

## Time for winter woollies

Term one, with its lovely weather saw an invasion of young people to the many rock pool sites scattered along our coast. Thank you to all the teachers who have asked for support with these programmes, it has been a pleasure to be involved. To hear the shrieks of delight from the young and the not-so-young when they discover a tiny cats eye, a large red crab or especially a decent sized octopus is incredibly exciting. There is still a good chance over the next couple of months that a rock pool visit will not be affected by the weather, so please get in touch if you would like my support. A number of school groups, before or after studying the rock pools in New Plymouth, have also visited the marine display room on Ocean View Parade. Others have looked at coastal restoration in the areas close to the Fitzroy and East End surf beaches.

Most of you will recall the highly successful New Zealand ShakeOut of 2011 when over 1.3 million people took part in the nationwide earthquake education programme. New Zealand ShakeOut 2015 will be launched on Tuesday 28 April and past participants, schools and large organisations will be contacted by the organisers and asked to join up again. Later on, an engaging media campaign will swing into action to get new people, new organisations and new schools involved. The focus of the programme will be a Nationwide Earthquake drill at 9.15am on 15 October which is on the International ShakeOut Day of Action, so we will be part of a global campaign.

I often get asked about the weather forecast for upcoming school visits. The website [metservice.com](http://metservice.com) has the current weather situation and five and ten day forecasts for both New Plymouth and Hawera (Rural/Taranaki).

People visiting Pukeiti in the last few months have noticed the massive changes to the buildings and car parks. Despite this we successfully hosted 12 visits there last term, with two schools opting for the Garden Rally and the Native Freshwater Fish and their Natural Habitat at Night as part of their programmes. These activities were first-timers for us and I thank the schools involved. Lots of fun was had by all.

Have a great term everyone.

**Kevin Archer**

Education Officer

## Winter time means riparian planting time

This SITE reviews the Council's highly successful riparian management programme which is protecting our waterways and transforming Taranaki.



## Octopus excitement at Kawaroa

This octopus caused great excitement for the students, staff and parents from Makahu School during their visit to Kawaroa in February. The octopus swam up and down the old swimming pool, its presence was an extra attraction for everyone and was very much the main talking point at the picnic which followed the visit.



## Garden rally at Pukeiti

Students from Oakura School look for the answer to a clue during their garden rally activity at Pukeiti recently.



# Riparian management

As winter approaches, many Taranaki landowners turn their attention to their riparian management programme - fencing and planting on stream or riverbanks. It is widely accepted that riparian protection benefits the quality of the water that runs down the region's rivers and streams. The word 'riparian' comes from the Latin word Riparius which translates to 'riverbank'. The word was virtually unheard of two decades ago but is now in common usage. The riparian programmes in Taranaki help to bring back the natural vegetation that existed prior to European settlement. Last century much of the land was extensively cleared and drained, and developed into one of the world's premier dairying regions.

## Target areas

The main target areas for the riparian management programme in Taranaki are the Taranaki ring plain and the north and south coastal terraces where most of the region's dairy farms are located.

## Planting numbers and Council assistance

Since its inception in 1997 when 25,000 plants were planted on our stream or riverbanks, the number of trees planted annually has grown continuously with almost 500,000 planted last year. With this year's planting season almost upon us, the Council is confident that this number will be reached again this year. These numbers are staggering when one considers that currently it is a 'voluntary' programme. Council staff support landowners to prepare their riparian management plan, provide guidance as to what are the most suitable plants required, where to fence and when to plant etc. 99.5% of Taranaki dairy farms have active or completed riparian plans. Almost 14,000km of streambanks in Taranaki are covered by riparian plans. The Council contracts nurseries to bulk supply native plants, and then on-sells them to holders of riparian plans at an average cost of \$3 per plant. All costs for planting, fencing and future maintenance are the responsibility of the landowner.



## Riparian completion target

1 July 2020 is the proposed date for completion of the riparian management programme. The target of 100% fencing of stream and riverbanks is close to achievement but a major effort is needed to reach the streambank planting target. The current yearly figure of around 300km stream and riverbank planting will need to increase to 500km per year over the next five years to achieve the target. With the continued enthusiasm and support of landowners the target will be reached.

## What are the benefits of riparian management?

Riparian plants and trees can greatly improve water quality. They filter sediment from surface run-off, take up nutrients, and the established plants and trees help to lower both the average and fluctuating water temperatures which helps to limit algae growth. Stream bank erosion is reduced because the deep-rooted vegetation improves bank stability. The severity of flooding is reduced as the riparian vegetation regulates the amount of surface water flowing into the streams and rivers during periods of heavy rain. The vegetation also provides an important habitat for creatures that live in and out of the water, and once established helps to beautify the entire streambank area.

Fencing prevents stock access to the waterway and stops animal dung or urine from being directly discharged into the water.

## National award

The Council's riparian management programme was recognized in 2013 with a Ministry for the Environment Green Ribbon Award for its outstanding contribution to protecting the environment. The award was in the Caring for Our Water category. It is the largest water quality/soil conservation project on private land in New Zealand.

## Council assistance

- Invite the Council Education Officer Kevin Archer to take a PowerPoint classroom lesson and follow-up group activity that covers the riparian management programme.
- The Council can provide you with an informative booklet called 'Transforming Taranaki - The Taranaki Riparian Management Programme'. Multiple copies are available.
- Download from our website SITE numbers 10, 19 and 37 which have links to riparian management.
- A number of schools have 'adopted' sections of river courses running close to their school grounds. If you are planning such an action, contact Kevin if you require support with this.





## Tree names matching

Match the Maori name for these native trees with their common names.

1. Akakura	a. Cabbage tree
2. Harakeke	b. White pine
3. Horoeka	c. NZ honeysuckle
4. Kahikatea	d. Lemonwood
5. Kawakawa	e. Whiteywood
6. Mahoe	f. Flax
7. Manuka	g. Tea tree
8. Tarata	h. Red rata
9. Ti kouka	i. Pepper tree
10. Rewarewa	j. Lancewood

## Tree quiz

See if you can get the answers to these 'tree' related questions.

1. Trees which lose their leaves every autumn are called?
2. Humans were on Earth before plants. True or false.
3. A trailing or climbing plant is commonly known as a what?
4. The Japanese word 'sakura' means the blossoming of what kind of tree?
5. Name the world's tallest tree.
6. What is the name of the process in which plants absorb oxygen and emit carbon dioxide?
7. The outer layer of tree trunks and branches is called?
8. Name the part of the tree which is usually underground, helps attach the tree to the ground and conveys nourishment to the tree from the soil.
9. New Zealand's tallest native tree is called?
10. One of the greatest things that trees give us is the air that we breathe. True or false.



## Compound words

Match a word in Column A with a word in column B to make a compound word.

A	B
1. under	a. market
2. super	b. shelf
3. river	c. wheel
4. fresh	d. ship
5. high	e. take
6. friend	f. worthy
7. news	g. bank
8. cart	h. light
9. book	i. water
10. over	j. board



## Cabbage tree challenge

Nearly everyone recognises a cabbage tree and most people know something about it, so here is a challenge for you. See if you can unjumble each word in the paragraph below and if you succeed you will almost certainly discover something you didn't previously know about cabbage trees. The answer can be found on the back page. Try not to look there straight away. Good luck!

Teh bbagec tere si a delywi anbrchde tere, micdene ot ewn aadznel. Ti swogr

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teredscu ta hte spit fo the chesbran dan anc eb pu to neo etrem lnog. thwi

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oofd suocre rof het rkeuru dan thero tnaive rdibs. ti si mmooncly fuodn vero

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eth sthou landis. ti swogr ni a roadb anrge fo tatshabi, cludingin ssforet,

verir bnaks dan poen lpaces dan si dantabun rean wssapm. aerly aorim udes

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saw alos sued to kame choran posle, fingish nils, ssbaket, nair cespa, clawks

dan dalssan.

## Word target



How many words of three or more letters can you make from the term:

## RIPARIAN MARGIN

You can use the letter A three times in the one word as there are three As in the term but you can only use the letter G once in your word for the same reason (nearly).

- 1-10 Good
- 11-15 Very good
- 16-25 Excellent
- 25+ Wow, you are a genius!!



## Waste audit at Manaia Primary

The Year 7 and 8 class at Manaia Primary spent an hour sorting a week's waste at the school in March. Following the audit, the results were analysed and an 'action plan' to reduce waste was developed which will involve participation from everyone at the school. Good luck Manaia Primary.



## Eltham pupils pot plants at Pukeiti

These budding botanists from Heather Nicholl's Eltham Primary class showed lots of enthusiasm during their recent visit to Pukeiti. Their activities, besides potting plants, included discovering a tree hut, climbing inside a giant rata and discovering all sorts of creepy crawlies. It was a big day out for these young people, with all the activities and the travel to and from Pukeiti. Thank you to all the people involved.

## Waitoriki pupils try fish spotting at Pukeiti

Council Education Officer Kevin Archer talks to the students of Waitoriki School prior to their nocturnal native freshwater fish hunt at Pukeiti late last term. Their visit also included a walk in the forest, a tasty barbecue and a couple of energy sapping games on the Pukeiti lawn. There was big excitement all round when a large long-fin eel was spotted, as were numerous freshwater crayfish. Everyone had loads of fun and the whole evening sure beats watching television on a Friday night!



## Central junior school have a fun time at Kawaroa

Kawaroa was a popular venue for school visits last term with groups of all sizes exploring the thousands of pools exposed at low tide. A group from some of Central School's junior classes try their luck and judging from the exclamations of glee and what was in their trays they obviously found plenty of plant and animal life.



## Thank you

I often receive thank you letters after field trips. Below are just a couple from West End School after their Mountain trip.

*Dear Mr Archer,*

*Thank you very much for showing us the statues and showing us the different tracks. Now we won't get lost when we come again.*

*Have you been right around the mountain?*

*Thank you - from, Sakob*

*Dear Mr Archer,*

*Thank you for spending the whole day with us up the mountain.*

*I enjoyed going up the mountain with you it was fun! The pepper leaves were really spicy. That's why I didn't swallow them and I needed to get a drink afterwards.*

*I hope you had a good day with us.*

*Thank you - from, Thomas*

## Answers from page 3

**Quiz answers** 1-deciduous 2-False 3-Vine or liana 4-cherry 5-The Coastal Redwood (USA) 6-respiration 7-bark 8-root(s) 9-Kahikatea 10-True

### Matching Trees

1-h 2-f 3-j 4-b 5-i 6-e 7-g 8-d 9-a 10-c

### Compound words

1-e 2-a 3-g 4-i 5-h 6-d 7-f 8-c 9-b 10-j

### Cabbage tree unjumble

The cabbage tree is a widely branched tree, endemic to New Zealand. It grows up to 20 metres tall with a stout trunk and sword-like leaves which are clustered at the tips of the branches and can be up to one metre long. With its tall, straight trunk and dense rounded heads, the cabbage tree is a characteristic feature of the New Zealand landscape. Its fruit is a favourite food source for the Keruru and other native birds. It is commonly found over a wide range of New Zealand from the tip of the North Island to the south of the South Island. It grows in a broad range of habitats including forests, river banks and open places and is abundant near swamps. Early Maori used it as a food source where other crops wouldn't grow. It was also used to make anchor poles, fishing lines, baskets, rain capes, cloaks and sandals.

### For assistance or information on environmental education contact:

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