

## Two terms gone already

It might surprise you that of the 20 stream or river field trips planned last term, only two had to be postponed because of bad weather or high river levels; unfortunately both involved the same school.

If you have been to Pukeiti recently you would have seen the massive changes that are taking place involving the car parks and many of the buildings. Despite the action taking place, we have been, and still are, able to host school visits.

It is extremely heartening to be involved with or hear about the amazing work of many schools for and about the environment. A great example of this has been the investigation by the senior class at St Pius X School in New Plymouth, into the dredging practices and coastal water quality monitoring at Port Taranaki. The school has been involved in an 'Experiencing Marine Reserves' programme for several years. This year they started off their investigation with a visit to the Kawaroa rock pools which is a great place for learning about a habitat, its biodiversity and plant and animal adaptations. The students noticed that many of the rocks had a thin layer of muddy, sticky sediment on them, something they had never seen there during previous visits. At the same time they noticed the dredge operating in the harbour and later watched it head out to sea. They were curious as to where the 'stuff' was being dumped, what it was being dumped on and what effect the dumping might have on the offshore reefs. Around the same time, many of the students went snorkeling at Ngamotu Beach to check the water clarity there. Clearly they were concerned with what they saw and more importantly what they couldn't see and why. The students sprang into action with letters written to the Council, Port Taranaki and the Nga Motu Marine Reserve Society to investigate the matter further. As a result of their enquiries a highly informative evening was held at the school, with all questions answered and clear explanations given by both the Council Marine Biologist Emily Roberts and a speaker from Port Taranaki. The investigation had many benefits, among them has been a Council review of and adjustment to, our coastal monitoring programme when the dredge is in action. A terrific effort from all concerned.

Kevin Archer



You may recall the inaugural New Zealand ShakeOut in 2012 which resulted in 1.3 million New Zealanders taking part in an earthquake drill simultaneously. The Ministry of Civil Defence and Emergency Management (MCDEM) plan a similar programme this year. This issue of SITE covers many aspects of it and how schools and early childhood centres can get involved.

## Coastal Investigation



Some of the letters of inquiry sent by St Pius X students to the Council Marine Biologist, Emily Roberts as part of their investigation into the harbour dredging programme at Port Taranaki.



The Council Marine Biologist inspects a sand dollar with two St Pius X students during their snorkeling session on Ngamotu Beach. This activity was one of the triggers for the class-wide investigation into the effects of sand dredging in Port Taranaki.



# New Zealand Shake Out™



## Background

The upcoming NZ ShakeOut is New Zealand's second earthquake drill exercise co-ordinated by the Ministry of Civil Defence Emergency Management (MCDEM), the initial one being held in 2012. It was enormously successful with over 1.3 million New Zealanders registered as individuals, through their workplaces, iwi, educational institutions or other avenues. This year MCDEM hopes for 1.5 million participants and at the last count 340,000 people have registered to do so. This year, it will be a truly global event involving 32 countries, with all participants invited to practise their drill on

**Thursday 15 October at 9.15am**

By virtue of our global position, New Zealanders will be the first to take part.

## Drop, Cover and Hold

If you are in an earthquake in New Zealand, then Drop, Cover and Hold is the right action to take. This is the drill that has been taught to school children for many years, and will continue to be promoted around the country. The simple advice is:



- If you are inside a building, move no more than few steps, then Drop, Cover and Hold to protect yourself from falling objects. **Stay indoors** until the shaking stops and you are sure it is safe to exit. In most buildings in New Zealand, you are safer to stay where you are until the shaking stops. It would be a good idea if teachers help students identify safe places they can Drop, Cover and Hold such as under classroom furniture or against an interior wall (away from glass). Please note that doorways are no longer considered safe places during earthquakes.
- If you are outside, stay outside but quickly move away from buildings, trees, streetlights and power lines, then Drop, Cover and Hold. Stay there until the shaking stops.

## Taranaki Emergencies

With the recent flooding events in Taranaki firmly in our minds, we should be well aware that earthquakes are not the only hazard we need to prepare for. One simple way to help prepare ourselves for an emergency is to be aware of what hazards are likely to occur in Taranaki. These include public health threats, flooding, volcanic eruptions, storms and tornadoes, exotic animal diseases, earthquakes, hazardous substances spillages etc. Although some of these events are nationwide hazards, others are more localized. All schools should have a copy of What's the Plan Stan? which is an excellent resource offering a range of activities designed to help schools prepare for emergencies.



## New Zealand ShakeOut – it's as easy as 1, 2, 3.....

- 1 Sign up to take part at [www.shakeout.govt.nz](http://www.shakeout.govt.nz). It only takes two minutes. The website has lots of tips and information for doing the drill and how to be prepared.
- 2 Spread the word (tell friends, family, workmates, share on Facebook, Twitter etc).
- 3 Do the Drop, Cover and Hold drill at 9.15am, 15 October 2015. (If you cannot do the drill at 9.15am, 15 October 2015, you can choose a time to suit within two weeks and still be counted.



## Council Assistance

1. In 2012, I was overwhelmed with requests for support to help students prepare for an earthquake. I have already been asked to do so again by some schools and all such requests will be honoured. However, I'm not able to take any further requests for individual class lessons (exceptions being small country schools) but I will be available to talk to students in school or team assemblies and to pre-school groups. In addition, I am happy to talk to teachers at staff or team meetings. Please get in contact if you require help along any of these lines.
2. Professional development sessions (see inserts). We are running three of these after-school sessions for teachers and other school personnel who wish to attend. All sessions start at 3.30pm and will finish by 5.00pm.
3. Visits to the TEMO (Taranaki Emergency Management Office) in New Plymouth. These are worthwhile additions to any emergency

- management programme and cover preparedness, hazards, TEMO functions etc. Visits usually last about an hour.
4. There are a number of websites such as [civildefence.govt.nz](http://civildefence.govt.nz) or [shakeout.govt.nz](http://shakeout.govt.nz) or [getthru.govt.nz](http://getthru.govt.nz) all of which have a host of information to assist you with your emergency management programmes.





## Major New Zealand Earthquakes

See if you find the locality of these powerful earthquakes which happened in NZ on (the magnitude is in brackets):

- 22 February 2011 (7.1)
- 4 September 2010 (6.3)
- 2 March 1987 (6.3)
- 27 January 1983 (7.3)
- 24 May 1968 (7.0)
- 5 March 1934 (7.6)
- 3 February 1931 (7.9)
- 16 June 1929 (7.8)
- 7 October 1914 (7.0-7.5)
- 9 August 1905 (7.5)
- 17 November 1901 (7.0)
- 23 January 1855 (8.1)
- 16 October 1848 (7.1)
- 8 July 1843 (7.5)
- 1460 - Exact date unknown (8.0)



## Earthquake word find

See if you can find the words listed below.

- Batteries
- Clothing
- Cover
- Documents
- Drop
- Earthquake
- Evacuation
- Food
- Footwear
- Getaway kit
- Hazard
- Hold
- Information
- Magnitude
- Photographs
- Shakeout
- Toiletries
- Torch
- Water
- Radio

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



## Prize winning Quiz - have a go

Here is a chance for two students to win a \$50 stationery voucher. For a student to be eligible to win a voucher, his or her teacher must take this quiz or even just a part of it with a class or a group within a class. Any student who does well (they don't have to get them all right) is entitled to have their name entered into a draw which will be made in the last week of this term so there is plenty of time to get the entries in. Teachers are welcome to send me the names of up to 15 students who qualify and I will ensure their names go into the draw. Good luck. The first five questions are particularly suitable for younger students.

- What bird has been New Zealand's national symbol since 1991?  
A. pukeko B. magpie C. kiwi
- There has been a lot of talk this year about changing New Zealand's?  
A. flag  
B. netball competitions  
C. mountains
- The biggest town or city in Taranaki is?  
A. Eltham B. New Plymouth C. Hawera
- Which of these animals is regarded as a pest animal in NZ?  
A. possum B. cow C. sheep
- If an animal or bird or fish is said to be extinct in NZ, it means:  
A. Nobody has seen one for a week or so  
B. They have gone away for a while  
C. They haven't been seen alive for 50 years+

6. The muscles in a grasshopper's back legs are how many times more powerful than an equal weight of human muscle?

- A. about 10 times
- B. about 100 times
- C. about 1000 times

7. According to some people, the huhu grub has a taste similar to?

- A. peanut butter B. honey C. raspberry jam

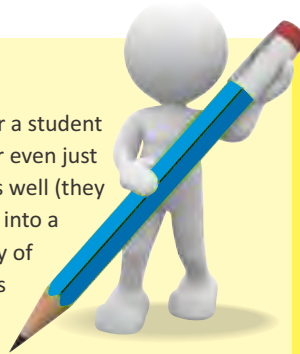
8. What is New Zealand's most poisonous spider?

- A. the harvestman
- B. the katipo
- C. the wolf spider

9. At Ships Cove in 1773, Captain Cook brewed a beer from a mixture of:

- A. spruce tree needles
- B. totara and flax leaves
- C. pine needles

10. Did the extinct bird the moa ever have wings? A. Yes B. No



## GETAWAY Kit

In the event of a major emergency you could be asked to evacuate your home. If that happened it would be very helpful if you had your 'GETAWAY' kit ready. From the list below decide which items you should have in your GETAWAY kit.

- Essential medicines
- yesterday's newspaper
- important documents
- a flowering pot plant
- your favourite cauliflower
- extra clothing and footwear
- a radio with batteries
- a collection of vivid pens
- emergency bottled water
- a torch with batteries
- your comfortable bed
- 6 bottles of coke
- a TV set
- togs
- baby needs
- toiletries
- a calculator
- family photos
- a stapler



Answers on page 4



### A tale of two streams

It's eyes down and looking as these Welbourn students study the invertebrates in the Huatoki Stream while fellow Welbourn student Charlotte Seddon checks the water clarity of the Te Henui Stream near to its mouth.

Four of the senior classes from the school had a busy time last month studying both streams. Each class visited one site on each stream assessing the water quality by identifying the invertebrates found and checking the water clarity and the water temperature at each site. As a follow-up to these studies, the classes studied the Taranaki riparian management programme and the students were able to link its benefits to their stream studies. Well done Welbourn, a very successful study all round.



### Spotswood College studies the Waiwhakaiho River



The Year 10 Science students under the guidance of teacher Brent Dunnet investigated the biological impacts of an event on a New Zealand ecosystem. The study was part of an NCEA assessment using in this case, the Waiwhakaiho River. The group used two sites to compare the water quality, one on Peters Rd, just below the Egmont National Park and the other at the Merrilands Domain in New Plymouth city. They gathered habitat data such as streambed composition, streambank vegetation, pH, water conductivity, water temperature and water clarity as well as using the invertebrates found to assess the 'state of health' of the river at both sites. The students worked purposefully and with enjoyment throughout the day. Thanks Spotswood College.

### Spotswood Primary's Scenic Reserve



Spotswood Primary students and staff were super busy last term, studying scenic reserves following their visits to the Rotokare Scenic Reserve. They have been learning about different methods of pest control, wide varieties of native birdlife and native fauna and flora. They have also been 'in action' eradicating pests such as possums, rats and mice from around their school. To finish off the study, they turned their school hall into their very own scenic reserve with a fantastic display of artwork, stories, multi media presentations, information brochures, tracking tunnels and much, much more. The displays were centred around a stream, with its walking bridge, stepping stones and flowing water, with sensibly placed riparian plants all set to go into the ground. The result was an incredible display, greatly enjoyed by the many visitors who had the good fortune to see it. A great effort!

## This and That

### Teacher Development Sessions New Zealand ShakeOut

Enclosed with this issue of SITE is an invitation to teachers to attend one of three New Zealand ShakeOut teacher professional development sessions. The dates for these sessions are:

- Tuesday 8 September at TEMO, Robe St, New Plymouth
- Wednesday 9 September at TRC, Cloten Rd, Stratford
- Thursday 10 September in Hawera Venue to be confirmed

All sessions start at 3.30pm and finish by 5.00pm

### State of the Environment 2015

The Council launched its five-yearly State of the Environment report last week, a copy of which is available on request. In past years, many schools have found having a copy in the library to be a great resource. Please contact me if you would like a copy.



### Environmental Awards

Once again, the council will be rewarding outstanding environmental work by individuals, community groups, farmers, businesses and educational institutions through its annual Environment Awards programme. For more than two decades, many schools, early childhood and tertiary education centres have been recognized for their outstanding achievements.

Nominations for this year's awards close at **5pm on Tuesday 25 August**, with the winners to receive their awards at a presentation evening in New Plymouth in November. To make a nomination or for further information go to [trc.govt.nz/environmental-awards](http://trc.govt.nz/environmental-awards) or contact: Council Communications Manager, Rusty Ritchie ph 06 765 7127 or email: [rusty.ritchie@trc.govt.nz](mailto:rusty.ritchie@trc.govt.nz)

### Answers from page 3

Quiz – 1.C 2.A 3.B 4.A 5.C 6.C 7.A 8.B 9.A 10.B  
**GETAWAY kit** - Essential medicines, important documents, a radio with batteries, a torch with batteries, emergency bottled water, extra clothing and footwear, baby needs, toiletries.

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

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