

Composting at Toko School

Toko School has been involved in a unit of work based around recycling. As a result of learning about the importance of recycling the School Council has 'driven' a project to recycle as much school waste as possible.

The School Council has recycled paper, gathered and recycled aluminium cans and their latest venture has been to set up a workable composting system.

The School Council invited our Education Officer to source some information and assist in the project. They put together some excellent compost bins with materials gathered from various sources.



Toko School Council children prepare to build their compost heap as part of their recycling programme.

The compost pile was begun with leaves and grass clippings, added to this will be selected food scraps, paper towels, tea bags and coffee grounds from the staff room, wood shavings, chicken manure, hay, vacuum cleaner dust, egg shells and wood ash.

Congratulations Toko School Council on taking this environmentally friendly initiative.

This is a good example of how our Education Officer can be used to assist with environmental education.



Environmental Awards

The Taranaki Regional Council wishes to recognise individuals and organisations who have contributed towards protecting or enhancing the Taranaki environment. There are annual presentations with nominations closing 30 December each year. There is a category for **schools** and in previous years awards have been presented for studies on environmental issues, beach clean ups and riparian (streambank) plantings. If your school is involved in any environmentally responsible activity, for example you may be involved in a recycling programme, apply for an award.

Application forms are available from the Information Officer at the Taranaki Regional Council.



Taranaki Eruption Primary and Secondary Resource Kits

These kits promote the Egmont Volcanic Contingency Plan, through the social studies, science and technology curriculum.

Contents provide suggested studies, activities and achievement objectives. Your school has a kit.

For further information contact:

Taranaki Regional Council, Civil Defence Education and Training Officer

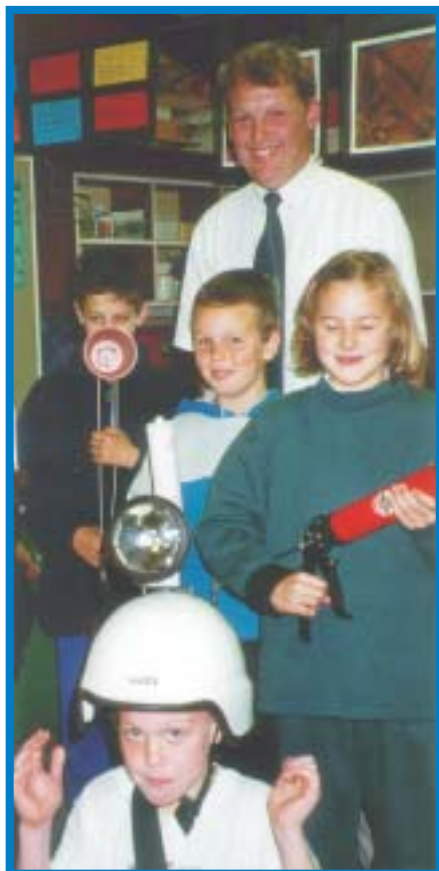
Ph: 06 758 1110 Fax: 06 757 8019

Answers to Word Puzzle on page 3: ACROSS: 1-Ocean, 2-Sun, 3-Civil, 4-Hilda, 5-Front, 6-Cyclones, 7-Ozone, 8-Storm, 9-Forecast, 10-Wind, 11-Pollution DOWN: 1-Environment.

Answers to Hydrological Cycle: Sun - rā, Evaporation - Whakaetotanga, Sea - moana, Rivers - awa, Smoke - pawa, Moon - marama, Rainbow - āniwaniwa, Bush - ngahere, Snow - hukarere, Trees - rākau, Wind - hau, Atmosphere above earth - rangi, Rain - ua.

Possum Busters in Town

Animal Pest Management Officers from the Taranaki Regional Council visited Frankley School recently. A reading group in Room 6 had been studying possums and faxed through some questions for our possum people. The questions were answered and a visit was arranged by their teacher Susan Warren. The children learnt about the various methods of possum control, comparing strategies and found out many of the reasons for keeping possum numbers low.



TRC Possum Control Officer Steve Ellis with children from Room 6 Frankley School studying possum control.

NEXT S.I.T.E.

The next issue of S.I.T.E. will arrive at schools early in Term 4. The focus will be the coast, dealing with coastal issues, monitoring sea life and pollution control. This may appeal to classes who are considering a seashore study. You may wish to include this in your long term plan for Term 4. If you have any ideas please forward them to Paul.

Paul Radich - Education Officer
Taranaki Regional Council

Ph: 06 765 7127
Fax: 06 765 5097



TARANAKI REGIONAL COUNCIL
NEWSLETTER TO SCHOOLS

The formal education sector, particularly primary and secondary school levels, is central to developing environmental awareness and attitudes that will encourage environmentally responsible behaviour.

The above statement is taken from Environment 2010 Strategy; a government document which established a goal of 'encouraging environmentally responsible behaviour and informed participation in decision making by promoting environmental education throughout the community'.

Although there is no formal curriculum for environmental education, the existing curriculum documents do make mention of environmental care and state a number of objectives which link with environmental education. These apply largely to the science and social studies curriculum statements but also apply to Technology and Maths.

The promotion of environmental education relies heavily on interested motivated teachers, who see the benefit in helping the children in their care to understand environmental issues and participate in environmentally sustainable activities.

Welcome to the second issue of S.I.T.E.

A big thank you to those people who have provided positive feedback on the value of this newsletter and environmental education in general. I have received faxes, letters and a good deal of verbal messages of support. It appears that the public value the Taranaki environment and are keen to preserve this for future generations through educating the young. I have enjoyed responding to teacher requests and working with children and teachers on environmental projects.

If you are embarking on a study that has an environmental component, please don't hesitate to call for assistance. I can source the resources we need and we can work through the project together.

Paul Radich.

S.I.T.E.

Schools in the Environment - Winter 1997 - No.2

Winner of the S.I.T.E. poster/writing competition

The River

- Shallow rivers
- Deep rivers
- Foggy fat muddy rivers
- Sandy slow long rivers
- Those are just a few
- Nice rivers
- Wide rivers
- Warm and friendly rivers
- Stony rivers, wavy rivers
- Dangerous rivers too
- Salty rivers
- Mossy rivers
- Don't forget the fresh rivers
- Last of all best of all
- We like clean rivers
- How about you



Paul Radich presenting Telina Hare with her certificate for first place in the S.I.T.E. poster/writing competition.

Room 12 children from Welbourn School studied the river by requesting a visit from our education officer. They learnt about the importance of rivers and the need to preserve rivers. They were surprised to learn how many types of animals live in the river and decided to enter the competition.

All the entries were of a high quality and the winner was Telina Hare with her poem entry titled The River. Congratulations to Telina who received a book voucher and an environmental encyclopedia for the school. All entrants from the class received a chocolate fish for their efforts.

Weather - focus for a winter newsletter

With the winter season well under way it seems an appropriate time to study weather. This newsletter will focus on weather with particular emphasis on the Taranaki scene. We will look at some of the Council functions regarding weather and some of the people who are involved. Also there are a number of activities for children on our junior environmentalists page.

Weather Unit

- For a more comprehensive study of the weather
- Variety of activities aimed at level 2-4 children
- Written by our Education Officer and

Studying weather - like a visit?

Would your class like to visit the Council for a weather related lesson? There is a teaching space within our display room where children can learn about Taranaki weather and weather issues. Our environmental education officer will facilitate the lesson which will cover areas such as global warming, ozone depletion, the threat of floods, weather monitoring and civil defence. Alternatively our Education Officer can visit any school within the Taranaki Region and bring his lesson to you.

To arrange a visit telephone the Taranaki Regional Council and ask for Paul Radich. Ph: 06 765 7127

Working with the weather

Grant Best - Hydrologist

(Hydrology is the study of the distribution and use of water)

What is the nature of your work?

I collect hydrological data for water resource consents and monitor rivers to warn people in areas prone to flooding.

How do you do this?

We have a network of data collecting technology located at a number of sites around the region. These include sensors which measure wind direction and speed, river level and flow, and water temperature. Much of this information is sent to a computer at the Taranaki Regional Council

so I can see what's happening all over the region at the push of a few keys. Monitors on some rivers page me when water levels reach certain critical levels.

What is the most interesting aspect of your work?

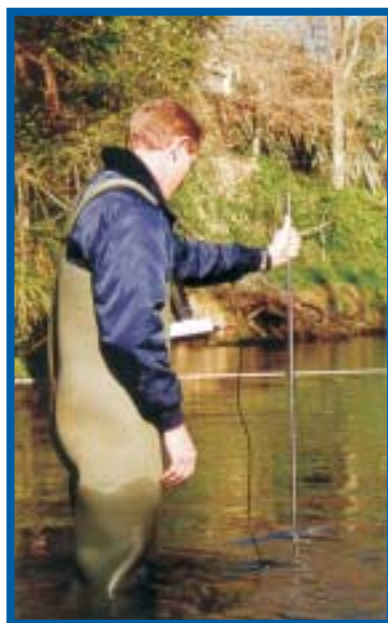
Flood monitoring and warning is always an exciting time. When there is heavy rainfall predicted we receive a special weather bulletin (SWB). We then take into consideration such things as ground saturation, river levels, and wind direction and decide who should be warned including Civil Defence, District Councils, emergency services, Federated Farmers and radio stations.

What was the most significant event you were involved in?

Cyclone Hilda in March of 1990. There was heavy flooding in Taranaki and I spent most of the day and night watching the Waitara river and sending information back to base and CD. That was a big event and some of the heaviest rainfall and flooding we have experienced since our records began in the mid-70s and certainly one of the major events of the century.

What can people in flood prone areas do?

People can learn to read weather maps so they know how much rainfall to expect and listen for heavy rain warnings over the radio. Some people may be interested in carrying out their own rainfall and wind direction and speed monitoring.



Grant Best gauging the flow of a river.

Read the inside back cover of the telephone book or contact Civil Defence for information on how to prepare.

Sarah Heveldt - Air Quality Scientist

What is the nature of your work?

I monitor the discharges to air from industries around the region, ensuring that they stay within limits set by Regional Council.

I also respond to complaints from the public about air pollution, such as odour, dust, smoke. I must respond to all complaints within 3 hours.

How does weather relate to your work?

Wind has an effect on my work. When there is wind around, the pollution is dispersed and doesn't create a problem. But when there is little or no wind, pollution can stay around. Sometimes when an industry is in a valley, and its smoke rises to meet a layer of cold air, it causes a mist which can be like a thick smog.

What has been your most interesting work?

When Mt Ruapehu erupted I was busy monitoring effects of ash and gas from the mountain on the region. I had to visit three sites around Taranaki with my equipment and report to Civil Defence. The information I gathered helped establish the no fly zones for aircraft, which were given out each day of the eruption.

What are some ways we can improve air quality?

We can improve air quality by using fires that burn fuel efficiently and not burning plastics and other rubbish which isn't suitable eg coated cardboard (milk carton), damp wood, textiles (like carpet) and clothing. Use aerosols that are CFC free. Use less petrol by car pooling, using public transport, and compost and recycle more.



Air Quality Scientist Sarah Heveldt at work.



John Hymers - Civil Defence

As a member of the Civil Defence I respond to emergency situations such as floods and storms. I help activate Civil Defence staff and monitor an event, and provide information which may lead to a state of emergency being declared. I sometimes help the community directly involved with rescues or sandbagging. It is the responsibility of Civil Defence to plan for and help co-ordinate a response to an event.

What are some of the weather related emergencies we face here in Taranaki?

Storms can cause problems. High winds during a storm can cause serious damage. We have people all over Taranaki who we contact to see how the conditions are in their area. These people are vital in giving us an overall picture of the extent of the event.

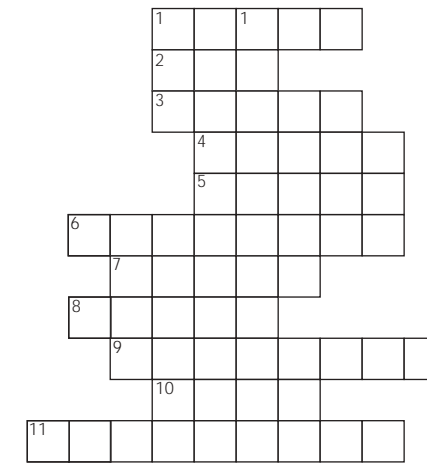
Heavy rain is also a problem and we monitor this through the Council hydrological network and local people who we contact.

Tornadoes pop through on occasions without warning. We have a supply of 400 tarpaulins on standby, ready to send out in emergencies if people lose a roof or a side of their house.

Another event is a storm surge which occurs with the occurrence of a cyclone. The combination of high tide and low barometric pressure causes the sea level to rise. This happened recently during cyclone Drena, causing damage to some areas of the coast.



Junior Environmentalists Page



ACROSS

- Another name for the sea.
- The source of energy.
- Defence helps in an emergency.
- A cyclone which brought floods to Taranaki.
- A weather feature often bringing rain.
- These often originate in the tropics.
- A gas protecting us from UV rays.
- A period of weather with wind and rain.
- A prediction of weather to come.
- A major source of moving air.
- Can lead to poor air quality.

DOWN

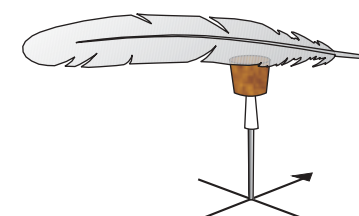
- The weather has a major influence on this.

Answers on bottom of page 4

Making a Weather Vane

A weather vane tells you what direction the wind is blowing.

Take a piece of wood, draw diagonal lines to find the centre and colour with 4 colours. Put north, south, east, west on the appropriate sides (use a direction compass to help you). Hammer a nail into the centre of the wood. Place a pen cap on the nail and stick a cork on top. Hot glue a feather onto the cork. Take the weather vane outside and hold it up high.

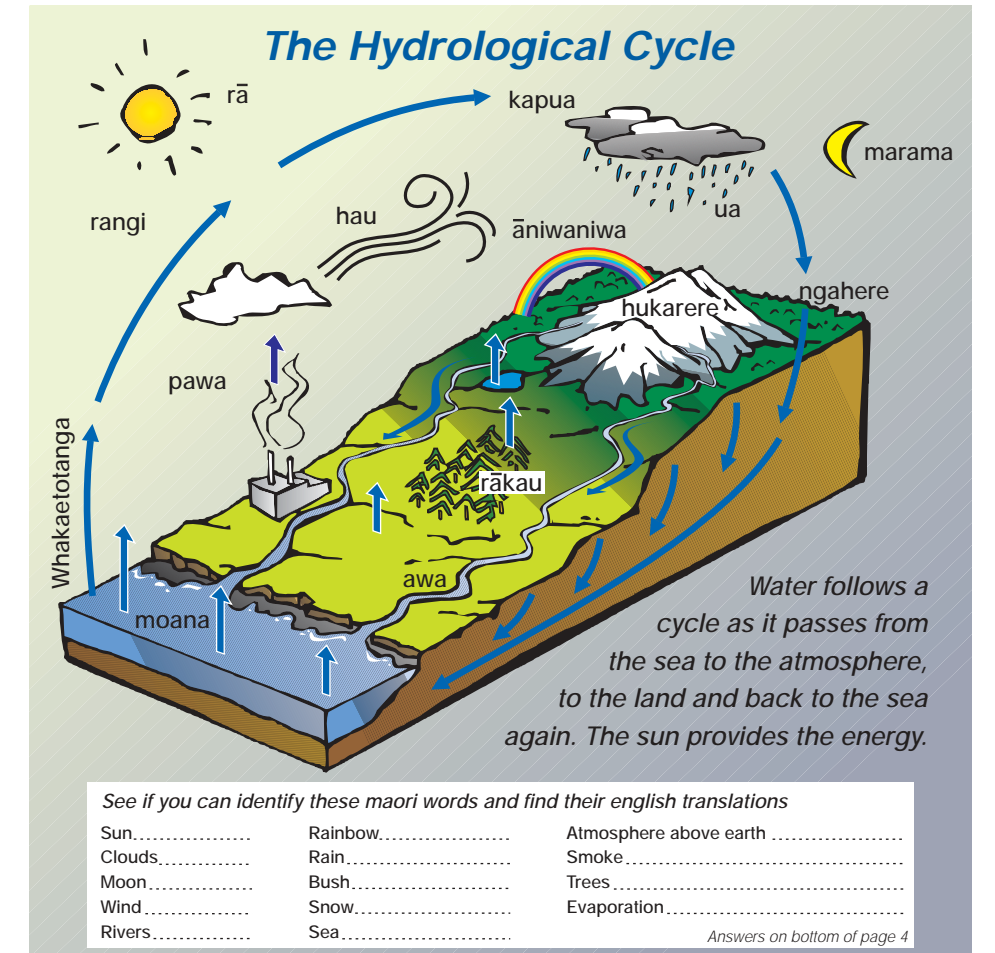


If the feather is pointing to the east it means the wind is coming from the east.

Taranaki is a significant sink for CO2 absorption, having the National Park, grassland and regenerating bush, Taranaki has reduced CO2 emission by around 15% over the last 3 years.



Releasing greenhouse gases by burning fossil fuels, rainforest destruction and methane emitted from animals, or paddy fields contributes to global warming by not allowing heat to exit our atmosphere so easily.



Ozone depletion occurs at a high level allowing harmful U.V. rays to penetrate to the earth's surface more readily. CFC gases used in some aerosols, air conditioning units or fire extinguishers deplete the ozone layer.

Mountain fed rivers may rise rapidly; for example the Manganui River has risen by 2.6m in 15 minutes.

A 'dry spell' is a period of at least 15 consecutive days with 1.0mm or less of rain each day. The longest 'dry spell' in the New Plymouth area lasted 45 days from 31 December 1927 to 13 February 1928.

Location	Altitude (m)	Average rainfall (mm)
North Egmont	955	7000
Dawson Falls	945	5877
Strfd Mt. House	846	6370
Stratford	311	2019
Pohokura Saddle	300	1822
Egmont Village	198	1963
Inglewood	195	2317
Eltham	183	1550
Hawera	105	1173
Huatoki N.P.	70	1548
Patea	42	1159
N.P. Airport	30	1529
Opunake	27	1239
Cape Egmont	08	1425