautiful costumes are on display in MOTEC this term.

See photographs on the next page.

Schools Taking Action



MOTEC costumes



Nelson Intermediate tackle their waste

Taking action around waste! Nelson Intermediate undertook a whole school waste audit. The focus didn't stop here with many classes doing learning around the story of waste and looking a little at what the story is in Nelson. We are currently logging this information onto the Enviroschool Measuring Change website and look forward to comparing this data with 2013's data.



Project Janszoon Youth Ambassadors

Motupipi School Project Janszoon Youth Ambassadors, Amalie, Tara, Tarn and Arjuna recently helped release twenty juvenile brown teal, or pateke, on the banks of the lower Awapoto River, at Awaroa.

The translocation of these rare birds was coordinated by Project Janszoon and the Department of Conservation (DOC). Our Motupipi Youth Ambassadors joined up with the Project Janszoon Youth Ambassadors from Golden Bay High School to help with the release. The release site is located in an area with an intensive stoat and feral cat trapping network so as to provide a safe habitat for the brown teal.

It was a great opportunity for the children and follows on from them being involved in the release of kakariki and kaka into the Abel Tasman National Park over the past few years.

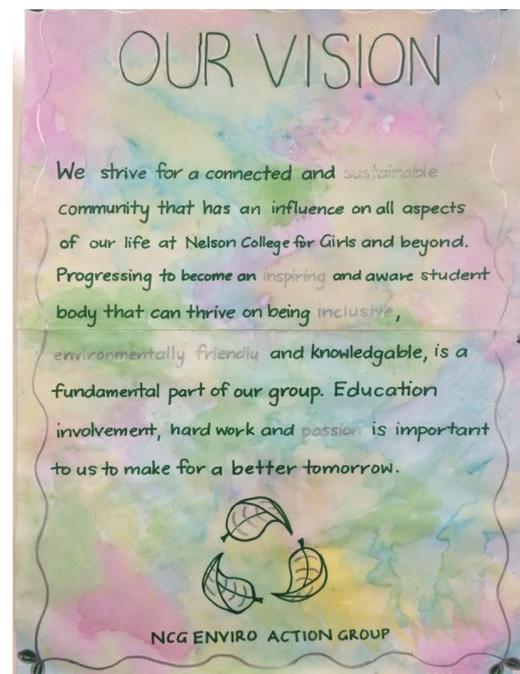
I was really excited when we got out there and were told we would actually get to hold the teal and release them ourselves.

At first I thought I would do something wrong, but the teal were quite calm and it was quite easy. We are going to go back there to see how they are getting on next year when we are at Golden Bay High School and hopefully the teal we released will have chicks by then. Amalie



Nelson College for Girls

Our Enviro group has been very busy lately as we have been working on a number of new initiatives! Recently we set up a mobile version of our school thrift shop for our school gala, making over \$100 to go towards Enviro group projects! We also organised a recycling system for the gala, which we supervised throughout the event, greatly reducing waste to the landfill. We're also organising some events such as a movie screening which will take place at our school to raise an environmental awareness.



Fonterra Farm Visit for Motupipi School

A group of interested Motupipi students from Rm 4 & 5 were lucky enough to visit the Fonterra Farm in Takaka along with students from Takaka Primary School. The visit was fantastic and it would have been great for the whole school to have gone however health & safety is pretty tricky with such large numbers as well as the stress on the cows with having lots of strange people around the milking shed.

Dairy farming plays an important role in our local and national economy and this was a great chance for some students to learn close up some of how this happens.

The children

- saw cows getting milked
- followed the path the milk takes from the cow through the various pipes, filters and coolers through to the storage vat
- checked out a milk tanker and watched the process the tanker driver goes through when collecting the milk and as well as the different tests that need to be done at each pick up
- talked to a vet about cow welfare/health/needs, and saw just how much grass a cow eats and water it drinks in one day
- Jeff Riordan the Farm Manager and Maree the farm worker also were on hand to answer the children's questions



Thanks go to Claire Webster, our TDC Education and Partnerships Officer for organizing this visit for us. We loved the visit.

It was really interesting as I'd never seen cows milked before. I learnt that they drink 60-90 litres of water a day and they are milked either once or twice a day. **Aurora**

I enjoyed watching the cows being milked and how they did everything and we got to see it close up. I was surprised at how much a cow can eat in a day so that it can make milk. **Chloe**

I loved the trip because I learnt heaps. I didn't realize that the milk had to be cooled down after it came from the cows. **Kiva**



Scarlett, Carmyn, Luca, Aliana and Aurora enjoying their learning



The Tanker Driver explaining what happens next

Tahunanui School



"I can - I will"



Tahunanui School checks to see how things are working!

This term The Green Ninjas have been busy working through the Action Cycle to see how being Tahunanui Tidy Kiwi is working for 2017. The bins are still covered and we are working on waste education to encourage litter free lunches.

We have been doing a litter audit each week and graphing the results to see if we can reduce playground litter.

"It has been good to show how much rubbish there has been in the playground" **Jake Yr 4**

"We like to clean up so we can help protect our native birds in the area" **Deacon Yr4**

We have also been working on a new video showing students how to be a Tahunanui Tidy Kiwi.

"It was so much fun to be part of the video and we can show people what to do" **Molly Yr 4**

The Green Ninjas now have a new logo and this will be on name badges so all students will know their role within the school. We also aim to produce enough beeswax wrap to sell at school for a gold coin donation then students can use these in their lunchboxes.

"I can I will ..Ka taea - ka tutuki"

Collingwood Area School celebrate Matariki

Kua haehae ngā hihī o Matariki

Always be grateful for the blessings you receive

The air was filled with music and light on Tuesday evening when CAS hosted a celebration for Matariki. Drumming, fire poi, hangi, kappa haka and lanterns made and carried by students were part of this fiesta – culminating in a splendid bonfire, lit by senior students carrying flaming torches.

When world news is so bleak at the moment, having an attitude of gratitude, gives us hope. Gratitude also helps us connect to something bigger than just ourselves, it connects us together as a community, creating common bonds and shared goals. This evening was indeed filled with gratitude and hope.





Kia ora! my name is Mel McColgan and I co-ordinate and deliver the Waimaori Streamcare Programme. The kaupapa was derived from The Whitebait Connection and is all about arming students, teachers and community members with the skills and understanding of how to measure water quality, monitor and help enhance our waterways.

Waimaori is fully funded and aims to have students become Kaitiaki of a reach of a stream or river close to their School.



Richmond Primary students carrying out tests to decide the state of the water quality at Twin Bridges Reserve on the Roding River – where some of Richmond’s water supply comes from.

Low flows mean less oxygen for water critters who require healthy strong flows to breathe. We discovered a good variety of healthy indicators (aquatic insects) during our inquiry, but algae on rocks was over-abundant. Rain is a good thing!



TE WAIREPO = BREATHE PROJECT

Vicki Smith is the Project Champion for the “Te Wairepo” (York Stream) Project. It is a highly collaborative initiative raising awareness about York Stream and how we can care for it. I have the pleasure of assisting with Te Wairepo – part of Project Maitai, by delivering stream ecology workshops to a total of forty students from; Auckland Point, Victory, Nelson Intermediate and Nelson College for Girls.

The mahi involved students personalizing their own clear laser cut fish, to make up an exhibition now on display at Nelson Provincial Museum. But that’s not all! The tamariki also constructed electronic devices (sensors) so that data could be transmitted from the stream to the internet, and beamed across to LED lights behind the fish, with colours corresponding to the temperature of the water!

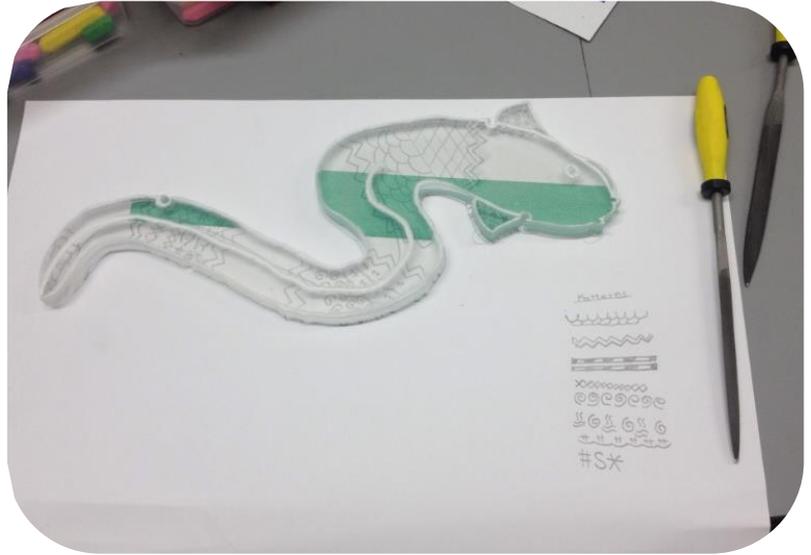
This reminds us that we need to think about the cold-blooded critters that exist in our freshwater streams, especially in urban environments where streams are often channelled. If water temperatures exceed 19–20 degrees Celcius for long periods, fish can die off. The temperature also directly affects the oxygen levels, a requirement of fish and macro-invertebrates.





The school students from upper primary to early secondary from local schools took part in two workshops;

1. To learn about the cultural and scientific aspects of stream ecology and how art and data can communicate important messages and
2. How to construct an IoT (internet of things) in the form of the data gathering sensors to record the temperature of the water in Te Wairepo/York Stream, which runs adjacent to or nearby their grounds.



WAIMAORI CATCHMENT MODEL MAKEOVER

In 2006 I constructed this catchment Model, mostly from paper mache³. During the demonstration of the model I pour water and food colouring down the "stream" to show students how various land uses impact on freshwater and marine environments. The model needed some waterproofing and a bit of a makeover, so I got some help from Vicki Smith (Artist) and Faye & Karl Wulff from Community Art Works Nelson. The makeover is almost complete!



Mel McColgan

WAIMAORI STREAMCARE

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INTERACTIVE & ENGAGING SUSTAINABILITY WORKSHOPS FOR SCHOOLS & COMMUNITY GROUPS

Nelson Environment Centre has been delivering waste education programmes in schools and preschools for over 10 years with the support of Nelson City Council and Tasman District Council. Our facilitator Sarah Langi is a trained teacher and has vast experience working with children, youth and adults.

Over the years we have developed a range of interactive eco-workshops which can be tailored to suit different ages, abilities and audiences. Whether you are a preschool, school, community group, social club, or team of professional teachers – we can customise a workshop which will enlighten, inspire and provide some great strategies to live a more sustainable life.

Below is an overview of programmes our facilitator can deliver to your school or organisation. We can adapt any of these workshops to meet your individual needs so if you have a specific request give us a call.

WASTE AUDITS / INTRODUCTION TO WASTE MANAGEMENT -

Conducting a waste audit at your organisation can be a real eye opener. For schools and community organisations, our facilitator assists in sorting one day's rubbish and encourages participants to explore the different options for dealing with their waste and examine why landfill is not an ideal choice. This session often ends with a challenge – to have a waste-free lunch day.

ZERO-WASTE LUNCHES (ALL AGES) -

In school settings the waste audit often identifies that the non-recyclable waste at school often comes from plastic lunch packaging and food waste. Participants explore how to reduce these two waste streams: the 'Stack-a-lunchbox' activity helps students compare different lunch packing choices, leading to a personal challenge of creating a waste-free lunch.

PLASTICS IN THE OCEAN (ALL AGES) -

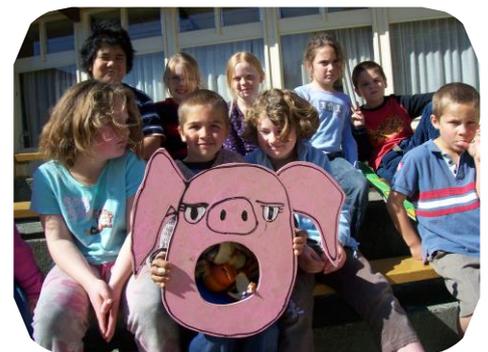
Reducing the amount of plastic in our daily lives, especially single-use plastic, reduces our reliance on fossil fuels and benefits the environment, especially marine life. Participants learn how plastic is made, how it breaks up into small pieces rather than breaks down, and the harmful effects on the marine environment. A hands-on simulated feeding game reveals the effect of plastic on marine animals.

REDUCE, REUSE, RECYCLE – REDUCE COMES FIRST! -

It is a challenge for us all at times to understand that sometimes less is best. Through a series of visual displays, participants explore the environmental and financial impacts of consumerism and think about the changes they could make to lessen their own impact on the planet.

WORM FARM WORKSHOP -

A hands-on demonstration of how a worm farm works and how these incredible creatures turn organic waste into a valuable resource. This is an interactive workshop where participants watch worms up close and consider what organic waste they should put in a worm farm.



Provider Updates

BUILD A COMPOST HEAP

A hands-on workshop where students build a compost heap, learning which ingredients make a healthy compost: greens are rich in nitrogen and browns are rich in carbon. Getting this balance right makes healthy compost for your veggie garden!

EM BOKASHI

Many organisations and schools are now opting to deal with their organic waste using an EM Bokashi system. This workshop introduces participants to the process and benefits of composting using effective micro-organisms.

WHICH COMPOSTING SYSTEM WILL MEET OUR NEEDS?

This workshop compares the advantages and disadvantages of worm farming, E.M. Bokashi and composting so that participants can learn each technique and work out which system will suit their organisation's needs best.

ELECTRONIC WASTE (E-WASTE)

Electronic waste is the fastest growing waste stream and poses a threat to the environment when thrown in the landfill. In this workshop, participants learn what e-waste is, what is in e-waste and why we need to recover the precious resources it contains and dispose of the rest safely.

THE OIL GAME

We depend on oil for transport, energy and manufacturing goods, especially plastics. The oil game is an inspiring workshop that engages participants' intellects and creative energy to explore our dependency on oil and which actions they can take today to create a sustainable future, where resources are precious and nothing is wasted.

CONSUMERISM (YRS 5-13)

Consumerism is a modern-day phenomenon that fuels the excessive production of waste. After watching the movie Story of Stuff, participants learn to analyse their needs versus desires, the psychology of advertising, marketing, and shopping, and the effects of over-consumption on the planet's finite resources.

SMART SHOPPING (YEARS 3-13)

The future of the planet is in your shopping basket! Participants learn what to look for and what to avoid while out shopping.

Workshop	Face to Face Delivery Time	Guide Price
Waste audit & syndicate presentations (schools) costs vary according to size of organisation/school	4 hrs	\$120-\$240
Zero Waste Lunches workshop	40min	\$65
Compost workshop	45min	\$65
Wormfarm workshop	45min	\$65
Bokashi workshop	35min	\$50
Which composting system will meet our needs?	1hr 30min	\$100
The Oil Game (3 workshops)	4hr 30min	\$200
Smart Shopping	45min	\$65
Consumerism	1hr 30min	\$75
Plastics in the Ocean	45min	\$65
Reduce, Reuse, Recycle – Reduce comes first!	45min	\$65

The above prices are exclusive of GST & discounted for delivery to community organisations and schools.

For more information contact:-

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New Board game – Flight of Pollen



From JIL Hemming, designer of Cloak of Protection, comes her new board game, Flight of Pollen. Watch the final testing, see the feedback, and have an option to pre-purchase: <http://kakarikigames.co.nz>



Habitat Heroes competition 2017

Habitat Heroes encourages young people to explore a local natural environment and think about how they can make a difference. The 2017 competition will be taking place in New Zealand between 18 April 2017 and 29 September 2017.

For more information and to enter the competition, visit www.doc.govt.nz/habitaheroes

The website also has lots of teaching and learning resources for teachers and group leaders.

Global Goals for Sustainable Development

Watching "The World's Largest Lesson" will be six and a half minutes well spent. Introduced by Michelle Rodriguez and written by Sir Ken Robinson, it calls on students around the world to use their superpower of creativity to help achieve the UN Global Goals for Sustainable Development. It is a great introduction to the topic of sustainability, and is bound to get students talking about what they are already doing, or want to do to help.

<https://vimeo.com/207843269>

<http://worldslargestlesson.globalgoals.org/>



NZTA – focuses on Citizenship!!

The NZ Transport Association has new resources supporting the use of road safety as a rich context for learning. www.education.nzta.govt.nz/resources

Curriculum resources available from the NZ Transport Agency “model a sophisticated weaving of higher level components of the New Zealand Curriculum (NZC), such as the key competencies, with learning area content.”

Rosemary Hipkins, a Chief Researcher at NZCER (New Zealand Council for Educational Research) writes that “students should be educated in ways that build their dispositions to be responsible and proactive citizens who recognise their part in making the road commons safe for everyone.”

“The case study teachers had all built a new type of narrative about what learning is for – a narrative that values both traditional curriculum goals (building new knowledge and skills) and less familiar future-focused goals such as citizenship. They all worked to gain deep engagement, so that their students would be disposed to care about what was being learned and assessed.

“They also sought to support students to build their action competencies – the ‘know how’ and willingness to plan and carry through on ways to stay safe personally and to keep everyone else safe to the extent that this is possible for individuals to do.

“There is clear evidence that that all three teachers had these types of longer term goals in mind, and that they were willing and able to make space for their students to take greater agency for their learning.”

The chain in my lunchbox

www.soilfoodsociety.online

The Soil, Food and Society website has some wonderful curriculum-linked resources for NZ teachers of Year 5–8 science

An example from the website For Years 7–8

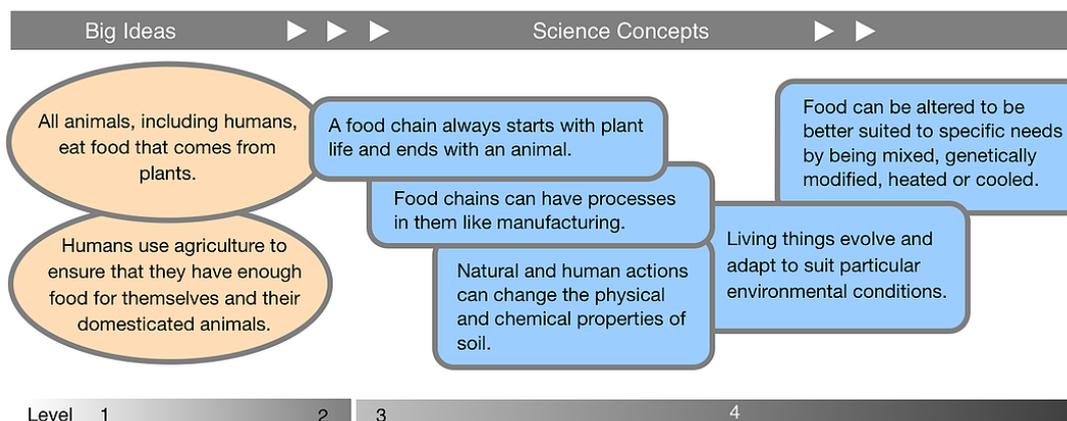
He raupapa kame kei roto i taku pouaka tina

A food chain shows how each living thing gets its food. With a simple food chain each link in the chain is food for the next link. A food chain always starts with plant life and ends with an animal.

The nutrients that plants are able to capture from the atmosphere and take up from the soil and the same nutrients that end up in your lunchbox

Agriculture’s purpose is to grow plants and other crops, and raise animals for food, other human needs, or economic gain. Agriculture is a supply step in a food chain.

Natural and human actions can change the environment where food is produced. These changes can be induced by physical action and by chemical action and reaction.



Activity one

Making a rainstorm



Water of Life
Activity



Where have we
come from and
what do we know
now?

This is a co-operative, experiential game used to introduce water as a topic and to stimulate thinking and talking. The game can be revisited at any time to re-energise you during your learning about wai. Ideas from the discussions that follow each rainstorm are 'collected' and 'channelled' into your Pool of Knowledge.



The game begins with the whole group in a circle.

1. Using fingers and hands, the group is led to tap and clap the actions, to illustrate the effects of rain.
2. Tamariki imitate the leader, joining in one-by-one as they are led through a series of actions. The leader starts at one end of the circle, making eye contact with the first person, who begins to make the first action (rubbing hands).
3. The leader slowly goes around the circle, bringing in each person by making eye contact with them. Each person who has been brought in continues with that action while the leader brings in all the other people in the circle, one by one.
4. The leader then changes to the next action and once again makes eye contact with each person in the circle one-by-one. The people continue with the first action until the leader comes around to them again, at which point they change to the second action. The leader keeps going round the circle, introducing a different action with each circuit (as listed in the box). This creates a steady progression from one sound to the next, simulating how a rainstorm builds and then fades as it passes over.

Actions:

- Rub hands together (to illustrate a gentle breeze)
- Snap fingers (to illustrate rain falling gently)
- Clap hands together irregularly (rain getting harder)
- Slap hands on legs (torrential rain)
- Stomp feet
- Slap hands on legs and stomp feet (the height of the rainstorm)
- Ease the rainstorm off by reversing the actions
- Stomp feet
- Slap hands on legs
- Clap hands
- Snap fingers
- Rub hands

Reflection/ Pūmahara

How did it feel to be part of a rainstorm event?

What do you think of when you think of rain?

How does rainwater affect you?

What did this activity tell you about wai and the different forms water can take?

Where does the water from a rainstorm go?

What questions do you have about rainwater in your Enviroschool and surrounding area?

