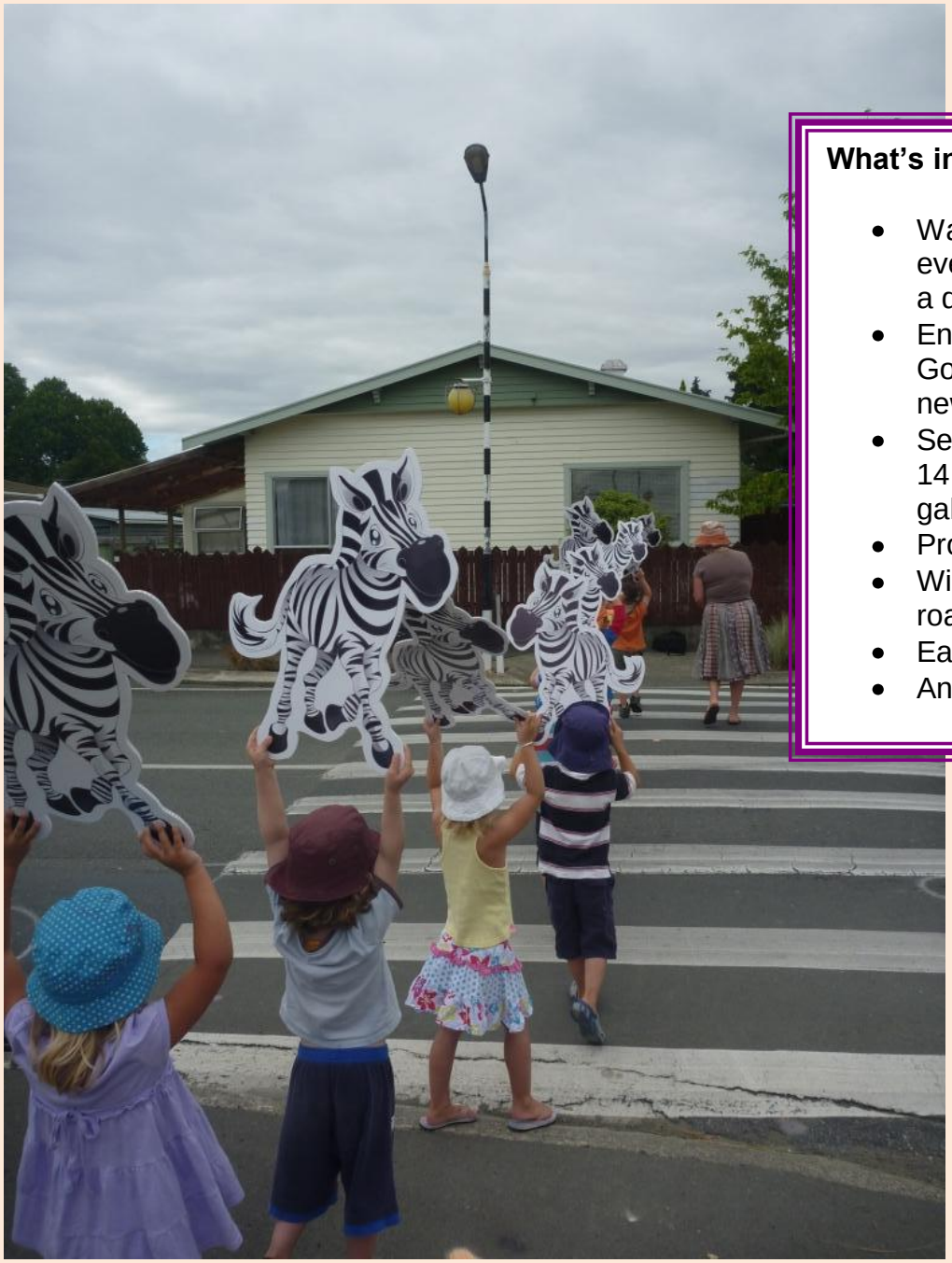
EcoBuzz

Edition # 37 **Term 1, February 2010**



What's inside:

- Water, water everywhere but hardly a drop to drink
- Enviroschools in Golden Bay and our new facilitators
- Seaweek – March 7 – 14 and resources galore
- Problem Ants
- Wild animals cross the road
- Earths kidneys
- And much more

Waverley Street Kindergarten children at their "Zebra crossing" – kids helping adults become more aware of pedestrian crossings.

EcoBuzz is created with the help of many contributors – thank you to you all! Feel free to share this with others too - please

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Tena Koutou Katoa,

It is “Twenty Ten” and the start of another school year where you have the chance to help shape the future with your wonderful and huge job as a teacher of our young. Perhaps ‘Learning Facilitator’ is more meaningful than Teacher? Hopefully our purpose is close to this, anyway.

So what learning do you plan to facilitate with your students this year? One perspective may be a sense of ‘aliveness’ in the present, and **hope and positivity in the future.** It is all too easy to learn about problems, threats, extinctions, and damage done to the environment (by our generation and those before us), but what a heavy load to place on young shoulders. Who wants to grow up with - “I’m just one small person – I can’t fix all these problems!”

Young people who learn about themselves and ‘their’ environment in a positive way, gain knowledge, skills and appreciation for natural world and our place within it. Caring about somewhere (like the school grounds), having a real way to positively engage with it, developing problem solving skills followed by action - could there be a more useful and powerful way to ‘teach’ and to ‘learn’?

Tēnā rāwā atu koe (Thank you) **Claire, Jo, Karen and Rob**

March Monitoring Month and Koura Kraze – Be in to win great prizes!!

Looking for a fun class activity which supports your delivery of science under the Revised Curriculum? In March and April 2010 we challenge you and your class to become inquiry scientists. Waterways are a great context for teaching the Nature of Science strand in particular - **‘Investigating in Science - Ask questions, find evidence, explore simple models and carry out appropriate investigations to develop simple models'.**

In 2010 we offer a fresh approach you can use to engage with March Monitoring Month. Based on an inquiry science approach we ask children to investigate questions such as 'what habitat conditions are needed to support koura (freshwater crayfish) or 'what makes a stream environment healthy?' or 'should we be concerned about the health of our waterways?'

Involvement in this event gives you the chance to win some cool, fun and sometimes educational prizes thanks to BOC and Read Pacific Ltd.

So check this website for more details. http://www.emap.rsnz.org/events/marchmon/

March 7 – 14. The theme for 2010 is **Fish for the future** (including aqua-farming, over fishing, food/kai, recreation, seabird bycatch & research).

Sea week info – www.seaweek.org.nz

"Fish for the future" is the theme, due to the importance of fishing to thousands of New Zealanders. Whether we fish for sport, food, science, cultural purposes, business or just the enjoyment of getting out on the ocean, there is a widely shared common interest. Seaweek is a fantastic opportunity to promote the critical element of future-proofing that interest by celebrating, exploring, sharing information and learning more about sustainable practices.

There will be three national competitions –

- short stories for younger people
- a photographic competition for older students
- and an adults and a young leaders competition

The fishing movie **"End of the Line"** will be shown throughout NZ during Seaweek. TVNZ 6 is going to show it in two parts as well as provide other special Seaweek coverage. It's a fantastic film so look at for local screenings too.

Check out the **Ministry of Fisheries website** http://www.fish.govt.nz/en-nz/Starfish for lots of resources – here's an example to try.

Te Reo Maori

With a partner create a game that will help you learn the following te reo Maori vocabulary.

koura	crayfish	wheke	octopus	kourangi	krill
mango	shark	patiki	flounder	aihe	dolphin
hokarari	ling	rawaru	blue cod	tohora	whale
mekameka kai	food chain	rahui	to place a ban, an embargo	tamure	snapper
kupara	John Dory fish	tio	oyster	kekeno	seal
ngu	squid	papaka	crab	rimurimu	seaweed
kaimoana	seafood	Tangaroa	God of the Sea	Kina	Sea Urchin / Sea Egg

Seaweek Teaching resources by Department of Conservation

DOC and LEARNZ are giving your class the chance to take a **virtual trip** to Cape Rodney-Okakari Point Marine Reserve from 24-26 February 2010.
LEARNZ field trip teacher, Andrew will help your class explore the marine reserve. During the trip your class will meet marine experts, go snorkelling with the fish living amongst the rocks and kelp forests, ride in a glass bottom boat in the deeper waters of the reserve and watch videos about the rock pool habitats and creatures, waves and wind, the beach and surrounding geology.
Teachers can enrol in virtual filed trips for free. Visit www.learnz.org.nz or call 0800 22 55 53.

On the DOC website - www.doc.govt.nz/getting-involved/for-teachers you'll find lots more such as:

What's the impact? - an education unit that has six activities to help children understand the impact people can have on life in and around the sea. The activities in the unit focus on:

- people living close to the sea
- how seals / kekeno behave and how we can protect them
- the importance of marine reserves
- Protecting our seas - information on marine biodiversity, people pressures, marine reserves, the tools to protect marine areas and how to establish marine protected areas. And more!

Seaweek 2010

Seaweek's theme this year is ***Fish for the future***…Use the links below to tie your Seaweek unit or happenings to curriculum learning areas, key competencies, values and achievement objectives. Seaweek is about celebrating all things in the marine environment, so include the Arts, Technology, Te Reo Maori, Social Science – in fact every subject area!

Subject	Level	Achievement Objectives	Possible activity
Science	1 - 7	Ecology – There are lots of different things in the world & they can be grouped in different ways. Life processes – Recognise that all living things have certain requirements so they can stay alive – some differ from others.	Beach visit – gather items at high tide mark & group (not living shellfish). Rock pool survey – what can you see? What makes them living things? Moving, reacting, feeding, breathing, reproducing, excreting, growing - some are observable. Record findings – make a huge wall mural of the different marine life forms.
	3	Evolution – Grouping, how things have changed over time & recognising NZ's unique marine life forms.	Find out all about whales & dolphins in NZ waters – especially Maui's and Hector's dolphins, and prehistoric marine life forms. Make an underwater shoe-box diorama.
Social Science	1 - 5	The past and places in NZ are important to people. Cultural interactions impact on cultures and societies .	Bring photos of family beach & fishing holidays past and present for discussion. Interview grandparents about how fishing may have changed over the years. Present at assembly (and enter in the Seaweek 2010 Back to the Future competition!)
	3	Understand how groups make & implement laws. Understand how people view & use places differently	Role play using junior fisheries office's badges in pack – size & quota!
Te Reo	All levels	Through all subject areas	Stories of Tangaroa & Maui. Kai moana, rahui (bans), mataitai, taiapure, kaitiakitanga & tapu.
Maori waiata	http://www.waitomocaves.net/index_files/page2maorisongs.htm		
Maths & Stats	1 – 3	Statistics – Gathering, sorting, ordering, displaying, discussing.	Fish species (and compliance with catches) – resources at www.fish.govt.nz/en-nz
The Arts	1 – 3	Dance, drama, music, visual arts –	Create a presentation for assembly – - The rarest dolphin in the world! - The hermit crab's new home! - Secret lives under the surface – stream or sea.
	2	Music & Visual arts – Explore ideas about music. Investigate the purposes of images.	Look, listen & discuss such works as The Blue Danube, Sea Interludes, images by Hokusai & Manet. Make a presentation for assembly during Seaweek. Post on You Tube!
Health & PE	3	Challenges & social & cultural factors – Participate in co-operative & competitive activities.	Students use sea item toys (fish, seahorse, net etc) to invent games based around quota, catch size, marine issues and teach to each other.
Technology	3	Technological modelling	Marine mammals get caught in nets. www.seafoodindustry.co.nz/ seals Research, design, make prototypes of 'escape hatches' or invent other designs which will allow fish to be caught & air-breathing animals to escape.
English	2	Speaking, writing & presenting	Use many text forms to share themed sea messages. Make a display, presentation, film to show others.

DOC Meet the Locals video clips.

Mini-documentaries about New Zealand's unique marine species and habitats.
For more info or to access the downloadable PDF resources go to www.tvnz.co.nz/meetthelocals

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Got ants in your pants, at School or at home?

Do you know what type they are? If they are Argentine or Darwin ants then you have trouble! Both these ant species have been accidently introduced and can cause huge problems.

The threat of Darwin's and Argentine ants

Because of their sheer numbers, appetite and aggressiveness, Darwin and Argentine ants are a major household and garden pest, and they can have a massive negative impact on the natural environment too. These threats include:

- eliminating other species of ants
- competing with native birds for food such as insects, worms and nectar
- competing with lizards, geckos, weta
- displacing and killing other native invertebrates

What do they look like?

- The best way to tell Darwin and Argentine ants from other ants is by their colour and trails. They are small (2-3 mm long) and honey-brown in colour, while most other common household ants in New Zealand are black. Argentine ants are highly active in searching for food and their trails are often five or more ants wide. Unlike most other ants, they climb trees to get to food sources. Often when people start to notice an ant problem around home where there has not been one in the past, it is due to Darwin or Argentine ants "moving in".
- Colonies can be very large and complex, with numbers ranging from just a few dozen through to many thousands and they can have satellite cities too!
- The number of queens in a colony can vary from 1 to several hundred.

You and your class can help stop Darwin and Argentine ants spreading.

It is important to stop the spread of these ants. You can help to ensure that they are not moved around, in particular by:

- checking potted plants for ants before moving
- checking garden soil and bark, and building materials before moving
- checking camping gear, especially when you are moving in and around reserves
- asking your retailer prior to purchasing goods whether they have Argentine ants and if they do, what treatment regime do they have in place to prevent them from spreading?

So teachers how about your class going on an ant hunt? Or set up some traps to see what is living on the schools grounds. If you catch any small brown ants contact Tasman District Council to have them checked out – and don't let them go or spread them around further!

A safe way to trap pesky little ants without poison.

Ingredients:

- 1/4 cup sugar
- 1/4 cup baking yeast
- 1/2 cup molasses
- Small cards

Mix all ingredients together and then smear a thin layer on each of the index cards. Use a rubber spatula to spread the mixture on the cards Place the cards in ant likely positions and wait!

Kia ora koutou,

Welcome back to the start of a new year, one full of opportunities and possibilities!

As many of you know, the Enviroschools Foundation has been working very hard to secure additional sources of funding for the programme. Thankfully they have been successful and the future is looking bright – as well as green! We are really looking forward to seeing some of the new initiatives and developments and sharing them with you in due course.

We are also pleased to welcome Roger Waddell back into the team. Roger has always worked closely with us as part of his EfS role and will be bringing his experience and expertise as an Enviroschools facilitator.

March 20-28 is Enviroschools Action Celebration Week. It's a week where many of the 650+ Enviroschools around the country will be celebrating the fantastic actions they are taking in, about and for the environment. For more information and ideas of ways to get involved please talk to your facilitator. Please also look out for information on the Eco-hut judging and 'prize-giving' event which will be happening that week too (tbc).

Our new Facilitators -

Mariam El Orfi joined the Enviroschools team at the end of last year as the Nelson Facilitator. She has a background in journalism and communications, has experience with school governance and Boards of Trustees and is a mother of three children aged 3, 6 and 8.
Mariam is keen to help Nelson's Enviroschools build on their achievements while also encouraging and supporting new schools into the programme.

Contact Mariam on **– p. 03 548 9706 c. 027 637 2054**
e. mariam@leviathan.co.nz

Kia ora koutou,
My name is Monique Patterson and I'm one of the new Facilitators on the Enviroschools team, working in the Tasman region.
My passion for our environment is a lifetime one sparked as a teenager by inspiring people and places, stimulated as a university student studying Botany, Environmental Science and more recently Environmental Management. I have spent 5 years involved in education through Mountain Valley School, where I worked in a parent-teacher role with a focus on the environmental education programme.
I believe environmental education has a very strong link to increasing our sustainability on a local, national and global scale. Enviroschools all over the country are working towards this and I'm really excited to now be part of this network.
Already in the short space of time I've been in this role I've had the opportunity to see a lot of awesome projects and processes happening in our local schools and kindergartens, had inspiring discussions and met students who are actively involved in decision-making at their school.

I'm looking forward to working with and supporting the Tasman Enviroschools this year.
Monique – Enviroschools facilitator Email: monique_patterson@xtra.co.nz

An Update of Enviroschools in Mohua – Golden Bay

2010 is looking to be a fabulous year for Golden Bay Enviroschools – we are blooming! Collingwood Area School has been on board a few years now and has a Bronze award. In 2009 Golden Bay Kindergarten, Motupipi Primary School and Central Takaka Primary School all came on board with heaps of wonderful things already happening at their schools. At the end of the year Golden Kids Early Learning Centre joined up too and now Takaka Primary is keen! It's wonderful to work with teachers who have so much enthusiasm and care for both the children they teach and the planet. As these children grow up the Golden Bay High School will come on board too I'm sure – led by the children, then it will be all the education centres in the Bay! YAY!

What's black and white and quite unexpected on a pedestrian zebra crossing? A zebra of course!

Zebras will be found walking across various Nelson and Tasman school crossings during the start of the new school term.
They will be there to remind motorists to look for pedestrians at these crossings and to be prepared to stop if necessary
The zebras will be out and about to raise awareness amongst motorists of the need to slow down and pay attention as they approach pedestrian crossings. As well as being extra careful before and after school when large numbers of children use these crossings, drivers need to be aware of pedestrians using the crossings at other times of the day.
Students and families will also be reminded of the importance of using the correct place to safely cross the road outside the school.

The zebras will be out and about at various schools during February so look out for them.
Contact Krista Hobday Road Safety Coordinator at Tasman District Council
Phone - 03 543 8551
Cell - 027 405 6888
Fax - 03 543 9524
Email - krista.hobday@tasman.govt.nz

Funding Opportunity - Zero Waste Grants for Schools

Do you have a great idea that could reduce waste?

Tasman District Council's Zero Waste Grants may be able to help you put it into practice.

Zero Waste Grants are available to help promote waste reduction ideas and projects and/or educate others about the importance of reducing waste. Funding is available to help schools set up projects that reduce the amount of waste they produce such as the purchase of collection bins, compost or worm farm bins or develop educational material on waste minimization. Funding cannot be used for buying plants or gardening equipment.

Contact Mary Curnow at Waste Education Services for further information about the Zero Waste Grant fund or an application form.
The closing date for this round of applications is **Friday 19 Feb 2010.**
Phone 03 545 9176 x 3
Email marycurnow@nec.org.nz

Some useful websites to check out for activities:

http://www.climatechoices.org.uk/pages/activities0.htm

http://www.landcareresearch.co.nz/research/ecosystems/penguins/education.asp

http://globalwarmingkids.net/international/index.html

http://www.aries.mq.edu.au/

http://www.marine-ed.org/bridge/

http://www.biodiversity.govt.nz/

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What a drip!

This is really a lovely compliment as water is **precious!**

In science they call water H2O, but they should call it H2Go – because your body can't work without it. The water you drink affects every part of your body and even your brain is 75% water! It gives you energy, it helps you think, it helps you breath and it even helps you when you're sick. Maybe they should call it H2Wo, as in Wo, that's amazing! Water really is the drink of life.

In New Zealand we have some of the freshest, cleanest and tastiest water coming from the taps in our homes. And that alone makes us one of the luckiest countries on earth! Experts say we need to drink about 6-8 cups per day. So drink up. Have a glass with each meal and drink extra when you're playing sport. Make water your first choice and stay cool.

Water Facts!

- Your body is 66 per cent water
- An elephant's body is 70 per cent water
- You can live for about a month without food, but only a few days without water
- The water you drink now, was the same water on the earth when dinosaurs were
- About a quarter of the world's population doesn't have a safe supply of drinking water
- Bottled water can cost up to 1000 times more than tap water.

Like us Papatuanuku (Earth) has kidneys to help keep the water clean and fresh!

So just to whet your appetite - What is a Wetland?
Wetland is a collective term for permanently and intermittently wet-land, shallow water and water margins. Wetlands may be fresh, brackish or saline and are characterized in their natural state by plants and animals adapted to living in wet conditions.

- Wetlands act like giant sponges. They absorb water during heavy rain or snow melt and release water gradually. This reduces flooding and maintains downstream water flow and ground water (aquifers) levels during periods of low rainfall.
- Wetlands are important for improving water quality. They are able to directly improve other ecosystems by absorbing many impurities that flow into the wetland. Their role is similar to that our kidneys – they both help control water flow and cleanse the system.
- Wetlands support the greatest concentrations of bird life of any habitat in NZ. Wetlands now only make up 2% of NZ's land area but 22% of our bird species can be found in wetlands.
- Wetlands are very productive environments supporting a diversity of species. An enormous range of plants inhabit wetlands and a number of NZ's endangered plant species are totally dependent on wetlands for their survival.

Use the following activity with your class to start researching more about this often undervalued part of our environment.

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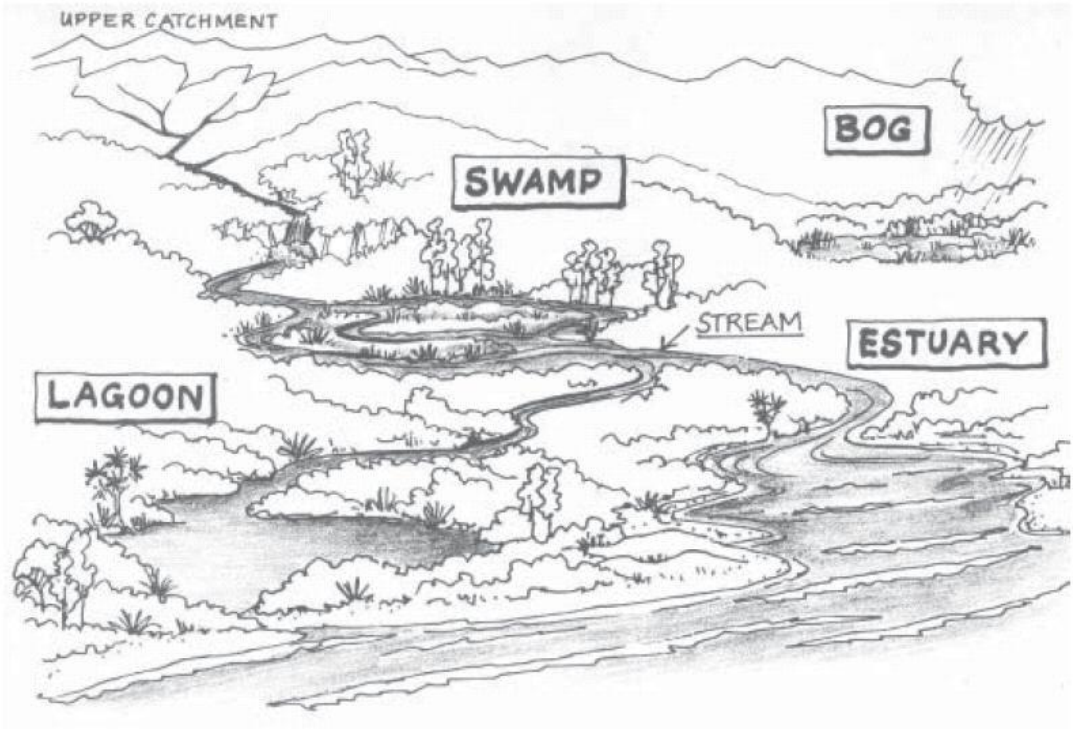
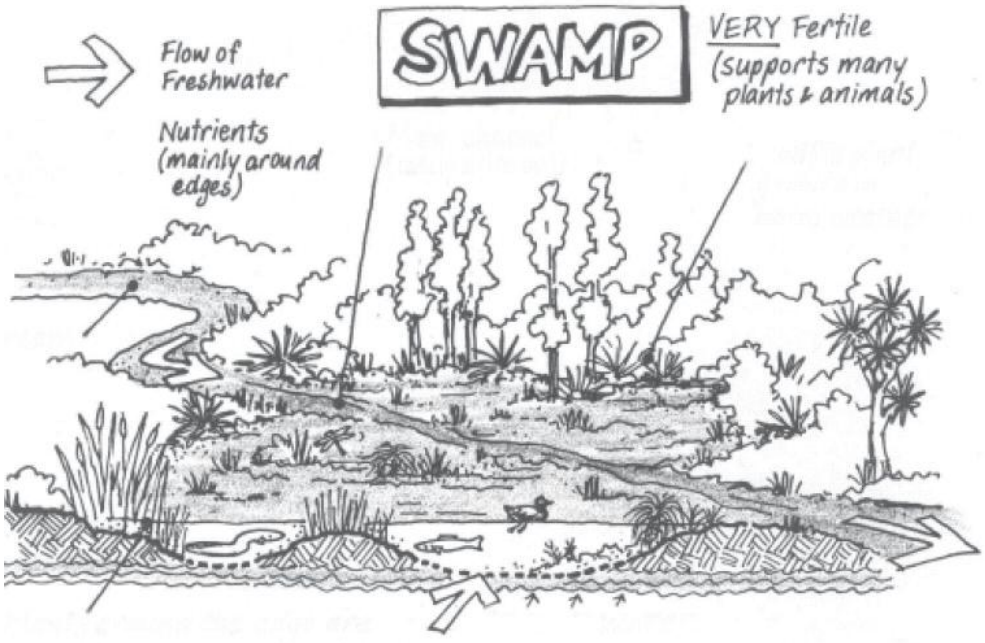
Activity one: what is a Wetland? Here is a general sketch of a wetland:



There are often different parts or types of wetland – can you name the features of each type?

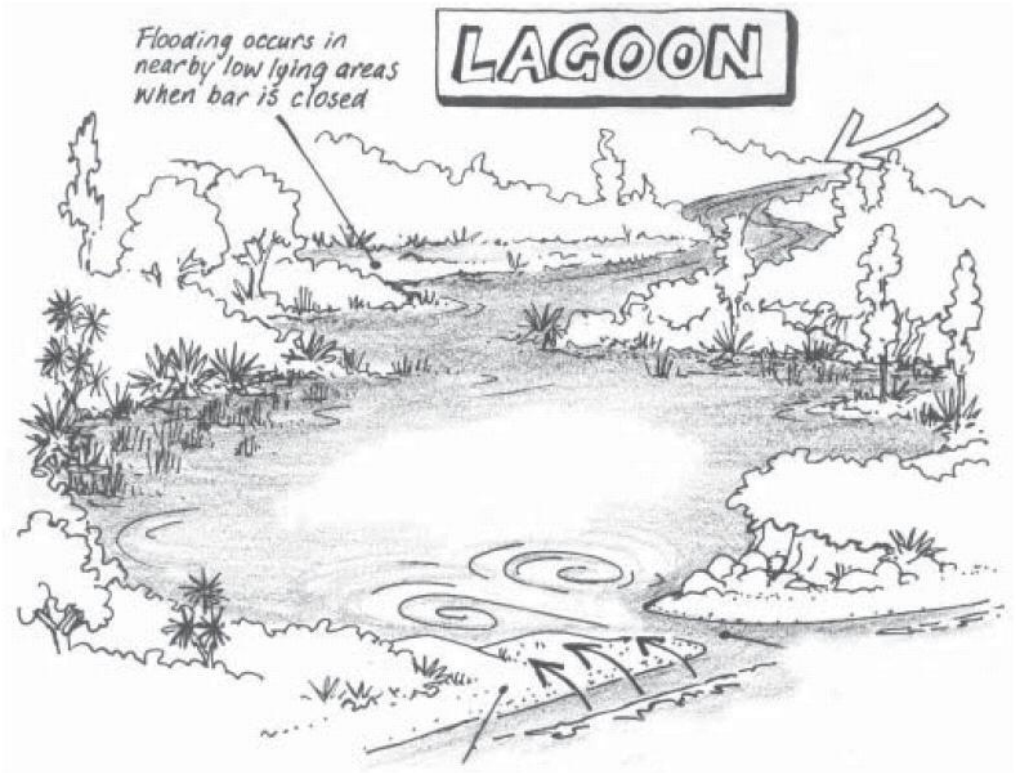


Here is a Swamp – cut out these labels and place them on the diagram where you think they best fit – (some have arrows waiting for you to use).

Prolific plant growth in warm weather	Main channel (rarely dries out)	Plants around the edge are good hiding places for wildlife
Stream	Groundwater	

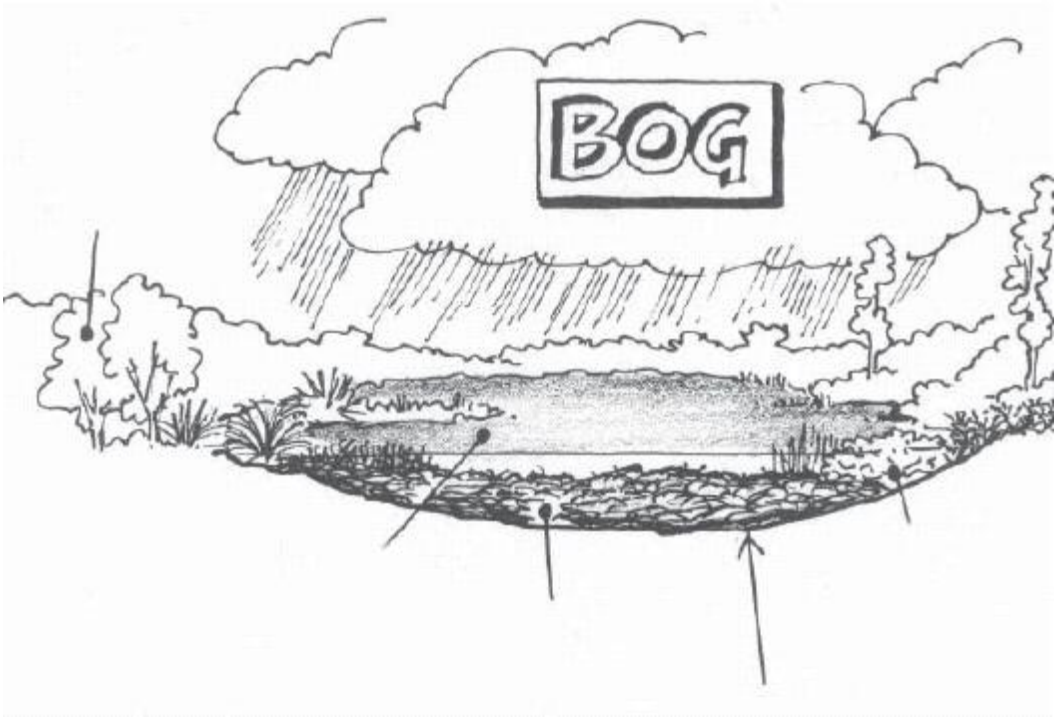
Here is an Estuary – cut out these labels and place them on the diagram where you think they best fit – (some have arrows waiting for you to use).

Spawning sites for whitebait	Mixture of fresh and salt water	Mudflats (covered at high tide)
Sand dunes	Freshwater	Saltwater
Main channel	Salt marsh	



Here is a Lagoon – cut out these labels and place them on the diagram where you think they best fit – (some have arrows waiting for you to use).

Bar (sometimes closes off)	Waves wash over in storms	Mainly fresh water (but salt water sometimes washes in)
Salt water	Barrier beach	Fresh water flow



Here is a Bog – cut out these labels and place them on the diagram where you think they best fit – (some have arrows waiting for you to use).

Spongy peat soil	Acidic water (few nutrients)	Sphagnum moss & other specialised plants
Basin	Manuka on edges	Rain fed only

This activity is part of a teacher resource from the DOC website http://www.doc.govt.nz/getting-involved/for-teachers/field-trip-resources/field-trips-by-region/west-coast/west-coast-wetlands/teaching-resource/ that is easily adapted to the Nelson/Tasman region.

Activity 2:

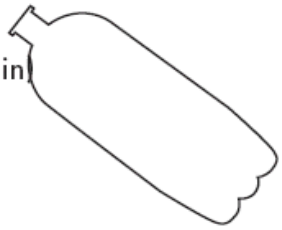
How to Measure Precipitation

Precipitation (pre - sip - uh - tay - shun) is just a big word used to describe water falling from the air. Rain, snow, hail, and sleet are all precipitation.

Meteorologists measure precipitation using something called a rain gauge. You can make your own rain gauge - here's how.

What You Need

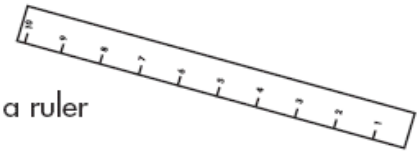
1. a 2 litre plastic bottle (the kind you get pop in)



2. scissors

3. a non-toxic marker

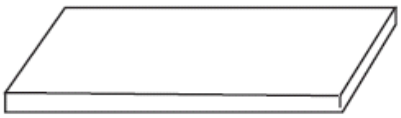
4. a ruler



5. one screw

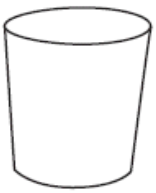
6. a screw driver

7. a scrap piece of wood (about 20 cm by 20 cm)



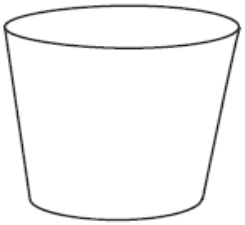
8. some tape

9. a see-through container that is the same size around as your rain gauge (plastic pop bottle). This will be your measuring container.



10. a strip of scrap paper that is the same height as your see-through measuring container

11. a large plastic container that is big enough for your pop bottle to fit in



www.ecokids.earthday.ca

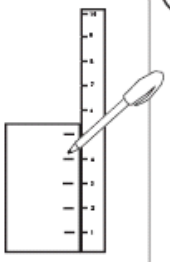
How to Measure Precipitation

How to Make Your Rain Gauge

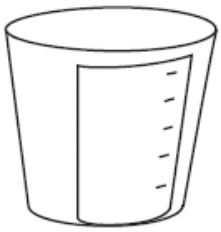
1. Cut the top off of the plastic bottle about 1/3 of the way down. The bottom part should be longer than the top part of the bottle. Make sure you ask permission from an adult. Scissors are sharp and plastic can be hard to cut; you may need an adult to help you.

2. Turn the top part of the bottle upside down and stick it in the bottom part. The top part is now a funnel.

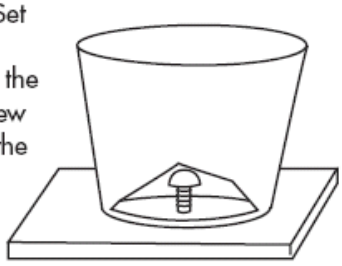
3. Set your ruler and strip of paper beside each other on a flat surface. Make sure the edge of the paper is right against the ruler and the bottom of the strip of paper is even with the bottom of the ruler. Use your marker to mark off every 0.5 cm.



4. Tape the strip of paper onto your clear container so that the bottom of the paper is at the bottom of your container. You will use this to measure the amount of water collected.



5. Ask an adult to help you with this step. Set the large plastic container on top of the piece of wood. Screw the container onto the piece of wood.



6. Find a spot outside that is not near any trees or buildings to put the container that you attached to the piece of wood. If it is in a windy spot put a rock (or something heavy) in the bottom so that it will not blow over. Set your rain gauge inside the container.