

Amazing Space



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For teachers' inspection ONLY

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Reading Essentials[®]

in Science

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“ ‘Begin at the beginning,’ the king said gravely,
‘and go till you come to the end; then stop.’ ”

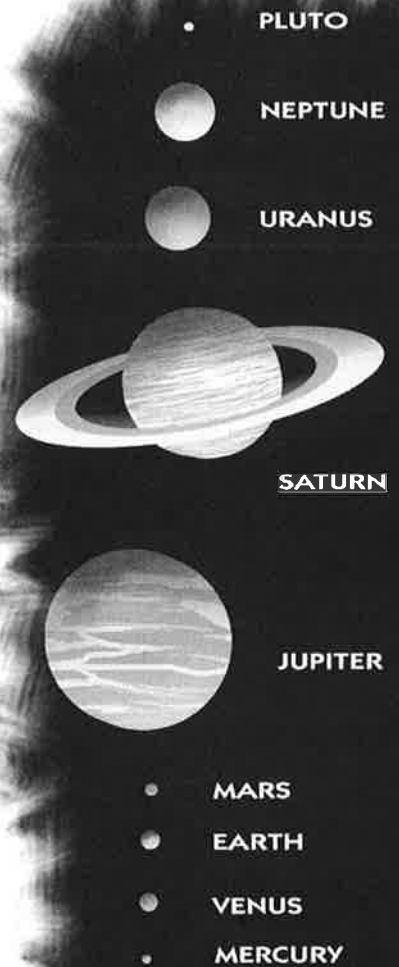
Lewis Carroll,

Alice's Adventures in Wonderland, (1865), p. 12

Unfortunately, this is the way many learners read—from beginning to end—regardless of the reading task in front of them, whether it be reading for information or pleasure, expository or narrative. This passive, linear approach to text compromises understanding and reading success. Successful readers need to be actively involved in the reading process, monitoring their understanding, personally relating to the text, and applying what they know to understand what they're reading.

While active reading strategies are important to the comprehension of any type of reading material, they are especially important in understanding informational, or expository, text. It is estimated that about 90 percent of adult reading is to acquire information, while only about 10 percent is for pleasure. So content-literacy skills will be important to students far beyond their school years. In their interactions with informational text, student readers should be learning content while developing the literacy and thinking skills necessary to become lifelong readers.

Reading Essentials in Science helps readers learn more about concepts introduced in science and develop content literacy strategies. Few students ever develop a passion for reading from their science textbooks. The interesting, visually appealing, reader-friendly student books in *Reading Essentials in Science* provide essential content and content-area reading practice as they pique students' interest. And the content literacy skills and strategies presented and practiced in the accompanying activities in the strand resources will prepare students for a lifetime of enjoyable and meaningful literacy experiences.



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Overview of the Program

Reading Essentials in Science offers curricular-aligned informational books for students in grades 3 to 6, strand resources for practice and assessment of content and content literacy strategies, and a program resource for teaching content literacy strategies.

Reading Essentials in Science Student Books

The interesting and informative nonfiction titles are 40 to 48 pages in length and arranged in thematic strands with five related books per strand. The science strands are organized using the following disciplines: Earth/Space Science, Life Science, Physical Science, and Science in Social and Personal Perspectives.

Reading Essentials in Science Teaching and Assessment Resources

The reproducible strand resources offer students opportunities to extend content knowledge and develop and practice content literacy strategies. Additionally, twenty-question objective tests and performance-based assessment suggestions are provided for each title to monitor student growth. These comprehensive resources have a separate section for each of the five titles in the strands.

Teaching Content-Area Literacy Strategies Resource

This collection of research-based content literacy strategies will help you make the best use of the student books and the practice and assessment activities in the strand resource.

Rationale: Why Teach Content-Area Reading?

Many mistakenly believe that students do not need further reading instruction once they learn to decode. However, reading goes beyond mere decoding. Content comprehension is dependent upon an active relationship between the reader and the text. Teaching reading in the content areas helps learners make connections between what they know and the new information in the text.

In order to develop content-area knowledge, students need interesting, relevant content-area books. Additionally, students need to develop and practice content-area strategies to learn to interact with the text and create meaning. Many readers have never been taught that they need to think when they are reading and to create pictures in their mind. Reading is not passive word calling. Readers who are not

actively involved in their reading, who aren't monitoring their understanding by personally relating to the text and applying what they know to understand what they're reading, will finish with little or no understanding of what they've read. Often they lose confidence in themselves as readers, give up on reading, and fall behind.

The science titles and content-area literacy skills and strategies presented and practiced in the *Reading Essentials in Science* program will help students learn how to learn, enabling them to acquire knowledge independently from their reading in school and throughout their lives.

Amazing Space

Amazing Space Student Books

The five titles in the Amazing Space series are *Are We Alone? The Case for Extraterrestrial Life*, *Inside a Star*, *Lights in the Sky*, *Mysteries in Space: Cosmic Puzzles*, and *Telescopes: Exploring the Beyond*. Each book views an aspect of the universe and how and why scientists and astronomers are studying it. Hands-on activities can be found in each book as well as an index and a glossary. The content-specific vocabulary included in the glossary is bolded throughout the text. Additionally, Internet sites and related readings are provided to extend the information presented in the book.

The *Reading Essentials in Science* Amazing Space titles contain considerate text that is well organized and clearly written. In this way, readers are actively involved in their learning as they make connections and create meaning.

Amazing Space Teaching and Assessment Resource

This comprehensive resource covers all five titles in the strand. Each title-specific section offers

- a synopsis of the chapters in the student book
- reading exploration activities (prereading, during reading, and postreading)

In order for students to understand the new information presented in the books, they need to relate what they're reading to what they already know. The prereading activities help learners call up prior knowledge and make connections to what they're learning. The during-reading and postreading suggestions provide students with a purpose for reading and guide them in using active reading strategies.

- a content-specific vocabulary activity

Research shows that vocabulary knowledge is one of the most important factors in increased comprehension.





- two reading skills activities
Reading skills activities link essential reading skills and strategies with important content.
- a writing activity
As students write, they make personal connections between the content and themselves.
- a hands-on activity
As students complete hands-on activities related to the content, they extend their subject matter knowledge.
- ten project suggestions
The performance-based activities offer students alternative ways to extend their learning and/or demonstrate their understanding.
- a twenty-question objective test
Objective assessment is presented in a format similar to the questions on state and standardized tests.

Second Language Learners

The terms English for Speakers of Other Languages (ESOL), English as a Second Language (ESL), or English Language Learners (ELL) were developed to recognize students whose heritage language is other than English. Classrooms today are comprised of a rich variety of heritages and languages reflecting the diverse cultural nature of our society. The Limited English Proficiency (LEP) students enter the classroom at various limited English language levels. They are faced with challenging content in an unfamiliar language. An appropriate instructional model must be in place for these students. ESOL instruction is designed to meet the needs of LEP students by providing instruction based on their level of English proficiency.

When developing and enriching instruction through ESOL strategies, the educator must be sensitive to the student's first language and cultural background while at the same time encouraging the student to acquire the English language in a nonthreatening and productive learning environment. The student's individual differences and learning styles must also be considered when applying ESOL strategies. All LEP students are entitled to equal educational opportunities that include access to materials, programs, and experiences.

Using Reading Essentials in Science with Limited English Students

The *Reading Essentials in Science* program offers LEP students an opportunity to learn grade-level content as they acquire proficiency in the English language. Through the use of certain instructional strategies, LEP students, representing a diverse group of language backgrounds and individual differences, can find success with the same books that are being enjoyed by their English-speaking classmates.