

Introduction

Purpose of This Book

The intent of this book is to improve English language skills through realistic, interesting reading. This method strives to combine the benefits of pleasure reading and direct instruction by incorporating natural reading materials into the classroom. The book consists of authentic articles and excerpts, along with related exercises in comprehension, vocabulary, discussion, grammar, and writing.

The readings are meant primarily for those learners who are interested in science and technology, or those who are more motivated to read scientific and technical literature than other genres (such as fiction, biography, history, news, etc.). My own parents, who immigrated to the United States as middle-aged adults, are a good example. My mother enjoyed biographies and historical novels and began to read them in English, with increasing success. My father, on the other hand, was drawn to magazines about engineering and mechanics, which he read with focused interest. In addition, this book may be especially helpful to English learners who are engineers, scientists, or university students in technical fields. For them, such reading is not only a source of relevant vocabulary, but also a good example of technical writing style; and both vocabulary and style are provided within an interesting and familiar context. Of course, this book is by no means intended only for scientists and engineers. It is for everyone who wants to learn English and also happens to enjoy science. I also hope that this book will provide some additional motivation and encouragement to reluctant readers of other genres.

To those familiar with the research in second language reading, this volume does not constitute “free” reading in a strict sense since the materials are not actually chosen by the students themselves. Yet, the articles contained here are authentic texts, written in non-technical English, and are likely to be of interest to a wide audience. These selections exemplify the types of reading materials that are easily available to the public and common in academic study. Once students have been introduced to these types of materials, they will be able to select materials that are of particular interest to them and better satisfy academic requirements.

This textbook aims to:

- ▶ expose students to English language in a natural, meaningful context
- ▶ introduce students to interesting and relevant reading materials in science and technology

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- ▶ increase vocabulary, both high-frequency and specialized, and demonstrate how it is used
- ▶ improve reading comprehension
- ▶ teach grammar through examples of real usage
- ▶ provide practice in the writing styles that are required in science and engineering—*explanation, persuasion, critical analysis*
- ▶ provide opportunity for verbal communication through class discussion
- ▶ encourage language learners to read independently and to learn language through reading

The material in this book is intended for high-intermediate to advanced students. Although the readings come from U.S. sources, they should be of interest to learners in other countries as well. This textbook is appropriate for all adults. It would be particularly useful to English students who are also scientists and engineers, including university students and professionals.

Materials

All materials are actual, unaltered English texts. They include articles from magazines and newspapers, excerpts from non-fiction books, and items from the Internet. Such materials are widely available and are easily accessible through public and university libraries. The readings span a variety of science-related topics, and many of them deal with the interaction of technology and society. They are meant to be enjoyable as well as to provide food for thought and discussion. The linguistic difficulty of the selections generally increases as the book progresses. Yet, the language is fairly general, rather than technically specialized, so as to provide the students with models and opportunities for everyday communication.

Reading

If class time allows, the articles should be read in class during a silent period, each student reading alone. This will simulate natural, free reading, allowing each student to make individual associations and interpretations. The length of the reading period will depend on the length of the selection. If class time is limited, students may complete their readings outside of class, after doing the pre-reading exercises in class.

Exercises

Each unit includes pre-reading and post-reading exercises. The pre-reading exercises set the stage for the reading by introducing the topic and key vocabulary, helpful to understanding the readings. These activities tap into what the students already know about the subject, put them at ease with it, and stimulate further interest in it. Post-reading exercises check reading comprehension, strengthen the acquisition of new vocabulary, and provide a forum for verbal discussion and written communication. The vocabulary taught and practiced are high-frequency words common to academic study. The discussion and writing activities deal with open-ended questions; they provide an opportunity for personally meaningful and creative use of language. At the end of each unit, the use of a certain grammatical form is pointed out and reviewed. Some units also offer suggestions for expansion activities that the students can do on their own outside of class; these provide additional exposure to language and reading materials.

Pre-reading exercises include:

- ▶ **Search Your Knowledge**—introduction to topic
- ▶ **Key Words**—vocabulary preview, if needed

Post-reading activities include:

- ▶ **What's the Point?**—reading comprehension
- ▶ **Understanding Words and Phrases**—vocabulary and idioms
- ▶ **Grammar Check**—brief illustration of a grammatical feature
- ▶ **Let's Talk about It**—verbal discussion
- ▶ **What Do You Think?**—written assignments
- ▶ **Activities for Fun**—independent activities outside of class

Class discussions, in pairs or larger groups, give students an opportunity to converse and to practice pronunciation and oral presentation in a meaningful context. For additional speaking practice, students may volunteer to present their written assignments. This may also stimulate further class discussion.

Answer Key

The answer key, available online for teachers (www.press.umich.edu/esl/tm/) provides answers to short-answer exercise questions. It also offers sample answers to some pre-reading exercises, where such answers help provide background knowledge or stimulate preliminary discussion.