

# Small Planet



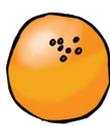
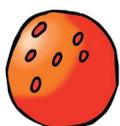
**An environmental education resource for small people**



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# INTRODUCTION TO SMALL PLANET

Everything is connected – how we live affects the health of our planet. In the face of threats from climate change, peak oil, dwindling resources and escalating world population, learning to live sustainably is crucial to ensure a positive and healthy future. We need to ‘future-proof’ our children by encouraging them to explore the world around them with a sense of awe and joy, respect all living things and understand the connections between them, use resources wisely, and grow food.

## WHAT IS SMALL PLANET?

Many ECEs (Early Childhood Education centres) already actively engage their students in learning about their environment. Small Planet is an educational resource designed to both recognise and reward existing activities and to act as a framework for planning future projects. The programme is designed to be self-managing by each ECE, whereby each centre chooses and runs activities that help children to engage with their environment.



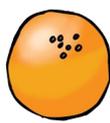
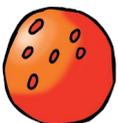
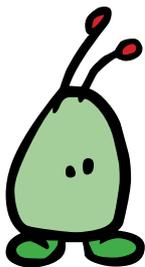
### WHAT DO WE MEAN WHEN WE TALK ABOUT SUSTAINABILITY?

Sustainability is about meeting the needs of today without impacting on the needs of tomorrow.

**He rau ringa e oti ai**  
(with many hands the work will be done)

“Let’s all work together to create a successful future for us, our children and our children’s children”

(Nelson 2060)



## HOW SMALL PLANET RELATES TO TE WHĀRIKI

Learning for sustainability fosters the concept of *kaitiakitanga*, which means guardianship of the environment and is customary to Māori. Learning about our environment and how we intimately connect to it and depend upon it empowers our children to become *kaitiaki* and take an active role in nurturing all living things. This empowerment is the key to learning for sustainability, where children gain the confidence and skills to create positive change.

Small Planet upholds the **Principles** and **Strands** of *Te Whāriki* by promoting a learning environment that is holistic, rich in diverse learning experiences, and where children know that they can make a real difference to the world around them.

### The Principles

Small Planet upholds all the Principles of *Te Whāriki* as children are empowered to work with each other and the wider community and make changes within a holistic learning environment.

Principles	Actions
Wha-nau Tangata / Family and Community	Taking pumpkin seeds home to plant and give to neighbours
Nga- Hononga / Relationships	Working with others to sort out the recycling
Kotahitanga / Holistic Development	Watching caterpillars make a cocoon and hatch into a butterfly, making caterpillar masks and butterfly wings to re-enact the metamorphosis, finding out about other creatures that metamorphose
Whakamana / Empowerment	Being given responsibility for feeding the worms in the worm farm

### The Strands

The Strands of **Mana Aotūroa / Exploration** and **Mana Whenua / Belonging** are maintained and strengthened as children explore the natural world and develop a sense of their relationship with other living creatures and their environment. As children work together, sharing their ideas as they help to create a healthy and sustainable environment, the Strands of **Mana Reo / Communication**, **Mana Atua / Well-being** and **Mana Tangata / Contribution** are supported.

Strands	Actions
Mana Aotu-roa / Exploration	Searching in a stream to see what creatures and plants live there
Mana Reo / Communication	Explaining to others what food the worms like
Mana Atua / Well-being	Becoming aware of which places make them feel safe and peaceful
Mana Tangata / Contribution	Taking responsibility for feeding the worms
Mana whenua / Belonging	Celebrating their hard work in the garden by harvesting and baking their potatoes and sharing them for lunch





# HOW SMALL PLANET WORKS

## JUST A FEW EASY STEPS!

There are NO deadlines or time constraints!

Each ECE will manage Small Planet within their own centre by:

- Choosing their activities – Each ECE will choose its own projects, either through an enquiry-based approach or using the children’s ideas. ECEs may also wish to use the list of suggested activities in this manual as a starting point for other project ideas. A project may be as simple as having a packaging-free lunch day, or may be longer-term, e.g. establishing a packaging-free ECE.
- Deciding when a milestone has been reached.
- Recording each project (e.g. by creating a learning story, video, poster, etc). This record is for your own information.
- Celebrate!

Small Planet booklets and posters are available to ECEs in Nelson through our website, [www.nelson.govt.nz](http://www.nelson.govt.nz), (search = Small Planet).

## Small Planet Posters

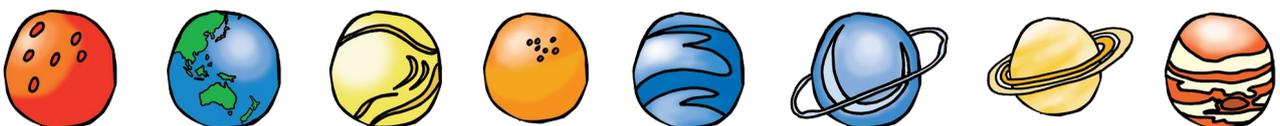
Each time you complete a project you can add a planet to your Small Planet poster. Each poster has four planet ‘spaces’ on it. The completion of each project is marked as a milestone and celebrated by adding a planet to the poster.

When you are ready to share your learning story with the children, ask them if they think they have reached a milestone and can add a planet to the poster. If they agree, ask them to put a planet onto the poster and discuss what their next project might be.

Have a shared lunch or morning tea (eat something you have grown!). Invite any guests who have helped to join your celebration.

*When you have finished four projects and have all four planets in place, you will have completed your first poster. There are two posters and eight planets in total.*

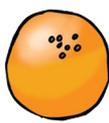
Kei te pai!

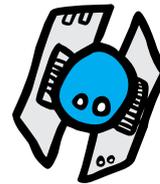


## HEALTH AND SAFETY NOTES

There are a few potential health and safety issues associated with environmental education, so please ensure you consider the following points. You should always follow your own health and safety procedures.

- If children are outside during the day, ensure that sun protection is worn.
- After being in the garden, remind children to wash their hands thoroughly with warm, soapy water.
- Remind children to keep their hands out of their eyes and mouth while digging or planting.
- Inhaling compost fumes can cause Legionnaires Disease; providing masks and gloves is strongly recommended if working directly with compost, and compost should only be handled in well ventilated spaces.
- Have specific guidelines in place when children are working with garden tools and equipment.
- Avoid potentially toxic plants in the grounds. (These are listed at [www.landcareresearch.co.nz/publications/factsheets/poisonous-plants](http://www.landcareresearch.co.nz/publications/factsheets/poisonous-plants)).





# SMALL PLANET ACTIVITY IDEAS

Here are some activities you may wish to try; you may have your own ideas already!

Remember to include the children's ideas and suggestions at every possible opportunity.

You will find useful links and references either with the listed activities or in the resource list at the end of this section.

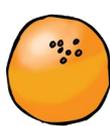
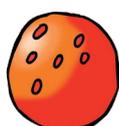
## MĀORI LEGENDS

Introduce the concept that **Papatuanuku** is our living mother: she gives us life and we need to respect her and all living creatures. **Ranginui** our sky father gives us rain so the plants and trees can grow. Introduce the other **Atua** and talk about the qualities they represent: e.g. **Tamanui Te Rā** the sun and **Tānemahuta** the **Atua** of the forest and everything that lives in it.

Encourage the idea of caring for and nurturing living things. Discuss how we can become *kaitiaki* for the planet and talk about what that means. (Watch *He Pae Korero*, the Enviroschools DVD of Māori legends).

## Connect children with their environment

- In the garden: lie down and close eyes: listen for the sounds you can hear.
- Count how many plants and living animals you can find.
- Look in leaf litter under a tree for mini beasts.
- How many different-shaped leaves can you find?
- Look for certain colours in your environment (Give children colour cards from paint shops to match with something outside).
- Look for insects coloured for camouflage and those that are vivid.
- Listen to the heartbeat of a (deciduous) tree with a stethoscope.
- Which parts of your centre do you like/dislike—why?
- Can you find a place where you feel safe/peaceful/scared/etc.?
- How can we make the areas we don't like better?
- Visit the Brook/Waimarama Sanctuary to learn about the forest and the animals which live in it.
- Visit the beach and check out the rock pools.



## HERE ARE JUST A FEW IDEAS FOR GREAT THINGS TO DO WITH WASTE!

### THE 3 RS: REDUCE, REUSE, RECYCLE

#### Reduce

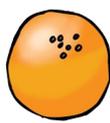
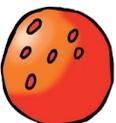
- Make cloth bags to take shopping: children design and paint their own to reduce plastic bag waste.
- Conduct experiments. Bury separate balls of plastic lunch wrap, paper wrap and food scraps in 3 different holes in the garden. Dig up 3 months later, analyse results to see what decomposes and what doesn't (**Waste Not** kit [www.nec.org.nz/reducing-waste-school](http://www.nec.org.nz/reducing-waste-school)).
- Decide as a group about rubbish-free lunchbox policy based on findings!
- Make non-toxic bug sprays (garlic, chilli) to reduce toxic products in gardens, as well as cleaners and other stuff ([www.nelson.govt.nz/sustainability/sustainability-at-home/sustainable-living-ideas](http://www.nelson.govt.nz/sustainability/sustainability-at-home/sustainable-living-ideas)).

#### Reuse

- Make puppets using old socks and buttons for eyes.
- Use material off-cuts and old clothes to make stuffed soft toys (Children draw designs and cut patterns to make a toy with teacher/grandparent/parent on sewing machine).
- Use milk cartons, yoghurt pots, cardboard rolls as seedling containers.
- Use junk mail for native bird artworks.
- Use cardboard boxes, plastic lids, cotton reels, packaging, magazines etc. to make robots, dolls houses, cars, and more.
- Make a Zerowaste birthday throne, a table, a chair (in fact anything!) out of tetra-pak bricks stuffed with plastic, non-recyclable rubbish.

#### Recycle

- Make recycled paper (**Waste Not** kit).
- Involve the children fully in filling the recycling bins, feeding the worms and emptying the compost bin.
- Organise a trip to the Recycling plant.
- Compost your food and garden waste (see next section).



## ORGANIC WASTE/COMPOSTING

There are three main ways of processing organic waste (food scraps and garden waste). Learning how to turn organic waste into rich food for the garden is an essential skill for growing food. Choose which method(s) would suit your centre.

### Worm farming

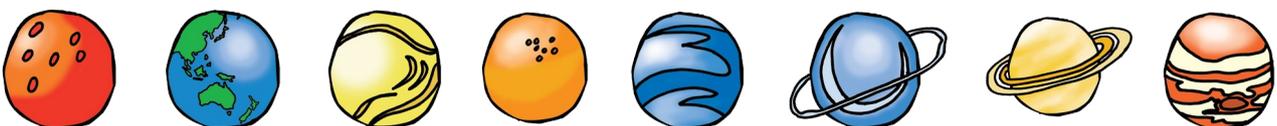
Worm farms provide a rich learning context, especially for young children. They produce both vermicast, a super-concentrated form of compost, and worm tea, a magic potion for feeding plants. They are excellent for food scraps; however, some foods are **not suitable** (citrus fruits, meat, fish, onions, garlic).

- Set up a worm farm
  - **Waste Not** kit [www.nec.org.nz/reducing-waste-school/](http://www.nec.org.nz/reducing-waste-school/)
  - How to set up a Can O Worms [www.youtube.com/watch?v=tTyikQU1gek](http://www.youtube.com/watch?v=tTyikQU1gek)
  - Set up a worm farm in four easy steps [www.youtube.com/watch?v=Berf8Sy0SCI](http://www.youtube.com/watch?v=Berf8Sy0SCI)
  - Short 2 minute video of how to set up a worm farm [handymanmagazine.co.nz/worm-farm](http://handymanmagazine.co.nz/worm-farm)
- Hunt for other animals who live in your worm farm (**Waste Not** kit).
- Sell your worm tea to parents as a fundraiser (let the children design the labels).
- Worm recipes (**Waste Not** kit).

### EM Bokashi

EM Bokashi is a very simple method of composting in an airtight, sealed bucket, using anaerobic micro-organisms (rather than worms!). It is ideal for processing food scraps as it does not attract flies and can take all types of food, including citrus, meat, fish, onions, and ham sandwiches. A rich compost and a powerful liquid plant food are also produced. However, as micro-organisms rather than worms do the work, there is not much for little children to see. Bokashi sets are available from a range of suppliers – see the Council compost subsidy page for local suppliers and details of the \$20 subsidy available.

- Set up a bokashi system for your food scraps.
- Let the children collect the food scraps and run the system.



## Composting

Composting is useful for processing your garden waste (grass clippings, leaves, etc.) as well as food scraps. Children can learn to get the balance of ingredients right: if they only use their food scraps (nitrogen-rich) they need to add other carbon-rich material too—paper, dry leaves, straw, etc.

- Collect ingredients to build a compost heap (compare it to making a cake)—seaweed from the beach, leaves, twigs, shredded paper, grass clippings, food scraps, beneficial weeds.
- Use an Archimedes screw tool to turn the heap.
- Check the compost regularly to see what changes are occurring.
- Let the children fork the compost into the wheelbarrow and spread it on the garden.
- Check the compost for worms.

The Council has a useful how-to guide at [www.nelson.govt.nz/sustainability/sustainability-at-home/composting-3](http://www.nelson.govt.nz/sustainability/sustainability-at-home/composting-3) along with a \$20 subsidy coupon for a compost bin (conditions apply).

## OTHER IDEAS FROM OUR NATURAL WORLD!

### Growing

A selection of delightful books is listed in the Resource section.

- Grow food, cook it and eat it (strawberries, raspberries, peas, cherry tomatoes, lettuce, corn and salads to pick and eat in summer; silverbeet, beetroot and pumpkin for soup in winter, zucchini muffins, baked potatoes... can be as simple as spuds in a sack, herbs in a pot, beans in a jar).
- Find out how seeds grow ([www.kidzone.ws/science/seeds.htm](http://www.kidzone.ws/science/seeds.htm)) or grow plants in hydrogel to watch the roots and shoots develop.
- Plant gardens to attract butterflies. ([www.greenurbanliving.co.nz/category/gardening-with-the-kids](http://www.greenurbanliving.co.nz/category/gardening-with-the-kids)).
- Plant gardens to attract native birds, skinks and snails (hold snail races!).
- Create bean tunnels, sunflower houses.
- Collect seeds (seed collections, seed pictures, seeds to give to parents).
- Make a scarecrow out of junk materials.
- Make seed balls for re-vegetating areas with native plants (Ask your Facilitator for instructions).
- Plant fruit and nut trees, a feijoa hedge, grape vines.
- Sprout seeds to eat – alfalfa, mung, pea, cress, etc.
- Learn how seeds are dispersed by wind, water, animals and birds ([www.theseedsite.co.uk/dispersal.html](http://www.theseedsite.co.uk/dispersal.html)).
- Make 'grass people' – reuse old stockings, fill with soil and seed to sprout grass hair.
- Other ideas for the garden ([www.greenurbanliving.co.nz](http://www.greenurbanliving.co.nz)).
- [www.eartheasy.com/grow\\_gardening\\_children.htm](http://www.eartheasy.com/grow_gardening_children.htm).
- [www.kidsgardening.org](http://www.kidsgardening.org).
- Grow It resource [nelson.govt.nz/environment/sustainability/sustainability-at-home/growing-food-at-home](http://nelson.govt.nz/environment/sustainability/sustainability-at-home/growing-food-at-home).
- Fruit & Nut Tree guide [www.nec.org.nz/growing-fruit-nuts](http://www.nec.org.nz/growing-fruit-nuts).



## Birds

- Make bird feeders (pine cones with peanut butter and seeds, fruit and bread scraps on a plate nailed on top of a post, honey and water in a recycled plastic milk container/dish ([www.doc.govt.nz/conservation-week/take-action/at-home](http://www.doc.govt.nz/conservation-week/take-action/at-home))).
- Make bird feeders from items purchased from your local recycle centre (Nelson Environment Centre, op shops and transfer station recycle centres).
- Make fun recipes to attract birds to your garden.
- Make a bird bath.
- Plant trees like kowhai to attract tui and other native birds.
- Learn to recognise native birds ([www.labarker.com/NZbirds.html](http://www.labarker.com/NZbirds.html)).



## Weather

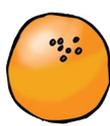
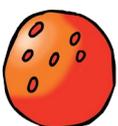
- Lie and watch the clouds, look for shapes (*Little Cloud* by Eric Carle).
- Learn a few basic cloud types, what they mean and what weather they may bring.
- Make a rain gauge and measure the rainfall.
- Make a sundial on a paved area and measure the shadow lengths in chalk.

## Wildlife

- Build a Weta hotel and observe these fascinating creatures ([www.doc.govt.nz/getting-involved/conservation-activities/in-your-garden](http://www.doc.govt.nz/getting-involved/conservation-activities/in-your-garden)).
- For interesting facts about weta go to [www.doc.govt.nz/conservation/native-animals/invertebrates/weta](http://www.doc.govt.nz/conservation/native-animals/invertebrates/weta).
- Look for birds and mini-beasts to see how green your garden is.
- Make homes for lizards in the garden ([www.doc.govt.nz/getting-involved/home-and-garden/attract-lizards-to-your-garden](http://www.doc.govt.nz/getting-involved/home-and-garden/attract-lizards-to-your-garden)).
- Build a bug hotel ([www.greenurbanliving.co.nz/encouraging-beneficial-insects](http://www.greenurbanliving.co.nz/encouraging-beneficial-insects)).

## Pests

- Contact **Brook/Waimarama Sanctuary** to go on a field trip and learn about local pests ([www.brooksanctuary.org](http://www.brooksanctuary.org)).
- Paws and poos: record the footprints (and sometimes poos) of mice, rats, possums, etc. in a tracking tunnel. Put one by your compost bin and act as detectives, "Is that a hedgehog's paw print?" ([www.mspca.org/programs/wildlife-resources/what-animal-is-it.html](http://www.mspca.org/programs/wildlife-resources/what-animal-is-it.html)).



## Freshwater

- Find out where water comes from. ([www.kidzone.ws/water](http://www.kidzone.ws/water)).
- Install a water-collecting system for water play and the sandpit.
- Learn what freshwater means to Māori.
- Find and learn about the insects and other stream life and what they mean for the health of your local stream.
- Adopt your local stream and find out what lives in it, monitor it regularly and care for it (by planting natives along the stream bank). For advice contact Nelson City Council's Science and Environment team on 03 546 0200, or [waimaori@ncc.govt.nz](mailto:waimaori@ncc.govt.nz). (Waimaori Streamcare Programme: a facilitator works with groups of children to monitor and care for local streams. Email [waimaori@ncc.govt.nz](mailto:waimaori@ncc.govt.nz) for more information.)
- Grow frogs from tadpoles ([www.nzfrogs.org/Resources/Kids+Information/Keeping+Frogs.html](http://www.nzfrogs.org/Resources/Kids+Information/Keeping+Frogs.html)).
- Find out about how **tuna** (eels) transform themselves for their long migration to Tonga (watch **Longfin** [www.longfinfilm.com](http://www.longfinfilm.com)).

## Marine

- Visit some rock pools: "What can we find? How do the creatures and plants relate to each other?" ([www.nationalaquarium.co.nz/education-programmes-and-facilities/videos/#prettyphoto.3/](http://www.nationalaquarium.co.nz/education-programmes-and-facilities/videos/#prettyphoto.3/)) ([www.enchantedlearning.com/biomes/intertidal/intertidal.shtml](http://www.enchantedlearning.com/biomes/intertidal/intertidal.shtml)).
- Build penguin nesting boxes and find out why penguins might need these boxes ([www.doc.govt.nz/nature/native-animals/birds/birds-a-z/penguins/little-penguin-korora](http://www.doc.govt.nz/nature/native-animals/birds/birds-a-z/penguins/little-penguin-korora)).
- Find out about the life of seabirds ([www.doc.govt.nz/upload/documents/conservation/native-animals/birds/sea-and-shore/factsheet-1.pdf](http://www.doc.govt.nz/upload/documents/conservation/native-animals/birds/sea-and-shore/factsheet-1.pdf)).
- Collect seaweed after a storm for the compost.
- Collect and sort feathers, shells and pebbles, "where do they come from?".

Books by Eric Carle: *Mister Seahorse* and *A House for Hermit Crab* also KCC Magazine No. 96 *Marine Reserves*.

## SAVING PRECIOUS RESOURCES

### Transport

- Find out: How do we get to our ECE? Talk about the alternatives to one family travelling in a car. (Ideas: share journeys with your neighbours; encourage parents to drive their cars to a designated point and walk the rest of the way to school; organise a bicycle bus, a walking bus or a walking crocodile (children with egg carton croc. masks and parents in front and behind dressed as the head/tail!).)
- Put together a travel plan.

### Energy

- How did people manage without energy in the 'olden days'? What would happen if we didn't have energy now? How could we cook food? What about lights?
- Fun solar energy projects [www.brighthubeducation.com/preschool-crafts-activities/120650-solar-energy-activities](http://www.brighthubeducation.com/preschool-crafts-activities/120650-solar-energy-activities).



# Case Studies

Case Studies  
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## WATER OF LIFE CASE STUDY - NAYLAND KINDERGARTEN

# Empowering kaiako, tamariki, family and whānau to develop responsible habits in the use of water

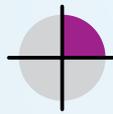
The kindergarten community have been developing water conservation for four years. It began with the team having a question:

**“How can we capture, recycle and conserve water at kindergarten?”**

This was actively explored with tamariki using the action learning cycle.

### We investigated:

- What tamariki know already and their understanding of why water is important and what we use it for.
- Full body exploration: We know the importance of young tamariki exploring their world with their whole bodies. Being able to explore how water moves, how it feels and looks supported further learning. What does water look and feel like through movement?
- Water experiments: How much water do we give our plants? We had three groups of plants in our experiment. The first group was watered each day. The second group were over-watered each day. The third group were not watered at all. Tamariki were able to observe the care of plants and the role water plays.
- Water conservation was explored through a bicultural lens: The creation story was introduced as a way of tamariki understanding wai and where it comes from.
- Whānau recognised the amount of water that was flowing off the roof in heavy rain while the grounds were in drought, and got involved in problem solving.



### We took action:

As part of the project a water collection tank was installed. High whānau involvement was integral in enabling this to happen. Our vision was for tamariki to make the connection to where water comes from, as a step to realising it is something we need to be responsible for. Kaiako were more intentional in setting up the environment, often using smaller containers for water play, encouraging tamariki to wonder about how we could capture water, conserve it and explore it travelling from one vessel to another.



## LIVING LANDSCAPES CASE STUDY - WHANGAMATA KINDERGARTEN

# Whangamata Kindergarten children develop a sense of place

Developing a sense of place is important to us at Whangamata Kindergarten. Children at our centre have been taught about mihi and we have helped each child to write their own. These are displayed on the kindergarten wall.

We have talked to the children about special places, including our kindergarten, and showed them a map of our area. Some children decided to draw their own maps including places that were special to them. Teachers realised through these interactions that not many children knew about the maunga and awa close to the kindergarten. They had all been to the beach, but they didn't know about the awa/ stream that flowed from the maunga/ mountain to the moana/ sea.

Staff booked the Kindergarten Association van, and took small groups of children on an excursion. Off they went up the maunga, down the maunga to the awa, along the awa to the moana! Each time they saw something, they used the local Māori names to talk to children about those places. Back at the centre, staff had made a huge wall display with the mountain, stream and sea. Children were encouraged to draw themselves to fit into the picture. They drew the van, they drew the sky and the sun. They drew some birds and some trees.



Children use the wall display to tell stories, recreate their experiences and consolidate learning.

Children now use the wall image to tell their stories about the trip up the maunga, down the maunga along the awa, out to the moana, and back to the centre. Stories change! More things are added. The pepeha/ mihi now has meaning.

As we consolidated this through experiences, discussions and play, our children became familiar with the special places in their mihi, the maunga, awa, motu and moana.



## WATER OF LIFE CASE STUDY - BIRCHWOOD KINDERGARTEN

# Water project

At Birchwood Kindergarten we decided to install a rainwater tank. Why?

- Our children are fascinated by water. They interact with water in their play; when it rains; noticing the effects of lack of water on our lawns and gardens
- Teachers control children's access to water. We hoped a water tank would help tamariki make their own choices and deepen their understanding of conservation issues
- We were inspired by the experience of other kindergartens that installed rainwater tanks
- We saw it as a valuable first step in development of our outdoor area
- An Enviroschools Action Project fund was available that would meet some of the costs

We explored options for setting up a tank. We talked with whānau. Our Family Committee were very supportive and agreed to cover costs beyond the Enviroschools Action Project grant. We sought advice from plumbers and the property manager. We visited rainwater collection systems at other kindergartens.

The only possible site for the water tank was some distance from the sandpit. Realising we needed a long underground pipe, we invited

whānau to a working bee. Once the tank was installed we had several weeks' wait for rain. Children tapped on the tank, listening to the hollow sound.



## LIVING LANDSCAPES CASE STUDY RAUMATI SOUTH KINDERGARTEN

# Creating a healthy Living Landscape: From the garden to the table

Learning about life cycles is integral to the programme at Raumati South Kindergarten. We learn about nature, and discover through understanding natural systems that we can work with the environment and nurture our bodies by producing fresh produce to eat and share.

Kaiako and whānau work alongside tamariki to observe, and learn about the life cycles of insects and birds. We also work together as a community to learn about healthy kai and how we can grow this in our gardens at home and at kindergarten.

**'If we look after Papatūānuku, she can look after the worms and dirt to help us grow things'**  
says Nerys.



Eligh says **'We pick apples and make apple juice for morning tea, with Lara's machine.'**



Isobelle, Lucy, Lincoln, Sophia making apple juice

## ZERO WASTE CASE STUDY - GRANDVIEW KINDERGARTEN

# How the Waste Monster lost weight...

When Grandview Kindergarten embarked on the Enviroschools Programme, teachers were aware that they had a waste issue, with two big bins of rubbish going to landfill each week. After discussing this in context of their recent professional development around the Enviroschools programme, they felt this was a problem where they could make a difference – something achievable to start on. Tamariki and teachers began to brainstorm together about what it means to be an Enviroschool and what to include in their care code.

During kai times, the children were encouraged to think about how much waste was in their lunch boxes and where this goes if it's not diverted ("To the dump! Aueeee Papatūānuku!"). There was also discussion about what happened to recycling ("To the dump? No!!!!") One way of modelling recycling and remanufacturing was to make "new" paper out of used. This was a fun, hands-on and creative experience that led to other ideas.

A waste audit was carried out – all food and plastic was sorted and weighed. Head teacher Trish noticed that the waste audit seemed boring to the children (although useful for the adults), and so a very visual hands-on activity of creating a rubbish monster was devised – this had a much greater impact for this age group. Children helped thread one week of kai time rubbish together to make a 14 metre "Rubbish Monster" and this was displayed inside, creating a conversation point for children, staff and whānau alike.

**"What's in lunch boxes is the biggest way that families can contribute to reducing waste". says Trish. "and the great thing is that families have been really responsive".**

Conversations continued to explore ways of reducing waste at the kindergarten and a range of activities were undertaken with the children to reuse or re-purpose waste items. Newsletters were put together with ideas for how families could support this Zero Waste initiative, as well as providing healthy food at a reduced cost. Changes have occurred through the choices families were making in response to the children's new understanding and awareness of ways they could reduce waste. Parents are now exploring alternatives and finding healthy and creative ways to reduce waste. This has impacted not only the kindergarten, but in some families has had a flow-on effect to schools and even Dad's packed work lunch.



# USEFUL CONTACTS AND RESOURCES

## Nelson Environment Centre, including Ecoland/Organic Co-Op

NEC has a range of programmes available to support ECEs.

31 Vanguard Street, Nelson. (03) 545 9176. [www.nec.org.nz](http://www.nec.org.nz).

## Nelson City Council – Environmental programmes team and Enviroschools

(03) 546 0200. [enviroschools@ncc.govt.nz](mailto:enviroschools@ncc.govt.nz)

### Freshwater

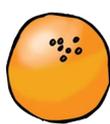
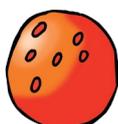
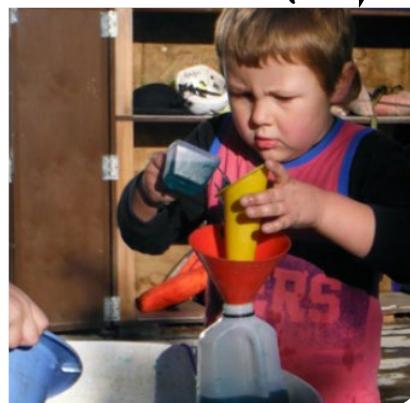
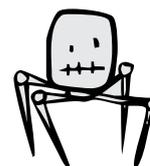
Waimaori Streamcare Programme: [www.nelson.govt.nz/environment/sustainability/sustainability-in-schools/waimaori-stream-care](http://www.nelson.govt.nz/environment/sustainability/sustainability-in-schools/waimaori-stream-care).

### Conservation

- **Department of Conservation (DOC) –Te Papa Atawhai**  
Nelson Office – Monro State Building, 186 Bridge St, Nelson 7010. (03) 546 9335  
[www.doc.govt.nz/get-involved/conservation-education](http://www.doc.govt.nz/get-involved/conservation-education).
- **Brook Waimarama Sanctuary**  
Field trips and education for conservation and wildlife management.  
[info@brooksanctuary.org](mailto:info@brooksanctuary.org). [www.brooksanctuary.org](http://www.brooksanctuary.org).
- **Project Janszoon Education**  
[marika@janszoon.org](mailto:marika@janszoon.org). [www.janszoon.org](http://www.janszoon.org)

### Community garden visits

- **Waimarama Community Gardens**  
Tantragee Road (off Upper Brook Street), The Brook, Nelson  
[waimaramacommunitygardens@gmail.com](mailto:waimaramacommunitygardens@gmail.com).
- **Victory Community Gardens**  
Victory Community Centre, Totara Street, Nelson.  
(03) 546 8381. [vchinfo@victory.school.nz](mailto:vchinfo@victory.school.nz).





## WEBSITES

Enviroschools website [www.enviroschools.org.nz](http://www.enviroschools.org.nz).

Kiwi Conservation Club [www.kcc.org.nz/](http://www.kcc.org.nz/).

World WildLife Fund [www.wwf.org.nz](http://www.wwf.org.nz).

[www.zerowaste.co.nz](http://www.zerowaste.co.nz).

[www.sustainableliving.org.nz](http://www.sustainableliving.org.nz).

[www.ecomatters.org.nz](http://www.ecomatters.org.nz).

[www.consumer.org.nz](http://www.consumer.org.nz).

Interactive sustainability resource [www.olliesworld.com](http://www.olliesworld.com).

[www.wasteinplace.org](http://www.wasteinplace.org).

[www.kidsrecycle.org](http://www.kidsrecycle.org).

[www.wastefreelunches.org](http://www.wastefreelunches.org).

## BOOKS

**Charlie and Lola – Look After Your Planet** by L. Child. Used with great success by Cherry's ECE, Christchurch. The book includes a tree template onto which 'leaves' can be stuck as recycling gets brought in by the children. Once the tree is full, take the children to purchase a native tree to plant.

**Waste Not** by Waste Education Services (Teachers' resource, can be downloaded free from [www.nec.org.nz/reducing-waste-school](http://www.nec.org.nz/reducing-waste-school)).

**George Saves the World by Lunchtime** by J. Readman and L.H. Roberts. Eden Project [www.edenproject.com/shop/George-Saves-the-World-by-Lunctime.aspx](http://www.edenproject.com/shop/George-Saves-the-World-by-Lunctime.aspx).

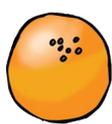
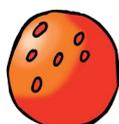
**The World Came To My Place Today** by J. Readman and L.H. Roberts. Eden Project [www.edenproject.com/shop/The-world-came-to-my-place.aspx](http://www.edenproject.com/shop/The-world-came-to-my-place.aspx).

**Rubbish! Everything you wanted to know about rubbish, landfills, recycling and worms** by R. Goddard. 2007. Reed Publishing, Auckland. ISBN 978 1 86978 014 2.

**Tea for the Tui** by R. Tully. 2007. New Holland (NZ) Ltd. ISBN: 9781869661670.

**Old Blue, the Rarest Bird in the World** by Mary Taylor.

**Wild Things** (Kiwi Conservation Club Magazine), e.g. No. 101 Wild Rivers, No. 79 Native Freshwater Fish and No. 96 Marine Reserves.

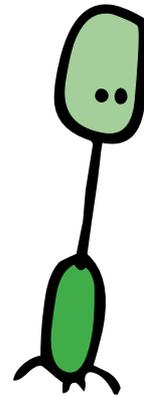


## Gardening Books

- *Sunflower Houses* by Sharon Lovejoy.
- *Roots, Shoots, Buckets and Boots* by Sharon Lovejoy. Workman NY ([www.workman.com/products/](http://www.workman.com/products/)).
- *A Child's Garden* by Molly Dannenmaier. ([www.amazon.com/Childs-Garden-Ideas-Children-Archetype/dp/0881928437](http://www.amazon.com/Childs-Garden-Ideas-Children-Archetype/dp/0881928437)).
- *Seed to Seed: Food gardens in schools* by Jude Fanton and Jo Immig. 2007.
- *The Tiny Seed* by Eric Carle. 1970.
- *Stamp, Stomp, Whomp and other interesting ways to get rid of pests* by Jackie French. 2000. ([www.jackiefrench.com/books99.html](http://www.jackiefrench.com/books99.html)).
- *The NZ School Gardening Handbook* by Keli Jones. ISBN 978-1-4425-1864-3.
- *Companion Planting in New Zealand* by Brenda Little. 2000. ISBN 1877246417.
- *Growing Gardeners* by Dee Pigneguy. ISBN 978-0-9582966-0-1.

## Books by Eric Carle ([www.eric-carle.com/ECbooks2.html](http://www.eric-carle.com/ECbooks2.html)).

- *The Tiny Seed*. 1970.
- *The Very Hungry Caterpillar*. 1969.
- *The Honeybee and the Robber*. 1981.
- *The Very Busy Spider*. 1984.
- *A House for Hermit Crab*. 1987.
- *The Very Quiet Cricket*. 1990.
- *Little Cloud*. 1996.
- *Mister Seahorse*. 2004.



## MOVIES

*OURS* by Emma Heke ([www.oursdvd.co.nz](http://www.oursdvd.co.nz)) An environmental DVD for young children containing close encounters with playful seals and shy Hoiho, boisterous Kakapo chicks and worm gobbling Kiwi. See a Monarch butterfly emerge from a chrysalis, experience spurting geysers and explosive mud pools! See majestic native Kauri, giant snails, rainbows, frosts and storms, fascinating fungus and children saving the planet.

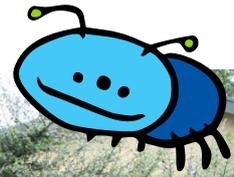
*Longfin* by Lindsey Davidson & Melissa Salpietra ([www.longfinfilm.com](http://www.longfinfilm.com)). Gives a spiritual and magical glimpse into the life of the endemic NZ longfin eel.

*He Pae Korero* Enviroschools short stories, Māori legends and myths ([www.enviroschools.org.nz](http://www.enviroschools.org.nz)).

## SONGS

*Daisy Face, Home free* and other dvds by Anna Rugis ([www.enviromusic.co.nz](http://www.enviromusic.co.nz)).



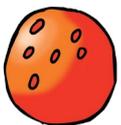


### ABOUT THIS RESOURCE:

Small Planet was developed by Nelson City Council with assistance from Sarah Langi (Waste Education Services (WES), Emma Heke (creator of OURS DVD) and Kate Cobb (Enviroschools).

If you have activity ideas or resources such as great websites etc, which you'd like to see added to this resource, please contact the Nelson City Council Science and Environment team on 03 546 0200.







**Nelson City Council**  
te kaunihera o whakatū

