



Teacher Edition

AlphaWorld

Erosion: **The Changing Shape of the Land**

Written by Marilyn Woolley

Horwitz Education
A Division of Horwitz
Publications Pty Ltd
55 Chandos Street
St Leonards NSW 2065
Australia

Horwitz Gardner Limited
168c High Street
Egham, Surrey
TW20 9HP
United Kingdom

Published edition
© Eleanor Curtain
Publishing 2005
Text © Nicole di Marco
Photographs © Eleanor
Curtain Publishing

First published 2005

Apart from any fair dealing for the purposes of study, research, criticism or review, as permitted under the Copyright Act of Australia, no part of this book may be reproduced by any process, or transmitted in any form, without permission of the copyright owner. Where copies of part or the whole of this book are made under Part VB of the Copyright Act, the law requires that records of such copying be kept and the copyright owner is entitled to claim payment.

Developed by
Eleanor Curtain Publishing
Text: Nicole di Marco
Consultant: Susan Hill
Designed by
Alexander Stitt
Production by
Publishing Solutions

Printed in China

ISBN 0 7253 3082 1

1 2 3 4 5 6 7 8 9
05 06 07

How to use this book

The AlphaWorld teacher editions support teachers as they guide children's reading and thinking during one or more guided reading sessions. Teachers can observe children as they read and choose from the given suggestions to suit individual needs.

Before reading

Setting the context, front cover and title page:

The suggestions help teachers to set the scene and prepare children for reading the book. Prompts help to determine children's prior knowledge. Where necessary, background information is provided. Teachers are encouraged to check that children understand the vocabulary listed and to discuss the meanings and/or the structures of these words. Previous experiences with similar text types may also be discussed.

During reading

Predict, Read, Reflect:

Questions encourage children to engage with the text by making predictions. The children then read a section of the text and reflect on what they have read. The focus is on the content, language and text features of the book.

Observe and support:

Prompts help teachers to focus on the strategies children use as they read. Teachers can then select from and adapt the suggestions according to the needs of the individual child. The suggestions aim to develop a child's reading abilities. Interruptions to the child's reading should be minimal.

After reading

A selection of reading and writing activities:

The last pages of the teacher edition provide follow-up activities and include the assessment focus.

Selected text features

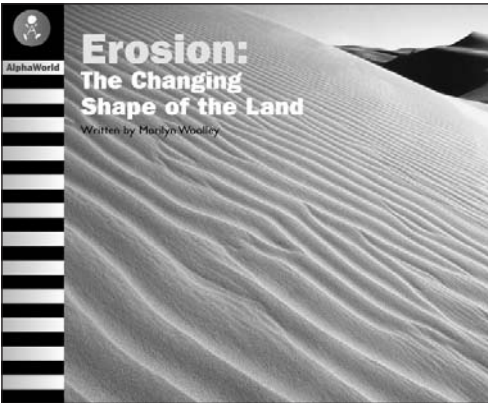
- Introduction and conclusion
- Colour photographs support the text
- Index

Vocabulary

avalanches, canyons, changing, cliffs, coastline, desert, erosion, glacier, ice, landslides, sand dunes, shapes, snow, water, wind, worn away, valley

Setting the context

This book is about how wind and water can change the shape of the land. Discuss with the children what it is like to sit on the beach on a windy day. *What happens to the sand at the beach on a windy day?* Ask the children to tell you about a time they built a sandcastle at the beach. *What happened when a wave washed over the sandcastle?*



Front cover

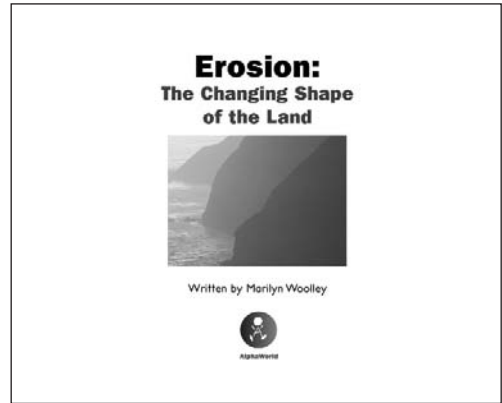
Show the front cover.

This book is called Erosion: The Changing Shape of the Land.

What can you see on the front cover?

Background information

This text explains how the movement of wind and water (in the form of waves, rain, ice and snow) can lead to different forms of erosion that change the shape of landforms throughout the world.



Title page

Turn to the title page.

Look at the photo of the cliffs and discuss reasons that would explain their shapes.

The author of this book about erosion is Marilyn Woolley. Have you read any other books by this author?

Predict

This is the contents page. What do you think this book is about? Let's read through it and find out.

Discuss any words that the children are unsure about.

How could we find out what the difficult words mean?

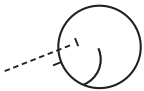
Turn to page 4.

This is the introduction. The introduction will tell us what this book is about. It says that the land around us is always changing. Water, wind, ice and snow can all change the shape of the land. How could this happen?

Read to the end of page 4.

Reflect

What does erosion mean? Can you tell me in your own words?



Observe and support

Ask a child to read aloud to you while the other children are reading silently.

Does the child read the text fluently?

I liked the way you read that. It sounded like talking.



Contents

Introduction	4
Beaches	6
Rocks and cliffs	8
Canyons	10
Glaciers	12
Avalanches	14
Landslides	16
Rocky deserts	18
Sandy deserts	20
Conclusion	22
Index	24

Introduction

The land around us is always changing. Water, wind, ice and snow can all change the shape of the land.

Water can wash soil, sand and bits of rock to other places. Wind can blow soil and sand to other places. Ice and snow can move down mountains.

When any of these things happen, parts of the land are worn away and new shapes are made in the land. This is called erosion.



Predict

Beaches are made up of sand or small rocks that have been washed up or blown along the shore.

How could erosion occur at the beach?

How would the shape of beaches change?

Turn to page 8.

This section is about the erosion of rocks and cliffs.

What does the cliff in the photo look like?

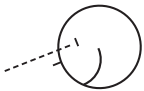
Over a long period of time the shape of rocks and cliffs change. How could they be changed?

Read to the end of page 8.

Reflect

Tell me how the shape of beaches keeps changing?

What was the most interesting fact you discovered when reading the section on rocks and cliffs? Why?



Observe and support

Can the child locate what the author actually says?

What happens to the soil that covers rocks? Where did you find that out?

Beaches

Beaches are made of sand or small rocks that have been washed up or blown along the shore.

Sand is washed up from the bottom of the sea or comes from rivers that flow into the sea. Wind blows this sand into hills called sand dunes.

The wind keeps changing the shape of sand dunes. Water from waves or heavy rain keeps changing the shape of beaches.



Rocks and cliffs

Wind, rain and sea water blow or crash against rocks and cliffs along the coastline.

The soil that covers rocks is easily blown or washed away. The water from the ocean also wears away rocks and cliffs.

Waves, wind and sand change the shape of rocks and cliffs over a long time.



Predict

Canyons are deep valleys with steep rocky cliffs on either side. Look closely at the photo on this page. How do you think canyons are formed?

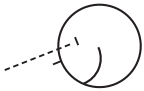
Turn to page 12.

A glacier is like a river of ice. A glacier moves very slowly. It tears off rocks and makes big holes and valleys in the land. When rain fills these valleys, a new lake or river is made. How would a glacier be made?

Read to the end of page 12.

Reflect

Is there any information in these sections that you found confusing? Let's talk about how canyons and glaciers are made.



Observe and support

Can the child support their understanding of the text with evidence from the page?

What causes a glacier to move downhill? How do you know?

Canyons

Canyons are deep valleys with steep rocky cliffs on either side.

Canyons are made when water wears away the sides and bottom of a river. The water breaks rocks into smaller pieces. This helps to grind away the sides and bottom of the river.



10

11

Glaciers

A glacier is like a river of ice.

When snow falls and the wind blows high up in the mountains, snow can pile up and turn into ice. The pile can become so heavy that the ice starts to move downhill. The moving ice is called a glacier.

A glacier moves very slowly. The heavy ice tears off rocks and makes big holes and valleys in the land. When rain falls in these holes and valleys, a new lake or river is made.



12

13

Predict

An avalanche occurs when huge chunks of snow break away from the sides of mountains or glaciers and crash down to the valley below.

What could cause an avalanche? What can avalanches do?

Turn to page 16.

A landslide occurs when soil and rocks slide down a slope.

What does the photo on this page tell you about landslides?

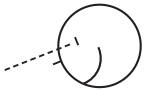
Read to the end of page 16.

Reflect

What could trigger an avalanche?

Tell me what you think happens when an avalanche crashes down. How do you know?

How does a landslide change the shape of the land?



Observe and support

Can the child interpret the information provided in the pictures?

Look at the pictures on page 15. What do you think an avalanche would look and sound like? What makes you think this?

Avalanches

An avalanche occurs when huge chunks of snow break away from the sides of mountains or glaciers and crash down to the valley below. Strong winds can start avalanches.

An avalanche covers everything in its path as it crashes down.

Avalanches can change the shape of mountains and valleys.



16

Landslides

A landslide occurs when soil and rocks slide down a slope.

Heavy rain can cause landslides. The water washes away the soil. Over time it can make deep cracks in the rocks underneath. Parts of the rocks can break off and move downhill.

A landslide leaves valleys and dips in hillsides and mountains.



17

Predict

Look at the photos of a rocky desert. A desert is a place where there isn't much rain. In rocky deserts larger rocks wear away and sometimes pieces break off. What do you think 'wear away' means? How might these rocky deserts be changed?

Turn to page 20.

In sandy deserts wind blows the sand around. It can blow the sand into large sand dunes. When it rains water washes the sand away or makes waterholes, streams or gullies. Have you seen sand dunes? What are they like?

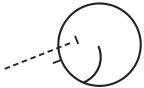
Read to the end of page 20.

Reflect

What is a desert?

How are sandy and rocky deserts the same? How are they different?

What causes deserts to change?



Observe and support

Can the child use information in the photographs and text to understand new vocabulary?

What is a dune? What helped you to work that out?

Rocky deserts

A desert is a place where there isn't much rain.

In rocky deserts, wind blows sand and small rocks against larger rocks. The larger rocks wear away and sometimes pieces break off.

When it rains in the desert, the water washes away sand and wears away at the rocks, which changes their shape. The wind can also change the shape of the rocks.



10

11

Sandy deserts

In sandy deserts, wind blows the sand around. It blows the sand into large sand dunes.

When it rains in sandy deserts, the water washes the sand away or makes waterholes, streams and small gullies.

Sometimes water gets trapped behind sand dunes to make lakes.



12

13

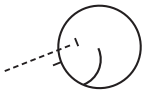
● **Predict**

*This is the conclusion. Why do books have a conclusion?
What words do you think we will find in this conclusion?*

● **Read** to the end of page 22.

● **Reflect**

*What causes erosion? What happens as a result of erosion?
After reading this book, tell me what you think erosion is.*



Observe and support

Do the children monitor their own reading? Do they notice when they make a mistake?

Why did you stop there? What did you notice? What could you try now? Does that sound right?

Conclusion

Erosion is caused by water, wind, ice and snow.

Water and wind blow or wash away soil, rocks and sand.
Ice and snow crash down mountains, tearing off rock
and covering things up.

As a result of erosion, the land around us keeps
changing shape.



● **Predict**

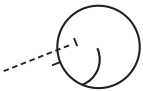
This is the index page. What is an index page for? How is an index different from a contents page?

● **Read** to the end of page 24.

● **Reflect**

Why do some entries have lots of page numbers next to them and some only have one?

Which entry would you like to read again?



Observe and support

Can the children demonstrate how to use an index?
Show me how an index works. Describe what you are doing as you demonstrate.



Index

- avalanches 14
- canyons 10
- cliffs 8, 10
- deserts 18, 20
- glaciers 12, 14
- ice 4, 12, 22
- landslides 16
- mountains 4, 12, 14, 16, 22
- rain 6, 8, 16, 18, 20
- rocks 4, 6, 8, 10, 12, 16, 18, 22
- sand 6, 8, 18, 20, 22
- snow 4, 12, 14, 22
- soil 4, 8, 16, 22
- water 4, 6, 8, 10, 16, 18, 20, 22
- wind 4, 6, 8, 12, 14, 18, 20, 22

After reading

Being a meaning maker

Encourage the children to support their answers with evidence from the book as they discuss these questions:

What is erosion?

What causes erosion?

Where can erosion occur?

What are some different forms of erosion?

Being a code breaker

Explore the following language features:

- Punctuation: colon, apostrophe, commas
- Using contextual information to understand unfamiliar vocabulary, for example, avalanches, glaciers, landslides

Being a text user

Turn to the index page.

What is this page called? How do we use it?

What did you learn about erosion by reading this book?

What would you still like to know?


How might you find out this information?


Being a text critic


What did the author need to know about to write this book?

What is the most important thing you learned by reading this book?

Responding to text

 The children could make a model of one of the forms of erosion discussed, for example, canyons. Ask them to re-read that section and look closely at the pictures to gather information. Encourage them to use pointers and labels to show how erosion occurs.

 Design a crossword using the scientific language found in the text, for example, glaciers. Children could work individually or with a partner to solve the crossword.

 Brainstorm words that are related to the topic of erosion. List these on a chart. The words could then be classified. For example:

Erosion

Where it occurs	How it occurs	Describing erosion
sandy dunes	wind	wears away
canyons	rain	shapes
beaches	water	tearing off

Writing links


Model taking notes using a large blow-up of one of the pictures from the book, for example, the avalanche on page 16. Discuss the picture and record three or four key words about it. Then remove the picture and write each key word in a sentence about avalanches. Display the sentences with the picture.

The children could record an entry in their learning journal describing what they now know about erosion from reading this book.


Possible assessment focus

Can the children:

- explain the meaning of the scientific language used in the book?
- explain how different forms of erosion are caused?
- share extra information gained from the photographs?

 whole text activity

 sentence activity

 word activity

Erosion: The Changing Shape of the Land

Topic: Environment/Weather

Curriculum link: Earth Science

Text type: Explanation

Reading level: 23

Word count: 574

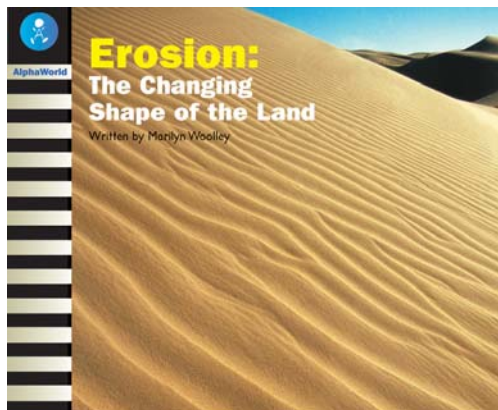
Vocabulary: avalanches, canyons, changing, cliffs, coastline, desert, erosion, glacier, ice, landslides, sand dunes, shapes, snow, water, wind, worn away, valley

Possible literacy focus:

- Understanding scientific language: break up, erosion, grind, wears away.
- Understanding how erosion can occur.
- Interpreting information provided in the pictures.

ESL possibilities:

- Using pictures and subheadings to gain information.
- Understanding phrases such as wears away, break away, washed up, grind away.



Summary

This book explores the ways in which the shape of the land is changed by the effects of water, wind, ice and snow.

AlphaWorld



ISBN 0-7253-3082-1



9 780725 330828