

NSW Marine Parks Education Kit

Jervis Bay Marine Park



our environment *it's a living thing*

Published by Marine Parks Authority New South Wales

Recommended citation: Marine Parks Authority 2010, NSW Marine Parks Education Kit

Available from:

Marine Parks Authority

PO Box 1967

HURSTVILLE NSW 1481

T: 1300 361 967

F: 02 9585 6544

E: executive.officer@mpa.nsw.gov.au

W: www.mpa.nsw.gov.au

or contact your local marine park office.

© State of NSW and NSW Marine Parks Authority

The NSW Marine Parks Authority is pleased to allow this material to be reproduced in whole or in part for educational purposes, provided the meaning is unchanged and its source, publisher and authorship are acknowledged.

ISBN 978 1 74232 556 9

DECCW 2010/127

August 2010

Printed on environmentally sustainable stock

Funded through the NSW Environmental Trust

Coordinated and compiled by Daniella Marks

Designed and produced by PeekKdesigns www.peekkdesigns.com.au

Edited by Kathryn James



Acknowledgements:

Thanks to all who assisted with this project: the Environmental Trust; the Department of Education and Training; Mark Caddey; NSW Marine Parks Authority staff; Andrew Read; Tracey Macdonald; the Department of Environment, Climate Change and Water; Sue Burton; John MacQueen from the Cascade Environment Centre; Anne Wilhelm; Yarrawarra Aboriginal Corporation and the Garby Elders; Mark Flanders; Mogo, Bodalla, Wagonga and Batemans Bay Local Aboriginal Land Councils; the Arakwal people of Byron Bay; the Wreck Bay and Jerrinja Aboriginal communities as well as other traditional owners of the Jervis Bay area; and the Worimi people of Port Stephens.

Photo Credits:

AC	Adrian Cookson	IS	Ian Shaw
BV	Brett Vercoe	JE	Jenny Edwards
CB	Chantelle Burns	JF	Jan Forbes
CCM	Coffs Coast Marketing	JN	John Natoli
DG	David Greenhalgh	MP	Michelle Perry
DH	Dave Harasti	MPA	Marine Parks Authority
DM	Daniella Marks	NJ	Nicola Johnstone
DS	Damien Stanford	SB	Sue Brown
GK	Geoff Kelly	SE	Shamaram Eichmann
HM	Hamish Malcolm	TK	Tony Karasconyi
IC	Ian Charles		

Cover Photos: Jan Forbes, Adrian Cookson and Daniella Marks

Contents

<i>Foreword</i>	2
Introduction	3
<i>About the NSW Marine Parks Education Kit</i>	4
Module 1: Marine Parks	6
<i>NSW Marine Parks</i>	7
<i>Jervis Bay Marine Park</i>	11
<i>Stage 1 - Local Places</i>	13
<i>Stage 2 - Local Environments</i>	15
<i>Stage 3 - Living Land</i>	18
Module 2: Rocky Shores	23
<i>NSW Rocky Shores</i>	24
<i>Rocky Shores of the Jervis Bay Marine Park</i>	27
<i>Life on the Rocky Shore</i>	28
<i>Rocky Shore Organisms of the Jervis Bay Marine Park</i>	29
<i>Stage 1 - Local Places</i>	30
<i>Stage 2 - Local Environments</i>	36
<i>Stage 3 - Living Land</i>	39
<i>Rocky Shores Risk Analysis</i>	50
Module 3: Estuaries	52
<i>Estuaries in Marine Parks</i>	53
<i>Estuaries of the Jervis Bay Marine Park</i>	56
<i>Estuarine Organisms of the Jervis Bay Marine Park</i>	57
<i>Stage 1 - Local Places</i>	58
<i>Stage 2 - Local Environments</i>	62
<i>Stage 3 - Living Land</i>	69
<i>Estuaries Risk Analysis</i>	74
Module 4: Sea Country	76
<i>Marine Parks Cultural Heritage - Sea Country</i>	77
<i>Sea Country of the Jervis Bay Marine Park</i>	81
<i>Sea Tucker of the Jervis Bay Marine Park</i>	84
<i>Stage 1 - Local Places</i>	85
<i>Stage 2 - Local Environments</i>	87
<i>Stage 3 - Living Land</i>	90

Foreword

Marine parks aim to protect estuaries, oceans and marine life for everyone to enjoy into the future. The State's system of six marine parks includes the subtropical waters offshore from Cape Byron on the Far North Coast and the temperate waters of Batemans Bay in southern NSW. NSW marine parks are part of a national and global effort to protect marine biodiversity, and are home to unique species of birds, fish, shellfish and plants that inhabit the beaches, wetlands or underwater reef gardens. Marine parks also protect important Aboriginal and historical sites.

Community understanding and education are central to the effective management of our marine parks. Primary school education plays a very important role in increasing community understanding and informing the future custodians of the marine environment. In 2007, the NSW Marine Parks Authority developed a primary school education kit for the Solitary Islands Marine Park. The overwhelming success of this local program has led to the development of an expanded primary school education kit for use in all our marine parks, with funding provided by the NSW Environmental Trust.

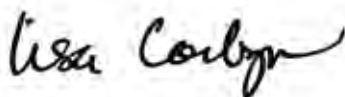
The NSW Marine Parks Education Kit contains four modules that cover the topics of marine parks and conservation, rocky shores, estuaries and cultural heritage. These modules have been designed to fit the NSW Department of Education and Training's primary school curriculum, and can be used to complement current teaching programs. With fact sheets, identification guides, risk assessments and activity plans within each module, the kit provides a comprehensive resource for primary school teachers to use.

We hope that this expanded education kit will help increase awareness and understanding of marine parks, and their values, and educate young students on conservation of the marine environment.

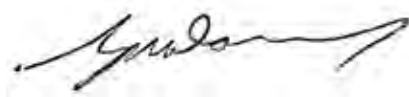
We recommend this kit to all primary school teachers and trust that their experience in marine park education is rewarding and exciting.



Peter Duncan
Deputy Director General
Department of Premier and
Cabinet
Chairperson



Lisa Corbyn
Director General
Department of Environment,
Climate Change and Water



George Davey
Director General
Industry and Investment NSW



Introduction



About the NSW Marine Parks Education Kit

The NSW Marine Parks Education Kit is designed to provide a structured and directed primary level teaching resource that conforms to the Department of Education and Training's curriculum, addressing the key learning areas in the Connected Outcomes Group A – Exploring Our Place. With four separate modules covering marine parks and conservation, estuaries, rocky shores, and Aboriginal cultural heritage, the kit offers a comprehensive interactive learning experience for students both within the classroom and in the field. This results in a resource that is flexible in its application, and can be used not only by those schools located on the NSW coast, but also by schools in remote inland areas whose students may not have opportunities to visit coastal areas.

Aims

The primary aim of this kit is to provide a structured and curriculum-based education resource for primary school students that educates them on the marine environment and marine protected areas, and increases awareness and understanding of marine park objectives, conservation values and management. The importance of the various habitats within the near-shore marine environment is taught through the four modules, which also cover the sustainable use of these habitats and marine resources by the traditional Aboriginal custodians.

Structure

The kit consists of individual packages for each of the six marine parks in NSW. Within each marine park package, there are four modules, or topics, each addressing different key learning areas of the Connected Outcomes Group A – Exploring Our Place. Objectives are described in each stage of each module.

1. Marine Parks

This module teaches the importance of marine parks, marine park management, and how we can act in an ecologically responsible manner towards the marine environment.

2. Rocky Shores

This module emphasises the importance of the rocky shore habitat in the oceanic ecosystem; that is, as a habitat for juvenile organisms, a source of food for coastal animals, and an interface between the sea and the land.

3. Estuaries

This module provides information about the natural estuarine environment; increases the understanding of relationships between plants, animals and their environment, and between humans and animals; and includes identification of local estuarine animals.

4. Sea Country

This module explores Aboriginal peoples' connection to and use of the sea (sea country), including their traditional practices, and how this connection is expressed through art, dance and music.

How to use the kit

Each module contains fact sheets, activity plans, identification guides and student activities designed for Stages 1, 2 and 3 to lead learning over the years. Activities include both classroom-based and field activities, but all are adaptable, and teachers are free to adapt activities to their particular requirements and location.

Each module within the kit has the following components:

- Fact sheets
 - A general fact sheet, as well as one specific to the local marine park, is included to provide background information on the module topic. Teachers should refer to the fact sheets and then guide students through the activity.
- Teacher activity plans
 - Activity plans for stages 1, 2 and 3 of Connected Outcomes Group A – Exploring Our Place detail student activities and are supported by video segments and Microsoft PowerPoint presentations where appropriate.
- Student activity sheets
 - Student activity sheets support each activity plan and encourage the students to apply the information learned from both fact sheets and excursions to a range of fun activities.
- Identification guides
 - Primarily used in the field, bingo-style identification guides support activity plans where species identification is part of the activity.
- How to adapt
 - Each teacher activity plan has options for adapting the activities for those classes that are not able to conduct coastal excursions.

Feedback

Please provide us with feedback on this kit so that we can improve and expand upon it.

Visit www.mpa.nsw.gov.au and provide your comments.

Thank you for your interest and involvement in the continued development of this resource.