

## Spring is here

Welcome back to the new term, they do seem to roll by at an ever-increasing rate.

I am sure you will remember NZ Shakeout, the earthquake exercise held last year which was the biggest of its type ever held in one country. You will be pleased to know that the Ministry of Civil Defence and Emergency Management recently announced that it will be repeated in 2015. Congratulations to the many schools taking a pro-active stance towards caring for their students and staff in the event of an emergency during school hours.

This year's Get Ready Week was based around the theme "Know your neighbours, know your community". It was a great opportunity for all New Zealanders to get to know their neighbours, if they don't already, and make a plan to help one another to "Get Ready, Get Thru." I apologise for the spelling of the last word but that is the way it is. While schools, businesses and the community generally are better prepared than ever before to deal with any dangerous event, complacency can be a very dangerous thing.

We never know for sure how we will respond to an extreme or unusual situation but being prepared gives us a better chance of making correct decisions. Immediately after the recent strong earthquake in Wellington many people needlessly evacuated buildings, putting themselves and others in danger. With knowledge and preparation, people can keep themselves safe during an emergency. Civil Defence Emergency Management has become an integral part of the support programme we offer to schools, please get in touch if you require any assistance in this area.

Our Pukeiti schools programme continues to be well supported. Towards the end of this year we will be writing the study unit based on activities offered to classes visiting this special place. The unit will be available for downloading from our website in time for the start of term one next year. If you are contemplating a visit to Pukeiti this term or at any time next year please contact me as soon as possible.

Have a terrific term everyone.

Kevin Archer

## Taranaki biodiversity

In Taranaki, there are many agencies, community groups and individuals working to protect and enhance our native plants, animals and their habitats. In July 2012, 19 of the region's key biodiversity champions agreed to pool resources and work together for the common good by signing the Taranaki Biodiversity Accord. This issue of SITE looks at biodiversity in Taranaki, the Accord, and its partners.



## Bus transport in Taranaki

The mini unit contains 16 activities teachers could use when studying bus transport in Taranaki. To assist with planning, we have listed the relevant curriculum areas and some of the key competencies, essential skills and values that could be covered. The unit is not designed to be used in any particular order and teachers are welcome to pick and choose activities as they see fit. There are opportunities to research using the internet and other resources, listen to guest speakers, use bus timetables, inquire about walking school buses, make PowerPoint presentations, solve fictitious bus issues, find out about New Plymouth's Let's Go programme and use different types of writing.

One of the highlights of the unit involves an exercise featuring Adam Thurman and his love of buses. Adam has had a lifelong fascination with buses, so much so that he and his support worker Margaret McConachie have written a book titled 'On The Buses'. Margaret and Adam spent two months at Puke Ariki researching the history of New Plymouth transport and enjoyed learning about buses on the internet. The book is fun to read, informative and pictorial. Adam is 30 and has a disability which requires the use of a wheelchair and his goal is to get from his house in Westown to his family home in Fitzroy by himself. He has been on a few buses in New Plymouth – and in a very exciting day in Wellington he was able to go through a bus-wash machine while he was inside the bus!!

This book would be a wonderful resource for a class group reading activity. We have a good supply of books available on loan for this or any other educational purpose related to the unit. Please contact Kevin if you would like to borrow some copies.





# Biodiversity

## What is biodiversity and why is it important?

Biodiversity is shorthand for 'biological diversity'. This means the variability among living organisms and the ecological complexes of which they are a part, including diversity within species, between species and of ecosystems.

Biodiversity is essential for the continued existence of a healthy planet and all parts of biodiversity are interconnected in an intricate 'web of life'.

Biodiversity often has social, recreational and cultural values and in New Zealand it helps shape our national identity.

## What have we lost?

- Throughout New Zealand 85% of our lowland forests, wetlands and sand dunes have been lost.
- Over the last century, 16 birds, nine land invertebrates, one native freshwater fish and six important plants have gone forever.

While the losses in different regions vary, Taranaki has certainly lost its share of the above.

## What are we doing?

- Taranaki is fortunate as we have many organisations, land owners and individuals committed to taking action to maintain and enhance biodiversity in our region.
- Much of this great work is unseen by the wider public. Work such as landowners covenanting their land to protect remnant forests, wetlands or dunes and controlling pest plants and animals to protect biodiversity values on their land.
- The Council's Self-Help Possum Control and Riparian Management programmes are now nationally recognized as leaders in their fields.
- Hundreds, if not thousands of individuals participate as volunteers in community biodiversity projects.
- Many schools have their own 'environmental group' whose main function is to be actively involved in good environmental practices.



## The Taranaki Biodiversity Accord

The Taranaki Biodiversity Accord was signed at a special function in New Plymouth on 27 July 2012.

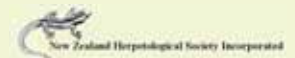
The Accord was signed by the partners with a view to raising the profile of biodiversity among themselves and to increase wider awareness and understanding of the issues. It provides opportunities for information sharing, identifies common ground, establishes publicly-agreed policies and partnerships, commits the partners to positive action and establishes a collaborative framework to work together better and get the best results from finite resources.

## Everyone can play a part

- Nearly all of the Accord partners have their own websites, many of which have the contact details of people who are willing to talk to school groups.
- Several of the organisations willingly host school groups, please check their websites to find more details.
- Council Education Officer Kevin Archer supports school groups with class lessons, field trips and venue hosting. If he is unable to provide the required expertise, he usually can find personnel from within the Council or outside it, who can.



The 18 signatories to the Accord are:



Nga Motu Marine Reserve Society



Tiaki Te Mauri O Parininihi Trust



## Be in to win with this biodiversity quiz/competition

Teachers - You could use this quiz as an opportunity to assess your students' knowledge about biodiversity. If you do, could you please email me up to **five** names of your students who either did well or surprised you with their results. I will put all the names into a draw for two \$50 book vouchers. Good luck to all.

**Competition closes on Friday 15 November.**

### 1) Biodiversity means

- a) Global warming
- b) The variety of life on Earth
- c) Genetically modified crops
- d) A big city under the sea

### 2) What is a coral reef made of?

- a) Plants
- b) Animals
- c) Just coral
- d) Plants, animals and coral

### 3) What is the largest living land animal?

- a) Black rhino
- b) Indian elephant
- c) Black buffalo
- d) African elephant

### 4) What is the world's largest mammal?

- a) Killer whale
- b) Great white shark
- c) Blue whale
- d) White shark

### 5) In which region or area would you be most likely to find penguins?

- a) Equator
- b) Antarctic
- c) Arctic
- d) African jungle

### 6) Which of the following is a New Zealand endangered bird species?

- a) Takahe
- b) Pukeko
- c) Brown duck
- d) Mallard duck

### 7) Pandas mainly eat

- a) Fruit
- b) Meat
- c) Carrots
- d) Bamboo

### 8) Global warming means

- a) The environment in volcanic areas
- b) The warming up of the Earth's atmosphere and oceans
- c) The effect of efficient double glazing
- d) The danger of having too many lights on

### 9) Which are the most numerous animals on Earth?

- a) Mammals
- b) Amphibians
- c) Reptiles
- d) Insects

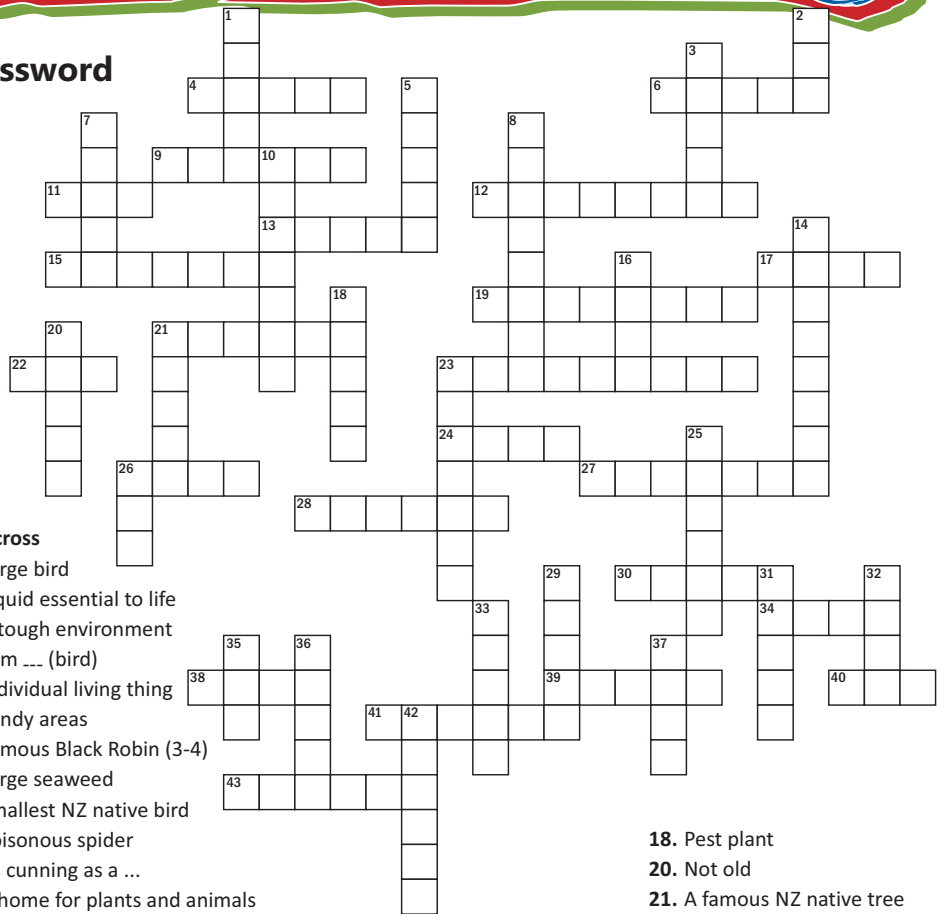
### 10) Which of the following New Zealand birds is extinct?

- a) Ruru
- b) Haast eagle
- c) Brown kiwi
- d) Black robin

### 11) Which of the following New Zealand birds is NOT extinct?

- a) Moa
- b) Huia
- c) Piopio
- d) Tui

## Crossword



### Across

- 4. Large bird
- 6. Liquid essential to life
- 9. A tough environment
- 11. Tom ... (bird)
- 12. Individual living thing
- 13. Sandy areas
- 15. Famous Black Robin (3-4)
- 17. Large seaweed
- 19. Smallest NZ native bird
- 21. Poisonous spider
- 22. As cunning as a ...
- 23. A home for plants and animals
- 24. Native tree with poisonous leaves
- 26. Plural of mouse
- 27. Learning places
- 28. Pertaining to the sea
- 30. Large cats
- 34. A famous NZ native bird
- 38. Large body of water
- 39. Freshwater crayfish
- 40. Parson bird
- 41. Long waterways
- 43. Tea tree

### Down

- 1. Marine scavengers
- 2. Much needed to breathe
- 3. Stinging invaders
- 5. Marine birds
- 7. Tiny crustaceans
- 8. Pepper tree
- 10. Belonging to one area/region
- 14. Swamps, bogs etc
- 16. Long snake-like fish
- 18. Pest plant
- 20. Not old
- 21. A famous NZ native tree
- 23. Never to live again
- 25. Cutty grass
- 26. Extinct bird
- 29. They go 'quack'
- 31. Small reptile
- 32. Prickly-leaved tree
- 33. Largest NZ plant group
- 35. NZ native mammal
- 36. Wading bird
- 37. Croaking amphibian
- 42. Main whitebait species

### 12) Which of the following do NOT lay eggs

- a) Crocodiles
- b) Kangaroos
- c) Penguins
- d) Sparrows

### 13) What does 'camouflage' mean?

- a) The ability to blend in with the surroundings
- b) The ability to breathe under water
- c) The ability to see everything in colour
- d) The ability to see in the dark

### 14) How many legs does a spider have?

- a) Four
- b) Six
- c) Eight
- d) Far too many

### 15) What does a fish use to breathe?

- a) Aqua lungs
- b) Skin
- c) Gills
- d) Fins

### 16) Some birds fly from one part of the world to another and back again within the same year. This phenomenon is called?

- a) Irrigation
- b) Evacuation
- c) Migration
- d) Stagnation

### 17) What is the name of the world's largest rainforest?

- a) Central African Rainforest
- b) Amazon Rainforest
- c) Nile Rainforest
- d) Central Taranaki Rainforest

### 18) The Venus fly-trap is a kind of

- a) Plant which catches insects
- b) Hockey movement involving a dummy runner
- c) Insect which catches flies
- d) Moon-like object belonging to Venus

### 19) Old Blue is the name of

- a) A former Auckland rugby player
- b) A well-known black robin
- c) A fading colour shading
- d) An extinct fish

### 20) A cabbage tree is a

- a) A very tall vegetable
- b) A seldom-grown New Zealand vegetable
- c) A tree with cabbage shaped leaves
- d) A common New Zealand native tree



Stratford Primary students in 'full flight' as they take part in a bird migration game. The game demonstrates how migrating birds use wetlands as stopovers during their long flights and what has happened to many species when the wetlands are taken away.



## Four environmental awards for education



The photo (left) shows Councillor Brian Jeffares with Stratford Primary School Principal David Cripps, Environmental Resource teacher Lisa Hill and members of the school's 'enviromite' team. The school, along with Toko Primary, the Western Institute of Technology at Taranaki (WITT) and Puketapu Kindergarten, received a Council environmental award this year. Thank you to all the educational institutions who were nominated for this year's awards. In a departure from previous years, the award ceremony was held at the Devon Hotel in New Plymouth but the schools and the kindergarten were offered their own extra ceremony so all of the students could be thanked for their efforts. For those looking to nominate for an award next year the closing date will be in September 2014 and the awards will be presented in November 2014.

## Science and Technology Fair winner



Every year the Taranaki Science and Technology Fair provides Taranaki students from Year 7 and above with an opportunity to showcase their extraordinary talents. This year was certainly no exception and indeed one judge was heard to comment that this year's exhibits were of the highest standard ever. The Taranaki Regional Council sponsors prizes for the best exhibits in environmental science. This year's winner was Cameron May, from Highlands Intermediate whose exhibit 'Mining the Beach' headed off a long list of wonderful entries. Second prize went to a Francis Douglas Memorial College pair, Alton Gondipon and Patrick Fisher-Evans for their exhibit 'Is the future of the world in the poo?' Heartiest congratulations to those three students and to everyone who submitted entries.

## Patea Area School at Dawson Falls



The Year 7/8 students from Patea Area School recently spent a couple of fun-filled days at Konini Lodge on Mt Taranaki under the leadership of teacher Mark Parsons. The Council Education Officer is talking (not singing) to some of the students about Dawson Falls and their history.

## This and That

### Professional development

**Date:** Thursday 21 November 2013  
**Venue:** Konini Lodge (Dawson Falls)  
**Time:** 10.00am – 3.30pm  
See insert for more details

### Professional development Term 1 2014

**Rocky shore**  
Wednesday 12 February (Cape Egmont)  
and Thursday 13 February (Kawaroa).  
Both sessions are from 4pm - 6pm.

**Pukeiti Gardens**  
Pukeiti - 2290 Carrington Rd, New Plymouth  
Thursday 20 February  
Session runs from 4pm - 6pm.

### Pukeiti education programme

Such has been the popularity of our Pukeiti education programme, we have gone a stage further and decided to base our freshwater fish and pest management programmes there as well. Apologies to those of you who had planned a visit to our office in Stratford to see the fish or learn about our pest management programme. The PowerPoint presentation outlining the Council's functions is still available at our office in Stratford or it can be easily presented at schools.



### Answers from page 3

**Biodiversity Quiz:** 1.b 2.d 3.d 4.c 5.b 6.a 7.d  
8.b 9.d 10.b 11.d 12.b 13.a 14.c 15.c 16.c  
17.b 18.a 19.b 20.d

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

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