

Mokoia School

Mokoia School is a small school that has a big environmental heart. All the children learn about the environment through taking part in environmental activities such as germinating seeds, taking cuttings and planting trees and shrubs to beautify their school environment. The school also has a small worm farm and recycles as much of their other rubbish as possible, and has a vegetable garden.



Children from Mokoia School with one of the gardens they planted.

The school's environment group meet every Friday to learn about the environment, take field-trips to interesting environmental sites and learn environmental skills. The activities the children take part in relate to specific curriculum objectives showing how easy it is to link environmental education to the New Zealand curriculum. The children are proud of their environmental achievements and humble about the range of environmental skills they have.

Waterwatch Australia visit Taranaki Regional Council



Paul Radich and Waterwatch visitors, sampling the Patea River.

A day out with the Taranaki Regional Council was part of Waterwatch Australia's visit to New Zealand to share water monitoring experiences. Our three visitors spent some time observing and working with Pembroke School children at the Taranaki Regional Council laboratory and in the Patea River. Waterwatch is big in Australia with around 50 000 people making up 1800 groups around the country (about 70% of these are school groups). Our visitors were complimentary of the Council's schools programme, seeing similarities with Australian Waterwatch programmes.

Hectors Dolphin

(*Cephalorhynchus hectori*)



Hectors dolphin is one of the world's smallest (weighing only 40-50kg) and rarest species of dolphin. Hectors dolphins are only found in New Zealand coastal waters and river mouths. They number around 3000 to 4000 and mainly live along the west coast of the South Island.

Hectors dolphins live close to land, which means humans can have great impact on them. Water pollution may make them more susceptible to disease and less fertile. Set fishing nets sometimes catch the dolphins by accident, and this also decreases the numbers. From 1984-1988 a total of 230 were killed in gillnets between Christchurch and Timaru.

In the North Island Hectors dolphins are

quite different to the South Island variety and are almost regarded as a separate sub-species. The North Island population is critically endangered and estimated to number only 100. There is an urgent need to protect Hectors dolphins as they could become extinct in 50 years. We can do our bit by not polluting waterways on land or at sea; and making sure we keep litter out of the sea. Dolphins are playful creatures and can get entangled in rubbish such as old nets, plastic packaging etc.

To find out more about Hectors dolphin check out the Whale and Dolphin Trust web page

(<http://ralenti.co.nz/topics/nzwhale.html>).

Answers from page 3 - Match up

- 1 ■ Volcano
- 2 ■ Hillcountry
- 3 ■ Ringplain
- 4 ■ Coastline



Bits'n'Pieces

NPBHS visit to Taranaki Regional Council

The energy exploration and dairy industries were the focus for 5th form geography classes at New Plymouth Boys' High School. For their field trips they visited farms and exploration and production sites. The students also visited the Taranaki Regional Council to check how these industries can affect the environment and how wise environmental practices can contribute to sustaining these resources for future generations. The students gained a lot of information to help them with their studies and make them environmentally sound future resource users. Congratulations to the Boys' High teachers for including an environmental component to their study.

Taranaki wetlands are valuable

To mark World Wetlands Day on 2 February, the Council launched the booklet *Wetlands of Taranaki*. Wetlands are special ecosystems and this booklet highlights the individual efforts of landowners, and the measures taken by Council, to protect and enhance Taranaki's wetlands. A copy should now be available in your school library.

A parting message from Paul

As you may have guessed, I have left the world of environmental education to re-enter mainstream education.

The last three years have been very satisfying for me and I have been delighted with the acceptance of environmental education by Taranaki's education fraternity. I would like to thank you all for allowing me to have input to the education of the children in your care. I have been proud to represent the Taranaki Regional Council in increasing environmental knowledge and skills and promoting positive environmental actions, attitudes and values. I have also been proud of my fellow education professionals. To meet and work with so many highly -skilled, dedicated teachers has been rewarding.

It is very pleasing to 'hand over the reins' to Graeme Phillips. Many of you will know Graeme and be aware of his many skills as an educator and trainer. Graeme will take environmental education to new heights in the region and I wish him every success.

Ka kite ano e hoa ma
Paul Radich

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TARANAKI REGIONAL COUNCIL
NEWSLETTER TO SCHOOLS

Kia ora kātoa

Welcome to the new millennium and with it a new editor of S.I.T.E.

My name is Graeme Phillips and I am thrilled to introduce myself in my role of Information Officer (Environmental Education) representing the Taranaki Regional Council. I was formerly employed by Massey University in the Teacher Support Service as an Adviser to Schools in Health and Physical Education.

I consider myself lucky in that I will continue to be able to work with all those associated with education in the Taranaki region, but with a slightly revised brief and emphasis.

I am also fortunate in that I succeed someone of Paul Radich's respect and standing. I am sure you all join me in wishing Paul all the best in his new role of Deputy Principal at St Joseph's School in Stratford and to sincerely thank him for his contribution to the environmental education fraternity over the last four years. In continuing the programme established by Paul, I hope that I can bring new skills and strengths to this position, that will enable teachers to highlight Environmental Education within the Taranaki community.

My objectives for this position are to:

- promote environmental education to schools
- develop resources and units of learning to support natural resource education
- provide training/information/opportunities to upskill teachers, to enable them to deliver their own environmental education programmes.

If you would like assistance with planning, preparing or delivering any aspects of environmental education or would like your class to visit the facilities at the Regional Council please don't hesitate to contact me and discuss your needs.

I look forward with great anticipation towards working alongside you all in the near future. I am only as far away as the telephone/fax.

Ka kite ano
Graeme Phillips



Schools in the Environment - Summer 2000 - No.12

The Taranaki Environment

This newsletter is all about the Taranaki environment. It looks at its special features, some of the environmental issues and how we can contribute to taking care

of the environment for future generations. The environment is a great place to learn through integrating a number of curriculum areas.

Environmental Education on the Mountain

The mountain proved a popular place to learn about the environment throughout term 4. As usual, many classes either camped on the mountain or participated in day trips to experience the beauty, views, and natural environment. The mountain's pristine surroundings provide a great venue for learning about the environment. Being on the mountain also inspires positive thoughts about the environment, and encourages environmentally responsible behaviour.

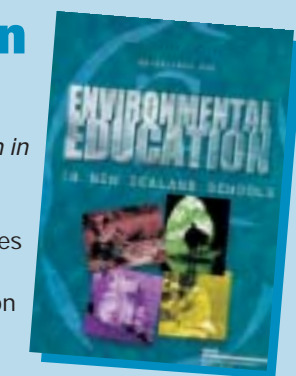


Students discover the abundant insect life in a mountain stream.

As the headwaters of many of our important rivers originate on the mountain and water is at its best quality, most studies focused on freshwater resources. Other studies included looking at native trees in their natural environment.

Environmental Education Guidelines for schools

Yes it's here at last! *Guidelines for Environmental Education in New Zealand Schools* should now be at your school. The guidelines will help teachers integrate environmental education into their programmes by identifying opportunities for environmental education. This is a very significant document to support and promote environmental education in schools. The Ministry of Education is planning training initiatives to support this document.



Taranaki's Environment

Taranaki, with about 3% of New Zealand's land area and population, has a spectacular and unique environment with sparkling fresh water running in hundreds of rivers and streams, a wild west coast marine environment, some of the flattest fertile land combined with rugged hill country and clean fresh air. To top it all off, there's a mountain, that has its own spectacular environment and contributes to the make-up of most of the region.

This page examines that special environment and some of the environmental issues which are part of meeting the challenge of sustaining the environment into the new millennium.



Freshwater

Taranaki's freshwater environment is unique, with the rivers on the ring plain radiating off the mountain. The mountain ensures a steady supply of water to the region and releases it slowly when we need it most.

Our freshwater is a source of wealth to our region and we have plenty of it. Our freshwater is used for farms and factories, our homes and for recreation, and is a home for fish and other life.



Issues

With around 3000 dairy farms and many other industries using water from our rivers and discharging to rivers, allocation and water quality must be closely monitored.

We must use our water wisely. Sometimes the use of water needs to be controlled to ensure that there is enough for everybody's needs, including recreation, and that the quality is not spoiled by any pollution of the water or the land around it. We also need to think about the water below the surface (groundwater) and protecting our valuable remaining wetlands, many of which have disappeared with the development of towns and farms.

Air



Issues

Air pollution can occur from industries discharging to air, spraying agrichemicals, vehicles burning and flare-offs at energy sites. Locally we can cause air pollution by burning indoor and outdoor fires inappropriately and not considering our neighbours.

One area where Taranaki doesn't do so well is our greenhouse gas emissions which contribute to global warming. Because Taranaki has petrochemical industries (including power stations) producing CO₂, and a large number of farm animals (producing a greenhouse gas called methane) we produce a lot of greenhouse gas. On the positive side our heavily vegetated areas help counter this by absorbing CO₂.

Land

Taranaki has a variety of landforms including the circular plain surrounding the mountain, known as the volcanic ringplain. In the east we have some steep hill country formed by various geological processes. There are also wave-cut coastal terraces in the north and south of the region.

Issues

Soil erosion is an issue for us in Taranaki, especially in the east where some of our steeper land has lost its vegetation cover. This has led to some loss of soil. The soil makes its way into rivers and silts them up.



Overuse of soil and overloading the soil with fertilisers and wastes can also spoil it for the future. There are also concerns from natural hazards such as flooding, earthquakes and volcanic activity.

The other significant threat to our land comes from animal and plant pests which have been introduced to our land. These pests have lessened the productivity of our land and pose a threat to the livelihood of our farmers, as well as having a disastrous effect on our native birds and plants.

Coast

Taranaki's 295 kilometres of coast provides fantastic recreational and scenic areas and is a great natural resource.

Our coast has hundreds of rivers and streams running into it, draining volcanic and hill country land. It is a place where people holiday, fish and collect kaimoana, farm and move products in and out of the country.

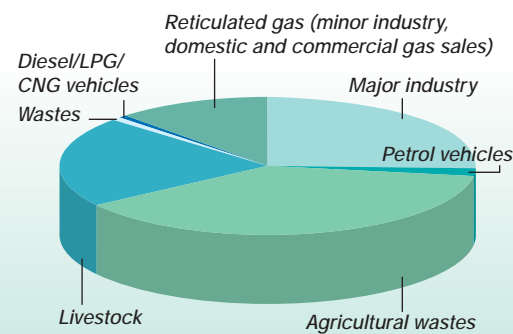
Issues

One of the main issues facing Taranaki's coast is erosion with properties being threatened through natural and human induced erosion.



Generally the quality of our coastal water is high as there are very few discharges to sea from our communities or industries. Taranaki's coast has considerable natural character with estuaries, islands and special habitats that we need to protect for the future.

Taranaki Greenhouse Gas Emissions



Junior Environmentalists Page

Beach clean-up



Every year birds, seals, whales, dolphins and fish die needlessly because people throw rubbish into the sea or leave it on the beach. Rubbish also makes its way to the sea through rivers which drain the land.

On a recent beach clean-up Carealot School found the following items:

Item found	quantity
Cigarette butts	86
Plastic pieces	74
Polystyrene pieces	60
Plastic food bags	27
Paper pieces	92
Glass pieces	14
Plastic caps and lids	35
Drink cans	42
Plastic straws	16
Glass drink bottles	36
Polystyrene cups	6
Plastic drink bottles	53

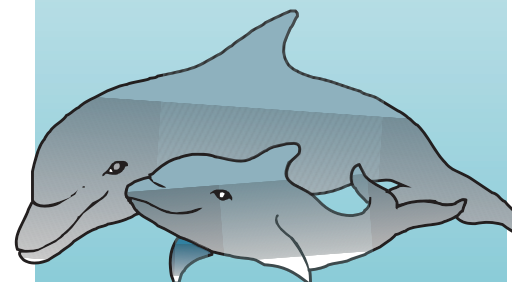
Create a bar graph to show the amounts of rubbish they collected.

Seaweed

2000 11-19 March

Start planning now for Seaweed 2000. Seaweed is a great time to focus on our coastal and marine environment. Schools can expect to receive a Seaweed poster, a poster about Hector's Dolphins and an updated periwinkles kit. Look out for these resources and plan to include Seaweed activities in your term's programme.

Hector's dolphin story on page 4



I	S	S	U	E	S	O	N	R	D
R	W	T	N	L	S	N	I	S	N
C	O	A	S	T	T	A	A	I	A
O	H	R	N	P	S	C	T	N	L
U	I	A	I	M	E	L	N	O	T
N	L	N	R	V	P	O	U	I	E
T	L	A	H	G	E	V	O	S	W
R	F	K	N	F	C	R	M	O	B
Y	L	I	N	D	U	S	T	R	Y
F	R	E	S	H	W	A	T	E	R

Word find

Here are 16 words written forward, up, down and diagonally, see if you can find them.

volcano	freshwater
coast	wetland
air	industry
land	farms
erosion	mountain
Taranaki	pests
hill	issues
country	river

Working for the environment

Match these activities with the part of the environment they will effect. The first one has been done for you.

1. Planting trees

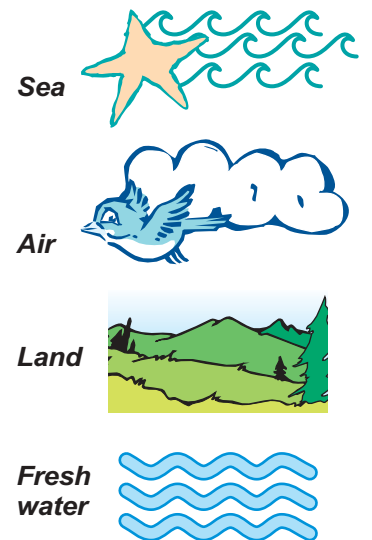
2. Beach clean-up

3. Recycling

4. Planting at the beach

5. River monitoring

6. Possum control



MATCH UP

Locate and name these four geographical features.

