



Seaweed 1996

Celebrate the sea - The Wetlands Connection

Harry and Jane Briedahl

Understanding the theme

All along Australia's coastline are areas that are either permanently or temporarily covered by shallow water. These are called coastal wetlands and include mangrove forests, mudflats, saltmarshes, lagoons, lakes and swamps. Coastal wetlands are very important and productive environments and play a significant part in keeping the coastline stable, productive and clean.

Coastal wetlands are home to an amazing diversity of plants, invertebrates, reptiles, fish and birds. They are important breeding grounds for birds and nursery areas for fish. They act as a buffer between the sea and land protecting it from erosion, waves and storms. They trap silt, chemicals and other run off from the land, helping to purify the water. They are vital recyclers of nutrients. They provide protection from floods by absorbing and slowly releasing water. They are natural fire breaks. Wetlands are an important part of our life support systems.

The continuing loss or deterioration of wetlands is of global concern. This theme presents the issues of:

- The definition and value of wetlands
- Wetland ecosystems: harsh environment, tides, temperature and salinity
- Coastal management issues including: coastal development; draining, acid sulphate soils; dredging; feral plants and animals and blue green algae
- Waterbirds: migration; resting and breeding areas; controlling farm pests
- Managing fisheries: home and nursery for many species

Exploring the theme - event ideas

Taking Seaweed to rural schools - Developing a wetlands connection for students in their local area.

What

The South Australian President of MESA, an environmental educator, visited rural schools on Yorke Peninsula, South Australia, to assist teachers and students in developing an understanding of the wetland connection in their local area.

Where

Five schools were visited over a five-day period, on the Yorke Peninsula.

How

A program of activities were tailored for each class in each school, depending on the location of the school and the requirements of the teachers and students. Over the five days field trips were conducted to freshwater ephemeral wetlands, mangrove communities, intertidal seagrass mudflats, rocky shores and sandy beaches. Some classes combined the field trips with activities back at school where they planted mangrove aquariums or investigated the multiple connections between wetlands and the terrestrial and marine environments.

Why

The visits allowed teachers and students to relate Seaweed to their local area. Yorke Peninsula is surrounded by sea on three sides and many schools are marine focused. The visits promoted a greater understanding of wetland environments and the contributions these communities make to the ecosystem at large.

Photo courtesy Marine Discovery Centre

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Extending the theme - classroom activities

Activity 1: Wetland Webs of Life

Background

Food is of vital importance to all living organisms because it provides both energy and materials for growth. Food webs provide a picture of energy flow in a community of plants and animals. They also show some of the complex interactions and relationships of an ecosystem.

Aim

- to build up a complex model of a wetlands food web.

Activity

- Ready with a ball of string, ask the students to form a seated circle.
- Stand in the centre and ask — Who know the name of a coastal wetland plant? Pass the start of the string to the student who provides an answer e.g. mangrove. Ask what happens to the mangrove leaves before they can be eaten by an animal?

Whoever answers — the leaves become part of the detritus is linked to the mangrove with the string. What eats detritus? Is the next question and the student with the answer such as marine worm is linked to the detritus by string. If you receive more than one answer it is fine to link the detritus to a number of students.

Continue to build links by asking what eats a marine worm? And so on.

Once you get to a top carnivore such as a wading bird you should work back by asking questions such as — what else would you eat?

Coastal Wetland Food Chains

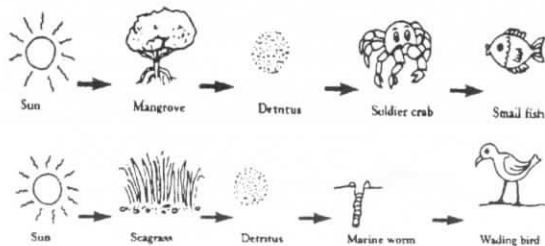


Illustration Courtesy Harry and Jane Briedahl

Activity and pictures courtesy of Harry and Jane Briedahl

In this way you can build up a complex model of a wetlands food web. Make sure that you build the web with tight string.

- Close the game by posing the question what happens if we remove all the soldier crabs from our coastal wetland? This can be simulated by asking the crab to tug on the string and anyone who feels this tug is affected in some way.

Personal actions

Lets work for our wetlands:

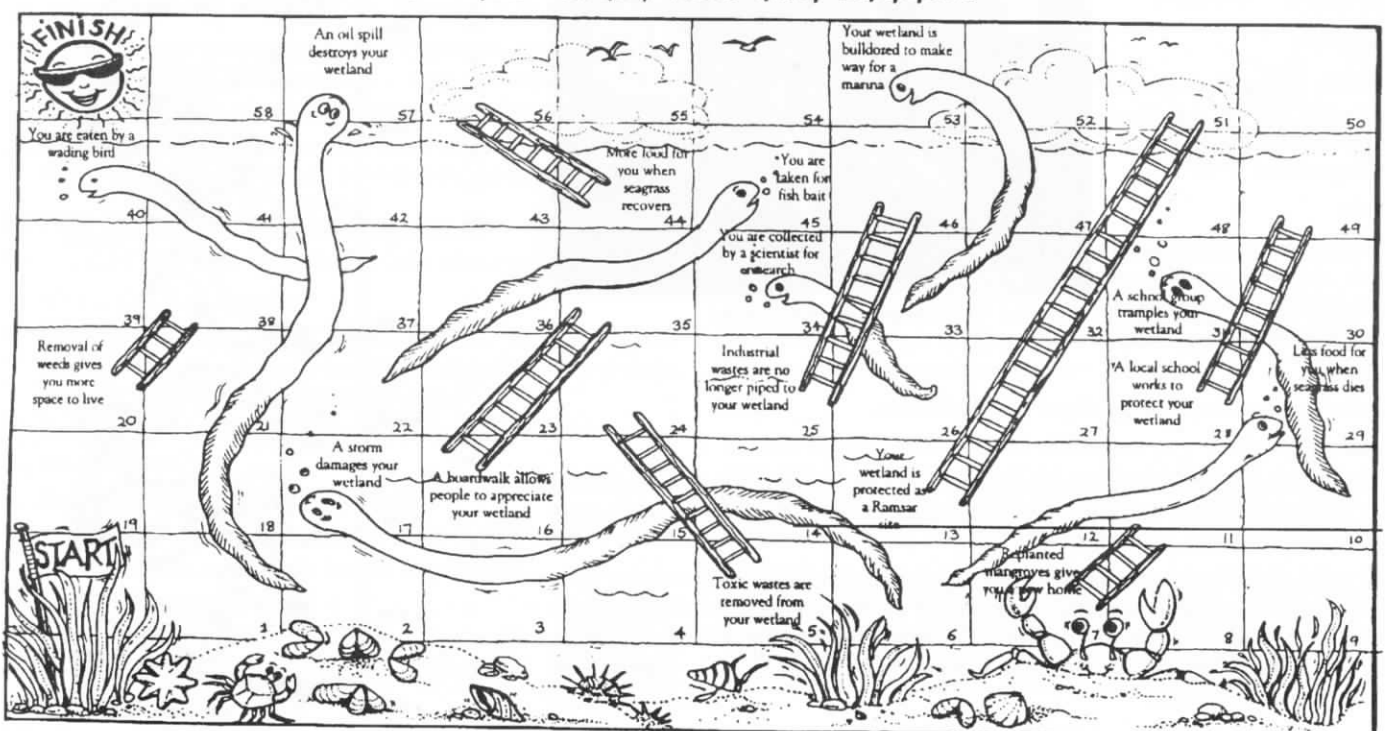
- Be responsible with the use of water and ensure that rubbish, detergents, oils, soils and chemicals are prevented from entering our waterways.
- Appreciate salt marshes and mangrove forests from boardwalks and information centres. They are sensitive to trampling and take a long time to recover.
- Phosphate is a contributing factor in blue green algal blooms, read labels on washing powders.
- Avoid sea bird colonies during the nesting season, many birds abandon their nests if disturbed.

Mangrove walks were organised for Seaweed in several parts of Australia, this is Lamb Island in Moreton Bay. The mangrove communities of Moreton Bay provide significant nursery areas, that play an important role and contribute greatly to the fishing industry.



Photo courtesy Jan Oliver

Soldier Crab, Eels and Ladders



Activity and pictures courtesy of Harry and Jane Briedahl

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