Seaweek 1999

Celebrate Marine Biodiversity: Jewels of the Sea

Harry Briedahl

Understanding the theme

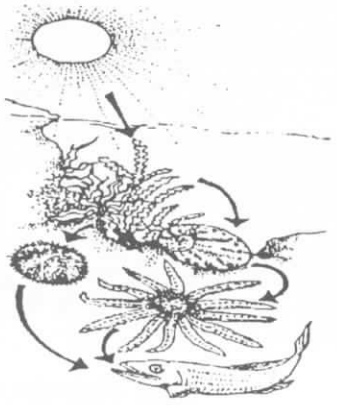

Illustration Courtesy VIMS

Have you ever caught a marlin? Have you ever swum through a kelp forest or seen a gannet dive? These special moments are reminders of the amazing diversity of life that lives along our coasts and in our oceans. Australian's marine environments contain a rich variety of ecosystems, habitats and communities of plants and animals, from the warm tropical north to the cool temperate south. Many of the southern species are found no where else on earth, a huge responsibility in the management of Australia's gigantic ocean area (about 11 million square kilometres).

This vast biological diversity not only makes us feel good but it is part of the basic processes on which human life depends. Healthy ecosystems of plants, animals and microorganisms recycle nutrients, transfer energy, dispose of wastes, maintain water quality and much more. Little is know about our oceans, areas once regarded as ocean deserts have now been found to be teeming with life. It is unknown what part they play in the oceans ecosystems and therefore it is critical that they are conserved.

But just how healthy is Australia's marine biodiversity? The National State of the Environment Report says it is 'poor and deteriorating near centres of human activity'. Working with this theme we can explore the issues of:

- Jewels of the sea, Australia's rich biodiversity and your local treasures
- What is biodiversity, why is it important and what threatens our biodiversity?
- Conserving biodiversity - why and how?
- International conventions and agreements - oceans have no boundaries

Exploring the theme - event ideas

Looking after our Bay - Information brochure.

What

A simple information flyer (tri folded A4 size) produced by the Kurnell Public School with the assistance of the Botany Bay Field Studies Centre. The brochure provided useful information for the local community on ways to help protect the local marine environment.

Where

Botany Bay

How

Illustration Courtesy VIMS

During the year, Grade 5 at Kurnell Public School undertook a marine studies unit which involved working with the Botany Bay Field Studies Centre to learn about their local marine environment. As part of that unit the class produced a brochure which gave information about the local marine environment and some ideas of ways in which to help protect the waterways. The students researched relevant material and then wrote the brochure, including the headings of Boating, Birds, Shells, Fishing, Protected Areas, Sensitive Habitats, Pollution Solutions and Taking Care of Yourself. It was edited by the Botany Bay Field Studies Centre.

Photograph Courtesy Sydney Maritime Museum

Performance at Sydney Maritime Museum - Seaweek 99

The brochures were launched during Seaweek at Lilli Pilli School and followed by a performance from the 'Resyche's' Environmental Theatre group. Brochures were sent home to all parents via the school newsletters. For wider community distribution they were also placed in local shops etc.

Why

The Grade 5 students decided that they would like to have clean beaches, clean water and the chance to see and enjoy a wide variety of marine life in their local area. They knew it would take a big effort by everyone if they were to achieve this. They hoped that with further information and understanding of the local marine environment, the community would be more interested and inspired to take actions towards caring for it. They saw that one way of providing this local information was by producing and distributing a brochure.

Extending the theme - classroom activities

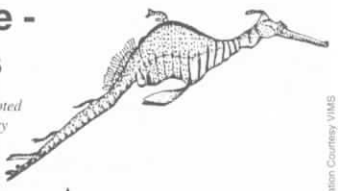

Illustration Courtesy VIMS

All these Marine Biodiversity Education activities are adapted from the Seaweek'99, Teachers Resource Booklet by Harry Breidahl, Mark Rodrigue, Andreas Glanznig and Barbara Jensen.

Marine Biodiversity Linked to all Key Learning Areas

The Arts

- Play Charades - Use marine animals as inspiration for performances in a game of charades.
- Biodiversity Stamps - Design a set of postage stamps about biodiversity in your local area. Make a display folder with information about each stamp.

English

- ABC in the Sea - Find examples of local marine animals or plants to match each letter of the alphabet?
- Bio Word Quiz - Biota, bioregion, biome, biodegradable, biologist are all examples of bio words. Find as many as you can and write a word quiz.

Languages other than English

- Marine Words - Find out about words in a chosen language to describe different animal and plants in the sea. Are animals and plants different in the country of origin of the language? How do they compare in diversity.

Mathematics

- Biodiversity 2000 Olympics - What are the events for Marine (animals) Olympic Games? What venues, rules and contestants. Which Australian sea animal is the fastest, biggest, toughest, most amazing feats etc? Who are the real winners in Marine Biodiversity?

Technology

- Biodiversity Design - Hundreds of turtles die each year after being caught in fishing nets. To protect the turtles and minimise the by-catch, TED's or turtle excluder devices are used in some countries. Design another device to help to reduce the impact of our fishing practices on marine life.
- Tool Time - Consider tools that are commonly used by humans and try to find similar examples from different animals or plants in the sea (eg crab pincers are like tongs).

Studies of Society and Environment

- Indigenous Australians and the Coast - Find out about the use of the coast by our indigenous people. What is sea country? What are some Aboriginal words to describe the marine animals and plants in your area? Find the people who can tell you more about sites, stories and significance of the coastal areas.
- Food in the Sea - Have students investigate their local shops to find at least ten different items from the sea. What else do different cultures use from the sea?
- The Story of a Drop of Rain - With a map of Australia find your closest ocean. Follow local creeks and rivers until they reach the ocean. Tell the story of a drop of rain from your roof on its incredible journey to the ocean.
- Timelines - Interview students, staff and older people about a local coastal or marine environment eg a beach or coastal park. Discover the changes over the years and the impacts on the area. Write a radio report.

Photo courtesy Jodi Piccas

Make an Ocean Mural

Science

- Patterns of Diversity - Identify and compare a range of different features of marine animals eg fins, eyes, gills, tails, eggs and body shapes. Show in a class presentation or report how different features are useful in assisting in survival in different environments or conditions.
- Marine Life Report Card - Examples of the major threats to biodiversity are habitat modification, pollution and poor management practises. Consequently much sealife is in trouble. Research a marine species and find out more about its habitat and ecosystem. Write a report card for the survival of this marine species.

Health and Physical Education

- Education by the Sea - Plan field trips and adventure activities along our magnificent coastline. Give students opportunities to get to investigate, know and enjoy the coasts and oceans.

Personal Actions

Biodiversity brings benefits to every part of our lives and needs our help:

- Dispose wastes properly from your garden, aquarium, swimming pool and fish pond.
- Protect wildlife by controlling pets or leaving them at home when you visit the beach.
- Revegetate cleared area. Choose your garden plants with care. Plant local native trees and shrubs they belong to your soil, climate and wildlife.

SeaweekNZ

Nga Taonga a Tangaroa
Treasures of our Coast

Seaweek NZ is organised by the Marine Education Society of Aotearoa Inc. It is an annual event celebrated every 3rd week in March since 1992. MESA NZís vision is to create an awareness and knowledge of the marine environment so that all New Zealanders take personal responsibility for their interactions with it. MESA NZ and Australia have developed a strong link, through support and sharing of experience, skills and resources.

Treasures of our Coast, Nga Taonga a Tangaroa

The New Zealand coastal environment is diverse. It is characterised by features such as long ocean beaches, exposed cliffs, bays, drowned valleys and numerous islands of varying sizes. Beneath the waves can be found a diversity of marine habitats such as kelp forests, sponge 'gardens', shellfish 'beds', canyons, coral 'beds' and all its fish and marine inhabitants. There is still much to be learnt about the coastal environment. Every year an average of 30 to 50 new species of fish are discovered.

It is important for all New Zealanders to ensure their natural heritage is protected now and into the future for the benefit and enjoyment of everyone. Overuse, exploration and apathy cause widespread damage and minimisation of examples of what life in the coastal water used to be like before humans arrived. Establishing marine and island reserves is becoming increasingly urgent and vital in the survival of native species and Offshore Islands - 'Treasure Islands'.

New Zealand comprises, in addition to the two main North and South Islands, just under 700 Offshore Islands. The arrival of human settlers from Polynesia some 1000 years ago proved to become the beginning of the end for many plant and animal species. Offshore Islands offer hope for the survival of endangered wildlife. On the mainland competition with predators and loss of habitat has made survival impossible for many species, but on offshore Islands it is possible to control, monitor and protect these species.

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