



Teacher Inservice Training Day

During the last term holidays sixteen local primary and secondary teachers participated in a 'Terrific Trees' workshop. The day looked at the significant part that trees play in sustaining our environment. Expert input was provided by the Taranaki Regional Council Land Management Officers. Visits to the TRC Pole Nursery and the Atawhai Nursery in New Plymouth provided the attendees with practical knowledge and expertise. A feature was a visit to Moturoa School where Deputy Principal Bill Clarkson hosted us on a visit to the school propagation unit where we saw results of the children's efforts in taking cutting for later planting in the school gardens.



Teachers



Science Fair winners

Once again this year the Taranaki Regional Council Environmental Award was shared by two entrants. Cynthia Cook and Natasha Bright from Opunake High School constructed an electronic rubbish bin, which thanked people who deposited rubbish in it. This award also was chosen as runner-up at the Fair.

Cadina Rea from St Mary's Diocesan School shared the award with her biological examination of the Punawhakakau Stream near Urenui. Her work compared the conditions of this stream with the Patea River near Barclay Road in Stratford. Her project also featured highly, winning two other sections.



Cynthia Cook and Natasha Bright.



Cadina Rea.

Black Trakka



TRC hosted a visit recently by Warren Agnew who has developed an interesting method for surveying the nighttime rodent visitors to school grounds. I have a number of these trackers available for schools to borrow. Ideally the Trakka should identify if pests such as rats, ferrets, stoats etc are present in your school grounds. As these pests prey on birds' eggs they can do considerable damage to our native species. The Trakka will warn of the presence of these pests and steps could then be undertaken to eradicate them.

Bits'n'Pieces

Scholarship website

In a joint venture with New Plymouth District Council the Taranaki Regional Council has attached a link to all local council websites. Senior students should find getting access to data about tertiary scholarships easier to manage. Details are:

Black trakka

Room 3 pupils and teacher Robyn Hutchinson visited the Dawson Falls area of Mount Taranaki/Egmont recently. The visit was an ending to a study of volcanoes and included viewing an ancient lava flow remnant. The pupils demonstrated considerable knowledge and interest in the history of our mountain.



TARANAKI REGIONAL COUNCIL
NEWSLETTER TO SCHOOLS

The Taranaki Science and Technology brought home to me the diverse talents that today's students have. The Taranaki Regional Council sponsors an environmental award and it's our responsibility to decide on the recipients (see back page). Deciding on the winning award meant looking at all the exhibits in the fair to identify those with an environmental theme and then choosing the winning entry. The huge range of topics, methods of presentation, and supporting data impressed me. I offer my congratulations to all the teachers, students, parents who devoted time and energy to help create an interesting and informative spectacle.

The Teacher InService programme offered this year has been an outstanding success with in excess of fifty teachers taking part in the programme. If you or your school has identified any areas of environmental interest that you would like training in next year please let me know.

My diary for the first and fourth term field trips gets filled really quickly and I often feel disappointed at not being available to assist you when you ring. Remember that you can alleviate this by getting me to run a staff or syndicate meeting to upskill your teachers to enable them to undertake the field trips themselves. These upskilling programmes can be run during terms two and three when I have less pressure on my time. All you need to do is ring and make a time!

As this is the last issue of SITE for 2001, I would like to thank all those teachers, students and parents I have worked with. I have appreciated your support and enthusiasm. I also record my thanks to the Taranaki Regional Council for having the foresight to continue providing this service to our schools.

Finally, I wish you all a relaxing summer holiday and hope that Christmas and New Year bring all the wishes you desire.

Ka kite ano
Graeme

Answers from page 3:

Fill in the gaps: eruption, Taranaki/Egmont, history, ash, cause, harm, difficulties, thick, people, volcanic, evacuation.

Word Match: Ash - g, Mudflow - f, Landslide - a, Lava - e, Hot ash flows - c, Tsumani - b, Gases - d.

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Schools in the Environment - Spring 2001 - No.19

Streambankplanting

There is now much evidence to support the idea that the re-establishment of riparian (river/stream bank) planting does have a positive effect on water quality. The Taranaki Regional Council is part way through a programme to assist in the planting of 16000 km of stream and riverbanks in the Taranaki region. This issue of SITE examines the riparian planting programme and considers its effect. Enclosed with this issue is a copy of the booklet 'Investing in our Banks' for your school library. This booklet highlights the work already undertaken in various locations around Taranaki.



STRATFORD PRIMARY SCHOOL

Plastic recycling knitting

I recently had the honour of opening the Stratford Primary School Science and Technology Fair, which was a celebration of work produced by their own pupils in these curriculum areas.

As part of an exhibit on Recycling, teacher Cushla Best and her five and six lass had explored ways to reuse supermarket bags. The result was an outstanding and colourful display of an innovative and creative use for these bags. Cushla explains:-



Author David Hill with Sleeper Wakes namesakes Corey and Alex.

Streambank planting

What is riparian planting?

Riparian comes from the Latin word riparius, which means 'riverbank'. The term riparian planting has come to mean any planting alongside waterways or the strip alongside the coastal dunes.

Why is it important?

In 1986/87 there were about 200,000 cows in our region. By 1999/2000 this number had grown to 480,000. The big increase in pastoral farming means that our freshwater supply is under increasing pressure. Everything we can do to improve the water quality is vital.



Why plant the stream bank?

Planting the stream bank usually involves fencing the area to be planted. Fortunately it also keeps the stock out of the water which helps lessen contamination. Another benefit is that erosion of the riverbank by the stock is also decreased.

What plants are best?

Beside the damage to the banks, stock also deposit dung and urine into or near the water. These deposits increase the nutrient levels which often leads to increased algal growth and bacteria counts.

What damage do stock do?

The area along the stream banks is divided into zones. Nearest the flow, low growing plants such as flax and toetoe are planted. When the stream floods they won't impede the flow too much. Above them is an area planted with trees and shrubs. Between these and the fence it is ideal to have an area of grass. Where appropriate native trees and shrubs are preferred.

Where do the plants come from?

Each year the Taranaki Regional Council contracts nurseries and other interested people to grow plants for the riparian scheme. The growth in the number of plants supplied shows the interest in the scheme.

1997/1998	25000 plants
1998/1999	32000 plants
1999/2000	51000 plants
2000/2001	69000 plants



How does the Council help?

Beside passing the plants on to landowners at cost the Land Management Officers, in conjunction with the landowner draw up the fencing and planting plan for free. Advice on the best methods and types of plants is also available although all costs for planting, fencing and future maintenance are the responsibility of the landowner.

What improvements should be gained?

As the length of riparian planting along a stream increases there should be a positive change in water quality. The established planting should provide shade, which will help lower the water temperature, which in turn will help limit the growth of algae. The plant roots should filter out nutrient chemicals, which will also lessen algal growth and decrease the levels of contaminants in the stream. Alongside these benefits the native vegetation should increase the attractiveness of the area and provide a haven for our bird life.

What can I do to help?

Many schools in the Taranaki region have adopted sections of a nearby stream. With help from the landowner and the Council they have planted sections of the stream and maintained the plantings. They also monitor the stream conditions at various times of the year to see what effect their actions are having.

How can I get involved?

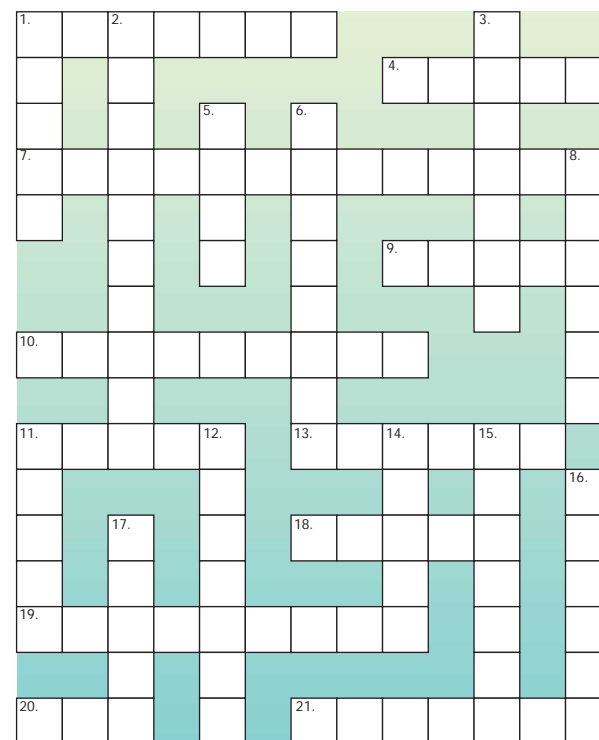
If local farmers are planning riparian development talk to them to see if you can help. You can also contact the Regional Council to see which areas are currently being targeted. If you have a stream in your school grounds you could begin your own riparian plan!

Word scramble

Unscramble these letters to spell the names of native plants.

- howkia
- aaakkheti
- ukrai
- akanmu
- irmo
- ttooe
- ottraa
- hpuoutakwa
- xfal
- muri

Crossword clues



ACROSS

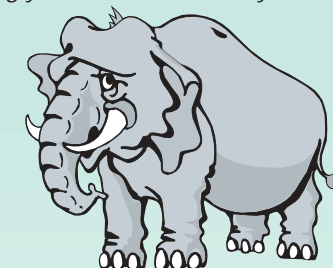
- Common types are dairying and sheep
- Animals on a farm
- Name for effect of pollutants on freshwater
- Take over care of
- To set up
- A row of shrubs or trees
- Small plants
- Past tense of grow
- Scientific name for urine & dung
- Riparian planting should help - quality
- When trees are placed in the ground

DOWN

- An object to separate paddocks
- Put back in place
- To keep check of over time
- Side of a waterway
- Latin word meaning 'riverbank'
- Belonging to a country (not introduced)
- Place providing shelter/protection
- Wearing away of earth
- Underground anchors of trees
- To improve or promote
- Area under trees is this
- H₂O

No kidding

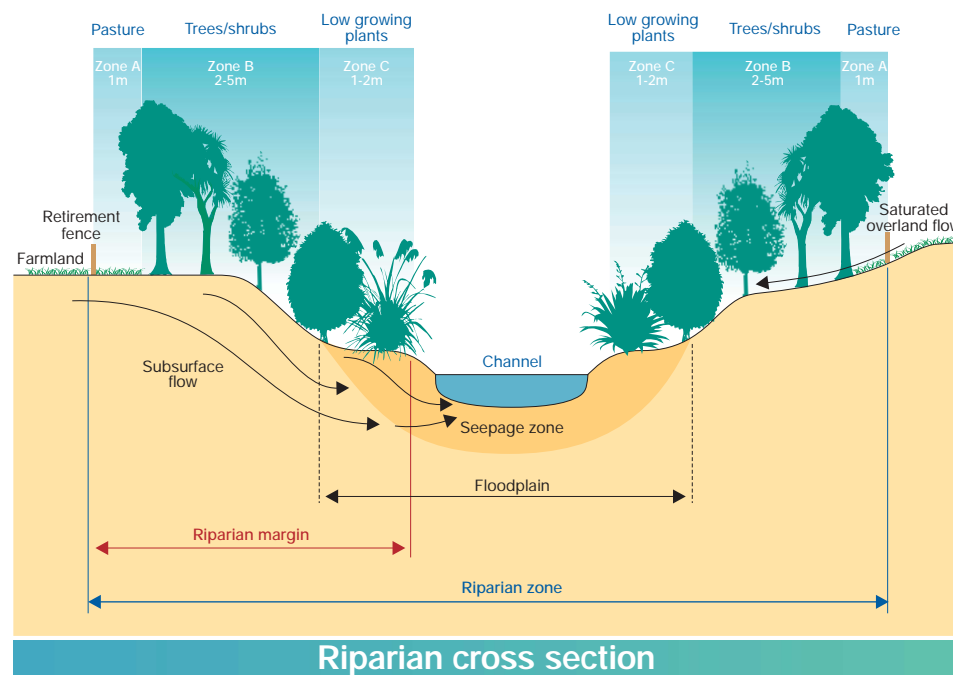
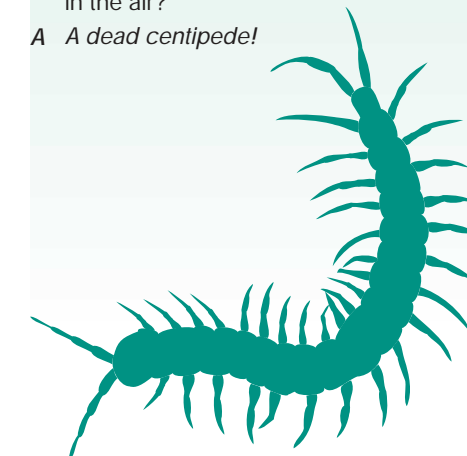
- Q What do you call a deaf elephant?
A Anything you like, he can't hear you!



- Q What happened when the frog's car broke down?
A It got toad away!



- Q What lies on the ground 100 feet up in the air?
A A dead centipede!



Riparian cross section

Mathematical wizard



A farmer has just had a riparian plan produced for his farm. Before he decides to proceed he needs to know what it will cost him. Help him work out the total cost if:-

- he has 850m of stream (remember streams have two banks!)
- fencing costs \$2.75 per metre for labour and material
- he needs 1636 plants at an average price of \$1.77 each
- the contractor charges 10c per spot spray
- the contractor charges 85c per plant for planting
- future maintenance is allowed at 25c per plant