

WHY OUR WETLANDS ARE VERY SPECIAL PLACES

Science based activities where students explore and gain an appreciation of the important role that wetlands play in our natural environment from:

Curriculum Focus: Living World – life processes, ecology. Planet Earth – earth cycles.

Understanding, Investigating, Communicating, Participating



DISCUSSION TOPIC

- Through class or group discussion, find the students' current knowledge of wetlands, **eg**
 - what are they and where do we find them?
 - how are they different from a stream or a pond?
 - what animals, birds and plants live in and around wetlands?
 - are they important for the environment?
 - how does our local community use its wetlands?
- List student responses for reference at the end of the unit.

INTRODUCTION TO WETLANDS

- Tell students that wetlands can come in many forms such as:
 - slow flowing streams
 - bogs
 - lakes
 - lagoons
 - estuaries
 - mudflats
 - flood plains
 - swamps
 - ponds
- Discuss the differences between these wetland types. Can the students identify any of these wetland types in the local district environment? Point out that many wetlands are fresh water environments, many can also be salty or a mixture of salt and fresh water.
- Did the students know that only about 10% of New Zealand's wetlands remain? Have them speculate on what could have caused this and any environmental consequences if they continue to disappear.

WETLANDS – STUDENT WEB RESEARCH

TWO WEBSITES FOR RESEARCH

www.fishandgame.org.nz > Click on Our Environment
> Click on > Wetlands life (and/or Wonderful Wetlands)

www.doc.govt.nz > Click on Conservation > Click on Lands & Fresh Water > Click on Wetlands Conservation

- Divide students into research groups to answer the following questions and complete the activities.
 - find out why early Māori regarded wetlands as a treasure trove
 - what evidence can be found to back up the statement that wetlands are one of our most diverse environments.
- Work through the *Why wetlands' are important* section of the DOC site. Discuss the following to ensure students understand the important roles that wetlands play:
 - wetlands role in flood control
 - how wetlands help improve downstream water quality?
 - the importance of wetlands in ensuring the survival of native and endangered plants, bird life and native fish.
 - the relationship between decline in plant, bird and fish population and the reduction of wetland habitat.
- Using the *Environment* section of the Fish & Game site, > Click on Wetland Life. Have students make a list of important plant, bird and fish life found in wetlands.
- Conduct Google research on several species, **eg type in:**
 - whitebait New Zealand, flounder New Zealand,
 - flax New Zealand, cabbage tree New Zealand.



- Groups present findings including Māori names, main characteristics, life cycles, abundance and threats etc. to the class.

WHY PRESERVE AND PROTECT WETLANDS?

- Have students recall the different forms a wetland can take. Identify all streams, rivers, lakes, ponds and the wetlands that exist (or did exist) in your local area and mark on a local map.
- Brainstorm and list ideas on the importance of preserving and protecting our wetlands and fresh water environments, **eg**
 - important habitats for birds, fish and plants
 - important recreational and food gathering resources.
- Have the students considered that wetlands and fresh water environments play an important part in our community for recreational use? Brainstorm and list the ways that people could use and enjoy wetlands, **eg kayaking, bird spotting, duck hunting, other recreational uses...**
- Prepare questions to survey your local community to find out how local fresh water environments are used, who uses them and how often. Display survey results in graphic form.
- Interview recreational users such as game bird hunters and local iwi to find out how they contribute to the maintenance and improvement of local wetlands. Why is it important that they are sustainably managed and able to be enjoyed by all the community?
- Have students speculate on how and why wetlands can disappear, **eg**
 - silting up is a natural wetland process
 - building stopbanks for flood protection
 - drained for farming or industrial/residential development.

THE GREAT DEBATE

- Introduce the following scenario. A forestry company plans to drain the wetland section on land they own to build a factory to process logs and timber. Previously, local people were able to use it for recreational purposes. Have students identify all the people who will be affected and in what way. Have them consider the effects on fish, birds and plant life that depend on the wetland for their existence. The local council supports the project as it will bring many new jobs and opportunities to the local district.

WHY WE MUST PROMOTE AND PROTECT THEM

- Have students prepare arguments both for and against the project from a 'people' point of view (including recreational/food uses and from the point of view of species who will no longer exist if the project goes ahead as planned. Run a series of group and class debates

WEBSITES FOR FURTHER STUDENT RESEARCH

- www.wildaboutnz.co.nz/mainsite/Education.html
- www.waterlink.org.nz/info/index.html
- www.ew.govt.nz/enviroinfo/water/wetlands/index.htm
- www.forestandbird.org.nz > click on Conservation > click on Fresh Water Conservation

PLAN A WETLANDS STUDY FIELD TRIP

There is no better way for your students to appreciate the workings, usage and special nature of our wetlands than to visit, explore and experience their special nature.

Fish & Game New Zealand invites teachers to take advantage of the special passion and expert knowledge their field staff have of local fresh water environments. They will be delighted to help teachers and students learn more about them by talking to the class and helping plan a field trip.

FOR FULL CONTACT DETAILS VISIT OUR WEBSITE AT:
www.fishandgame.org.nz > Click on your region

AN ESSENTIAL SCHOOL RESOURCE



Superb graphic design and stunning photography make Janet Hunt's *Wetlands of New Zealand* an essential resource to help students understand the unique and special environments that are New Zealand's wetlands. Each chapter is packed with information on what makes wetlands work and why they are different. Students will also discover why wetlands are

under threat and why we must make every effort to protect them as well as detailing the good side of the story – our increasing awareness in wetland restoration. Passionately written and highly informative, this beautiful book will be a treasured addition to a school library.

Janet Hunt is the author of *A Bird in the Hand*, winner of the non-fiction category and Book of the Year award at the 2004 NZ Post Children and Young Adults Book Awards and from *Weta to Kauri*, shortlisted for the same awards in 2005.

***Wetlands of New Zealand* by Janet Hunt is published by Random House and is available in hardback only, at all good booksellers. \$69.99 RRP.**

WORLD WETLAND DAY CELEBRATION

A SPECIAL INVITATION FOR TEACHERS

- World Wetland Day is celebrated on Saturday 2 February, 2008. Teachers are invited to attend a **special celebration** at the **Tawharanui Open Sanctuary** - 90 minutes north of Auckland north east of Warkworth, (part of the Tawharanui Regional Park) commencing at 12.30 pm.
- The purpose of the celebration is to launch the Pateke Survival Guide and the release of a number of Brown Teal into the **Tawharanui Open Sanctuary** – a perfect demonstration of the importance of wetland habitats and the contribution they can make in saving a critically endangered species. Join in the BBQ, enjoy Banrock Station's fine wines, meet some special guests and speakers and show your support for the Pateke and our 'wonderful wetlands'.

PLIGHT OF THE PATEKE

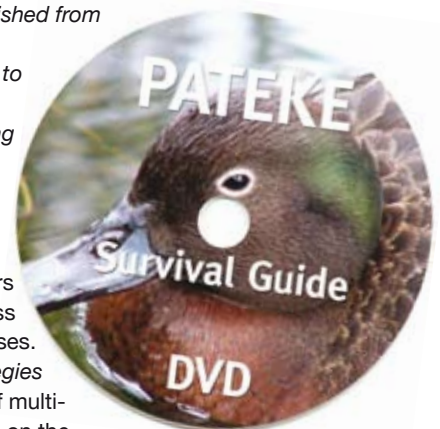
- The plight of the brown teal will be familiar to teachers and students through environmental lesson plans published in *starters&strategies* and online at: **www.brownteal.com** > Kids Track section.
- The released Pateke will be tracked and monitored via minute transmission devices.



- During 2008 there will be opportunities for your class to learn how they are getting on in their new wetland habitat.

BROWN TEAL CLASSROOM ACTIVITIES

- Remind students that wetlands are very important to the survival of the Pateke. Have them revise their brown teal knowledge by answering the following questions on the Kids Track section of www.brownteal.com (About Webster)
 - *what are the threats to the brown teal?*
 - *how can they be distinguished from other teal and ducks?*
 - *when are they most likely to be attacked?*
 - *where do they like to 'hang out' most and why?*
 - *why are wetlands so very important for the survival of the brown teal?*
- Play the Pests and Predators interactive game and discuss and list the threats each poses.
- During 2008, *starters&strategies* will feature a major series of multi-level classroom units based on the conservation of New Zealand's Pateke.



A video version and print pdf version of the Pateke Survival Guide and class lesson plans can be downloaded at:

www.brownteal.com