



# Seaweek

Fish for the Future

7–14 March 2010



the annual celebration of our precious marine environment

## WHAT IS NZAEE SEAWEEK?

Seaweek in the classroom is about encouraging students of all ages to think about the importance of looking after the marine environment and thinking of ways – no matter how small – to take positive actions to enhance it. In 2010 this positive action focuses on fishing sustainably.

Classes can celebrate Seaweek in any number of ways. Many regions organise special events so begin planning your Seaweek studies by visiting the Seaweek website at: [www.seaweek.org.nz](http://www.seaweek.org.nz) for a list of events and resources.

The following multi level, cross curricular ideas for celebrating NZAEE Seaweek are brought to you by ASB Community Trust, Department of Conservation, NZ Association for Environmental Education and New Zealand Seafood Industry Council.

## SUGGESTED SEAWEEK STARTERS

- Have students identify all the (component) parts that make up our marine environment.
- Identify the seas that surround our country. Remind students that if we travel overseas we have to cross these oceans. How do/did we cross them – both in the past and present. Older students can research the effect oceans have on our weather – particularly our rainfall.
- Think about and discuss the relationship we have with the sea, what it means to them and how people use and appreciate the sea, **eg** fish and shell fish, sport and recreation ...
- Brainstorm, research and list the thousands and thousands of creatures who call the sea and marine environment home
- Investigate food chains in the sea. What are the consequences for sea creatures and for us if these food chains are broken?
- How can we prevent polluting the sea and what are the consequences? How can we help look after a local marine environment, river, coastal area, stream or wetland?
- Make comparisons between different marine environments such as the deep ocean, high tide line, rocky shore, beach ... What lives in these areas?
- Take a rocky shore field study trip – include beach clean-up.
- Identify where our marine reserves are. How can people use these reserves to interact with the marine environment?

## OTHER USEFUL WEBSITES

- [www.seafoodindustry.co.nz/education](http://www.seafoodindustry.co.nz/education)
- [www.kcc.org.nz/educators/marinereserves.asp](http://www.kcc.org.nz/educators/marinereserves.asp)
- [www.kcc.org.nz/educators/seashore/index.asp](http://www.kcc.org.nz/educators/seashore/index.asp)
- [www.treasuresofthesea.org.nz/](http://www.treasuresofthesea.org.nz/)
- [www.fish.govt.nz](http://www.fish.govt.nz) > select starfish
- [www.emr.org.nz/](http://www.emr.org.nz/)
- [www.doc.govt.nz](http://www.doc.govt.nz)

## VIRTUAL FIELD TRIP TO A MARINE RESERVE

24–26 February 2010

The Department of Conservation and LEARNZ invite your class to take a 'virtual' field trip to Cape Rodney-Okakari Point Marine Reserve from 24–26 February 2010.

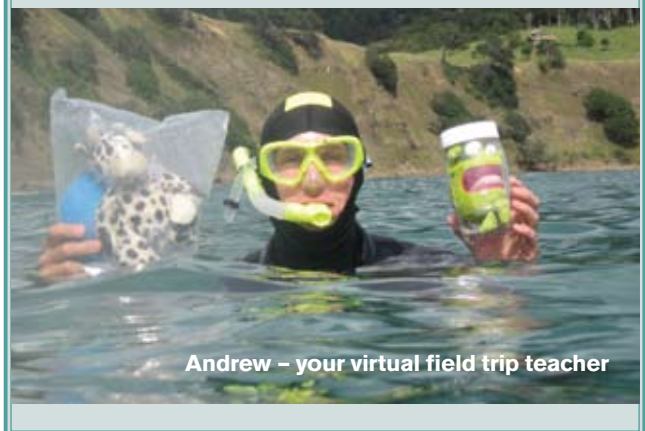
LEARNZ field trip teacher, Andrew, will help your class explore the marine reserve. During your virtual trip your students will:

- meet marine experts
- go snorkelling with the fish living amongst the rocks and kelp forests
- ride in a glass bottom boat in the deeper waters of the reserve
- watch videos about the rock pool inhabitants and creatures, waves and wind, and the beach and surrounding geology
- read diaries and look at photos from each day's adventures.



New Zealand registered and provisionally registered teachers can enrol in 'virtual' field trips for **free**. To enrol for this field trip and further information visit:

[www.learnz.org.nz](http://www.learnz.org.nz) or call freephone **0800 22 55 53**.



Andrew – your virtual field trip teacher





# FISH FOR THE FUTURE

A Science, Social Sciences Unit  
from the New Zealand Seafood Industry  
... proud sponsors of Seaweed 2010



## Curriculum Areas: Levels 2-4+

### Science: Living World:

- Understanding the importance of sustainability for our fishery and marine environment.
- Considering how living things interact with the environment and the effects humans can have on this environment.

### Social Science: Place and Environment, Economic Activities

- Finding how we perceive and interact with our marine environment and why we must learn to respect this environmental relationship.
- Understanding the scope of and importance of the seafood industry to New Zealand and its economy.

### Links to: English, The Arts

## UNDERSTANDING AN IMPORTANT CONCEPT

- If students came across an article in a newspaper or magazine called ***Fish for the Future***, could they predict what the article would be about or what the heading meant? Discuss and debate this in groups and as a class. Record student ideas.
- Could this article have environmental or conservation messages? If so, what could this/these be? **eg**
  - *we want to make sure that we always have fish and shellfish to eat in the future.*
- Introduce the idea of fishing as an important recreational pastime – something we all enjoy doing. Could this article also have a double message – one about conservation and the other about preserving this popular recreational pastime for the future? Challenge students to explain how these two messages are very closely related to each other. Can they suggest any actions we can take now to make sure that both following messages are understood and acted upon? **eg**
  - *we will always have fish to harvest (eat) for the future*
  - *we will always be able to fish in the future.*

## OUR RELATIONSHIP WITH THE SEA

- Brainstorm ideas about why the seas and oceans surrounding New Zealand are very important to us all, **eg**
  - *they provide us with kaimoana*
  - *we use them for recreation such as swimming, water sports and fishing.*
- Introduce the students to the term 'marine environment' – the name we give to everything near or connected to the sea.

- Challenge students to what this could include (don't forget rivers and streams that flow out to the sea). Did the list include: intertidal zones, rocky shore, deep ocean, reefs, beaches?
- Have students conduct preliminary online research into our marine environment at:  
[www.mfe.govt.nz/issues/oceans/kids/oceans.html](http://www.mfe.govt.nz/issues/oceans/kids/oceans.html)  
Can they find out:
  - *what is meant by a seascape?*
  - *what makes up two thirds of our marine environment?*
  - *what is a 'seamount' and how large are they?*
  - *how many marine species live in our marine environment?*
  - *how many new species are found every two weeks and how many species do scientists estimate we could find?*

## COMMERCIAL IMPORTANCE OF SEAFOOD

- Talk about and identify the products that New Zealand harvests and sells (exports) overseas to other countries, **eg**
  - *meat, dairy products, wood, wool, coal, wine, flowers ...*
- Did the students know that fish is one of our most important overseas exports? To find out how important it is, visit and play 'The Sea' video at: [www.seafood.co.nz](http://www.seafood.co.nz)  
> select ***View our TV Ad*** (Use multimedia projector if possible).
- Discuss the ideas it contains:
  - *what is meant by our largest natural resource?*
  - *just how large an area does this resource cover?*
  - *how many people are involved and have jobs that depend on the seafood industry?*
- To stress the importance of our commercial seafood industry, tell students that our exports of fish and shellfish is worth over \$1.3 billion dollars per year and that 20,000 people in New Zealand have jobs that are related to the seafood industry. Challenge students to mindmap an extensive list of people who are involved and how they are involved, **eg** fishers > trawler owners > factory workers who gut, clean and pack fish > drivers who transport the fish, port workers who load it > fish shop owners > manufacturers of equipment etc.



# IT JUST MAKES SENSE!

Ideas for  7–14 March 2010



## KEEPING FISH FOR THE FUTURE

- Introduce the idea of a finite resource as one with a limit – that is once it is all used up, we have no more. Did they know that fish could be a finite resource? Tell students that before 1986, commercial fishers were able to catch all the fish that were available and because of this, it was possible to take too many fish from one area, making some fish species scarce. Can students suggest any ways that this can be prevented? (Clue: a person is allowed to take only 3 trout over a certain size from Lake Taupo per day)
- Download *Te Mara Moana –The Living Sea* resource pdf at: [www.seafoodindustry.co.nz/education](http://www.seafoodindustry.co.nz/education) and print out pages 51-52 Conservation: Keeping fish for the future. Discuss the following points with the students:
  - *how did the Government and fishermen decide to overcome the possibility of too many boats chasing too many fish and what is this system called?*
  - *what do scientists do to estimate the number of fish available to be harvested by commercial fishers?*
- Discuss why it is necessary to have a quota. What would be the effect on the seafood industry, the thousands of people who depend on it and on New Zealand exports if we didn't take these measures to make sure we have fish for the future? Why do students think that commercial fishermen wanted and supported the quota system? Simply put, they would not have a job or a business in the industry they love so it makes perfect sense to limit the catch and have fish for the future. Do students know that New Zealand leads the world in making sure we have fish for the future, in other words a sustainable fishery? Tell students that in 2009, New Zealand's seafood industry was twice ranked as the most sustainably managed fishery in the world. Visit: [seafoodindustry.co.nz/factfile](http://seafoodindustry.co.nz/factfile)



## WE MUST ALL PLAY OUR PART

- Discuss the following scenario. *'On the rocks at the beach we visit each year at Christmas, we have always been able to collect a good feed of mussels to eat. Our parents have taught us to leave the small mussels and never take too many so there will be plenty left for next year. Last Christmas when we ...*



starters & strategies



- ... arrived, the rocks had been stripped clean of mussels – even the baby mussels had been taken by poachers!'*
- Did the students know that as well as being terribly selfish, the stripping of the mussels or any shell fish is illegal because there are limits put on the amount of shellfish and fish, we are allowed to take? Develop the idea that having a limit for recreational fishers is very much like the quota system for commercial fishers – it means we have fish for the future! What are the consequences of abusing recreational limits?

## KNOWING THE LIMIT

- Have students visit: [www.fish.govt.nz](http://www.fish.govt.nz) >Select Recreational, > choose the area closest to the school or where they fish and conduct individual or group research on limits, **eg**
  - *how can we play our part in conserving the resource?*
  - *are there any restrictions on nets and equipment we use for fishing?*
  - *select several of their favourite 'fin fish' and note the limit on size and daily take (bag).*

## FURTHER ACTIVITIES

- Invite a recreational and/or commercial fisher to talk to the class about fishing, special safety precautions to take and the conservation measures necessary to sustain the fishery.
- Have groups summarize all the facts they have learnt in their study. Have them decide how they will present these to the class. They could consider:
  - *slogan competition*
  - *poster messages*
  - *web page information*
  - *fridge reminders*
  - *script and shoot a video for other classes*
  - *create a combined class wall display of facts*
- Carry out a school and district survey using questions based on the findings of the 2007 Colmar Brunton Survey at: [www.seafoodindustry.co.nz/factfile](http://www.seafoodindustry.co.nz/factfile)
- Record the results in graphic form. How does the new survey compare with the 2007 survey?
  - [www.mfe.govt.nz/issues/oceans/kids/oceans.html](http://www.mfe.govt.nz/issues/oceans/kids/oceans.html) Visit the 'Effects of human impacts, marine pollution and reducing marine pollution' at the above website. Identify how on-land activities can affect our seas.
- Have students identify and list any measures – no matter how small that they can take to improve our marine environment.
- Choose one of the major projects such as a beach clean-up and put this into action. Involve your local community.