ACADEMIC FNCOUNTERS THE NATURAL WORLD

Reading Study Skills Writing

Jennifer Wharton

Low Intermediate





CAMBRIDGE UNIVERSITY PRESS Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org Information on this title: www.cambridge.org/9780521715171

© Cambridge University Press 2009

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2009

A catalogue record for this publication is available from the British Library

ISBN 978-0-521-71516-4 Student's Book ISBN 978-0-521-71517-1 Teacher's Manual

ISBN 978-0-521-71517-1 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate. Information regarding prices, travel timetables, and other factual information given in this work is correct at the time of first printing but Cambridge University Press does not guarantee the accuracy of such information thereafter.

It is normally necessary for written permission for copying to be obtained *in advance* from a publisher. The tests at the back of this book are designed to be copied and distributed in class. The normal requirements are waived here and it is not necessary to write to Cambridge University Press for permission for an individual teacher to make copies for use within his or her own classroom. Only those pages which carry the wording '© Cambridge University Press' may be copied.





The *Academic Encounters* series uses a sustained content approach to teach students the skills they need to be successful in academic courses. There are two books in the series for each content focus: an *Academic Encounters* title and an *Academic Listening Encounters* title. Please consult your catalog or contact your local sales representative for a current list of available titles.

Titles in the Academic Encounters series at publication:

Content Focus and Level	Components	Academic Encounters	Academic Listening Encounters
HUMAN BEHAVIOR High Intermediate to Low Advanced	Student's Book Teacher's Manual Class Audio Cassettes Class Audio CDs	ISBN 978-0-521-47658-4 ISBN 978-0-521-47660-7	ISBN 978-0-521-60620-2 ISBN 978-0-521-57820-2 ISBN 978-0-521-57819-6 ISBN 978-0-521-78357-6
LIFE IN SOCIETY Intermediate to High Intermediate	Student's Book Teacher's Manual Class Audio Cassettes Class Audio CDs	ISBN 978-0-521-66616-9 ISBN 978-0-521-66613-8	ISBN 978-0-521-75483-5 ISBN 978-0-521-75484-2 ISBN 978-0-521-75485-9 ISBN 978-0-521-75486-6
AMERICAN STUDIES Intermediate	Student's Book Teacher's Manual Class Audio CDs	ISBN 978-0-521-67369-3 ISBN 978-0-521-67370-9	ISBN 978-0-521-68432-3 ISBN 978-0-521-68434-7 ISBN 978-0-521-68433-0
THE NATURAL WORLD Low Intermediate	Student's Book Teacher's Manual Class Audio CDs	ISBN 978-0-521-71516-4 ISBN 978-0-521-71517-1	ISBN 978-0-521-71639-0 ISBN 978-0-521-71641-3 ISBN 978-0-521-71640-6

2-Book Sets are available at a discounted price. Each set includes one copy of the Student's Reading Book and one copy of the Student's Listening Book.

Academic Encounters: Academic Encounters:
Human Behavior 2-Book Set
ISBN 978-0-521-89165-3
Academic Encounters:
American Studies 2-Book Set
ISBN 978-0-521-71013-8

Academic Encounters: Academic Encounters:

Life in Society 2-Book Set

ISBN 978-0-521-54670-6

The Natural World 2-Book Set
ISBN 978-0-521-72709-9





Contents

	Introduction	vi
Unit	1 Planet Earth	1
Chapter 1	The Physical Earth	2
Chapter 2	The Dynamic Earth	10
	Additional Ideas for Unit 1	18
Unit	Water on Earth	19
Chapter 3	Earth's Water Supply	20
Chapter 4	Earth's Oceans	28
	Additional Ideas for Unit 2	37
Unit E	The Air Around Us	38
Chapter 5	Earth's Atmosphere	39
Chapter 6	Weather and Climate	48
	Additional Ideas for Unit 3	55
Unit 4	Life on Earth	= (
		56
Chapter 7	Plants and Animals	57
Chapter 8	The Human Body	67
Chapter 9	Living Longer, Living Better?	76
	Additional Ideas for Unit 4	88
	Content Quizzes	89
	Content Quiz Answers	97

V



Introduction

This Teacher's Manual provides:

- information about Academic Encounters: The Natural World (page vi)
- a brief description of the *Academic Encounters* series (page vii)
- an overview of *Academic Encounters* Reading, Study Skills, and Writing books (page vii)
- general teaching guidelines for *Academic Encounters: The Natural World* (page x)
- answers for the tasks in *Academic Encounters: The Natural World* and additional teaching ideas for each unit (page 1)
- photocopiable unit quizzes and quiz answers for *Academic Encounters: The Natural World* (page 89)

ABOUT ACADEMIC ENCOUNTERS: THE NATURAL WORLD

Academic Encounters: The Natural World is a reading, study skills, and writing text based on content taught in Earth science and biology courses in high schools, colleges, and universities in the United States. In this book, authentic materials have been used as the basis for texts that use academic content and style in such a way as to be accessible to low-intermediate students.

New Features in Academic Encounters: The Natural World

If you are already familiar with the *Academic Encounters* series, you will discover two new features in *Academic Encounters: The Natural World*:

• More support for low-intermediate students

The Student's Book has fewer readings than its predecessors and is one chapter shorter. It has nine, rather than ten, chapters and each chapter has three, rather than four, readings. This organization allows more space for tasks that support low-intermediate students in accessing the content of the readings and in practicing academic skills.

• Guided academic writing assignments

In addition to tasks in which students answer test questions, complete sentences, and write original sentences, *Academic Encounters: The Natural World* provides a one-page writing section at the end of each chapter. It provides students with an opportunity to develop their academic writing skills in an assignment related to the content of the chapter or unit. Students are guided through the writing process.

vi



Correlation with Standards

Academic Encounters: The Natural World introduces students to topics and skills recognized in the United States secondary school standards for Earth science and biology. For more information about the standards, go to www.cambridge.org/us/esl/academicencounters.

TOEFL® iBT Skills

Like the other *Academic Encounters* books, *Academic Encounters: The Natural World* provides tasks that teach academic skills tested on the TOEFL[®] iBT test. For a complete list of the tasks taught, see the Task Index on page 216 of the Student's Book.

ABOUT THE ACADEMIC ENCOUNTERS SERIES

This content-based series is for students who need to improve their academic skills for further study. The series consists of *Academic Encounters* books that help students improve their reading, study skills, and writing, and *Academic Listening Encounters* books that help students improve their listening, note-taking, and discussion skills. The Reading books and Listening books are published as pairs, and each pair focuses on a subject commonly taught in academic courses:

- Topics in Earth science and biology

 Academic Encounters: The Natural World

 Academic Listening Encounters: The Natural World
- Topics in American history and culture

 Academic Encounters: American Studies

 Academic Listening Encounters: American Studies
- Topics in sociology

Academic Encounters: Life in Society Academic Listening Encounters: Life in Society

• Topics in psychology and human communications Academic Encounters: Human Behavior Academic Listening Encounters: Human Behavior

A Reading book and a Listening book with the same content focus may be used independently, or they may be used together to teach a complete four-skills course in English for Academic Purposes.

OVERVIEW OF *ACADEMIC ENCOUNTERS* READING, STUDY SKILLS, AND WRITING BOOKS

The approach

Academic Encounters adopts a content-based approach to the study of academic English. Students read through the texts, seemingly with the prime purpose of understanding the content. In fact, as students work with the text by doing the accompanying tasks, they are also learning reading skills, study skills, and test-preparation strategies. Additionally,

vii



the texts are used for language study, so students become familiar with the vocabulary and sentence structures used in academic discourse.

Each unit of an *Academic Encounters* book focuses on some aspect of the book's content focus. The fact that the book is focused on a content theme has several advantages. First, it gives students a realistic experience of studying in an academic course, in which each week's assignments are related to and build on each other. Second, as language and concepts recur, students begin to feel that the texts are getting easier, building their confidence as readers of academic text. Finally, after studying with an *Academic Encounters* book, students may feel that they have enough background in the content area (for example, Earth science or biology) to take an academic course in that subject as part of their general education requirements.

In the high-intermediate to advanced Reading books, students are presented with authentic samples of academic text. The material has been abridged and occasionally reorganized, but on the sentence level, little of the language has been changed. In *Academic Encounters: The Natural World* and *Academic Encounters: American Studies*, authentic materials have been used as the basis for texts that use academic content and style in ways that are accessible to low-intermediate and intermediate students, respectively. In all the Reading, Study Skills, and Writing books, students use the texts to develop their reading and study skills, and the high-interest content of the texts provides stimulus for writing assignments.

The content

The topics and texts in each chapter were chosen both for their importance to the theme of the book and for their appeal to students. It is important for students to be interested in what they are reading about and studying and for them to be able to make personal connections to it. According to language acquisition theory, language development occurs more readily under such conditions. Similarly, it can be argued that the writing process is facilitated when students are well informed on a topic, have developed personal connections to it, and are engaged by it.

The skills

The main goal of the *Academic Encounters* Reading, Study Skills, and Writing books is to give students the skills and the confidence to approach an academic text, read it efficiently and critically, and take notes that extract the main ideas and key details. But the goal of academic reading is not just to retrieve information. It is also important for a student to be able to display that knowledge in a writing assignment or a test-taking situation. For this reason, tasks that develop test-preparation and writing skills appear throughout the books. A longer writing assignment is at the end of each chapter.

viii



Student interaction

To make the *Academic Encounters* Reading, Study Skills, and Writing books as lively as possible, student interaction has been built into most activities. Thus, although the books focus on reading, study skills, and writing, speaking activities abound. Students discuss the content of the texts; they work collaboratively to solve task problems; they compare answers in pairs or small groups; and sometimes they perform role plays.

Order of units

In terms of reading topics and vocabulary, the order of units is regarded as optimal. In addition, tasks build upon each other so that, for example, a note-taking task may draw on information that was offered in an earlier unit. However, teachers who want to present the units out of order may do so. The Task Index at the back of the Student's Book shows the types of tasks that have been presented in earlier units, so teachers can build appropriate background information from those tasks into their lessons.

Course length

Each unit of a Reading, Study Skills, and Writing book contains a unit preview section and six to eight readings and represents approximately 16–24 hours of classroom material, depending on the level of the students. The course can be made shorter or longer – teachers may choose not to do every task in the book and to assign some tasks and texts as homework, rather than do them in class. To lengthen the course, teachers may choose to supplement the book with content-related material from their own files and to spend more time developing students' writing skills.

Task pages and text pages

Task pages are clearly differentiated from text pages by a colored vertical bar that runs along the outside edge of the page. The text pages have been designed to look like standard textbook pages. The text is in a column that takes up only two-thirds of the page, thus allowing space in the margins for glossed terms and illustrations. Figures, tables, and boxed inserts with additional information are included on the text pages, just as they are in standard textbooks. This authentic look helps to create a sense for students that they are actually reading from an academic textbook.

Task commentary boxes and task index

When a task type occurs for the first time in the book, it is usually headed by a colored commentary box that points out which skill is being practiced and why it is important. When the task occurs again later in the book, it may be accompanied by another commentary box as a reminder, or to present new information about the skill. At the back of the book, there is an alphabetized index of all the tasks. Page references in boldface indicate tasks that are headed by commentary boxes.

ix



GENERAL TEACHING GUIDELINES FOR *ACADEMIC ENCOUNTERS:* THE NATURAL WORLD

Each of the four units is organized as follows:

- a unit title page
- a Previewing the unit page
- a Unit contents page
- two chapters (Units 1–3) or three chapters (Unit 4), each of which contains three readings with accompanying tasks
- a unit content quiz (photocopiable pages in this Teacher's Manual)

Each of the nine chapters is divided into the following sections:

- · Preparing to read
- Now read
- After you read
- Writing assignment

The remainder of this section contains general teaching guidelines for each element. See pages 1–88 of this Teacher's Manual for answers to the tasks and additional teaching ideas for each unit.

Unit title page

Each unit title page contains the title of the unit, a large illustration or photograph that is suggestive of the content of the unit, and a brief paragraph that summarizes the unit. This page is intended to look like a typical unit opening page in an academic course book.

Look at the title of the unit with students and make sure they understand what it means. Then look at the picture and have students describe it and attempt to relate it to the title. Help them with vocabulary as necessary.

Finally, look at the summary paragraph at the bottom of the page. Read it with your students and check to be sure that they understand the vocabulary and key concepts. At this point, it is not necessary to introduce the unit topics in any depth, since the unit preview activities that follow will achieve this goal.

Previewing the unit

Following the unit title page is a two-page spread. On the right-hand side is a contents page listing the titles of the chapters in the unit and the titles of the three texts in each chapter. This page resembles the typical chapter or unit contents page of an academic textbook. On the left-hand page of the spread are tasks that relate to the titles on the facing contents page. These tasks preview the unit either by having students predict what information might be found in each section or by giving them some information from the unit and having them respond to it. In this way, students are given an overview of the unit before they start reading it in order to generate interest in its content. Furthermore, students are taught

X



the important reading strategy of previewing the titles and headings of long readings.

Preparing to read

In this book, prereading is regarded as a crucial step in the reading process. Prereading activities serve three main functions:

- 1 They familiarize students with the content of the reading, arouse their interest, and activate any prior knowledge of the topic.
- **2** They introduce students to reading attack strategies, giving them tools to be used when they undertake future reading assignments.
- **3** They expose students to some of the language in the text both the structures and the vocabulary making the text easier to process when they actually read it.

Although one or two prereading tasks are always included for each text, you should look for ways to supplement these tasks with additional prereading activities. As you and your students work through the book, students become exposed to more and more prereading strategies. Having been introduced to these, students should be adding them to their repertoire, and you should encourage their regular use. For example, after having practiced the prereading strategies of examining graphic material, previewing headings, and skimming, students should ideally carry out these operations before each and every text.

In general, the lower the level of students' reading and overall language proficiency, the more important extensive prereading becomes. The more prereading tasks they undertake, the easier it is for students to access the text when it comes time for them to do a closer reading.

Now read

At the bottom of each "Preparing to read" page is an instruction that tells students to read the text. This is a deceptively simple instruction that raises an important question: How closely should students read the text at this point? Some students, after doing prereading tasks, believe that now they should read slowly and carefully. But students should be discouraged from doing this. For one thing, it is a poor use of class time to have students poring silently over a text for 20 minutes or more, and more importantly, it is vital that students begin to train themselves to read quickly, tolerating some ambiguity and going for understanding main ideas and overall text structure rather than every word and detail.

To promote faster reading, this text includes several speed-reading tasks (in Chapters 3, 6, and 9), in which students try to put into operation techniques for faster reading. If students consistently apply these techniques, most texts will take between 3 and 7 minutes to read. Before students start reading any text, therefore, it is a good idea to give them a challenging time limit, which they should aim toward to complete their reading of the text.



An alternative to reading every text in class is to assign some of the longer texts as homework. When you do this, you should do the prereading tasks in class at the end of the lesson and then start the next class by having students quickly skim the text before moving on to the "After you read" tasks.

After you read

These tasks are of many different types and serve several different functions. You should not expect to find many conventional reading comprehension tasks. Instead, students are often asked to demonstrate their understanding of a text in less direct ways, such as vocabulary comprehension, language focus, study skills, and test-preparation tasks. Each task is intended as an opportunity to develop a skill, not simply to test comprehension.

Postreading tasks serve the following main functions:

- 1 They have students read for meaning, look for main ideas, think critically about the text, or look for inferences.
- **2** They ask students to think about the content, find a personal connection to it, or apply new information in some way.
- **3** They highlight some of the most salient language in the text, either vocabulary or grammatical structures, and have students use that language in some way.
- **4** They develop students' study skills repertoire by teaching them, for example, how to highlight a text, take notes, and summarize.
- **5** They develop students' test-preparation skills by asking them to assess what they would need to do if they were going to be tested on the text.

The end-of-chapter writing assignments

At the end of each chapter, students do an academic writing assignment based on the content of the chapter or unit. The difficulty of the assignments progresses from writing a list of sentences on a topic to writing one or two paragraphs on the topic. In each assignment, students are guided through the writing process.

The content quizzes

At the back of this Teacher's Manual are four content quizzes, one for each unit. Each quiz contains a mixture of true/false, multiple choice, and short-answer questions.

xii