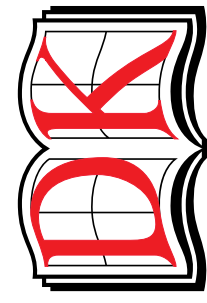SMITHSONIAN

KNOWLEDGE
ENCYCLOPEDIA

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KNOWLEDGE ENCYCLOPEDIA

This visually stunning encyclopedia will draw in students with its computer-generated 3-D images and concise entries that explain engaging subjects. Created in conjunction with the Smithsonian Institution, the *Knowledge Encyclopedia* brims over with crisp color photographs and extraordinary graphics. Numerous diagrams, cross-sections, cut-aways, maps, colorful charts and tables, and step-by-step pictures make new concepts clear and accessible. This one-volume encyclopedia will provide students with easy-to-find information on curriculum-related topics and trigger ideas for research, writing, and presentations.

The *Knowledge Encyclopedia* is an excellent fit with the goals of the Common Core State Standards (CCSS) that emphasize informational text and require students to use and evaluate content in visual, quantitative, and text formats. Succinct paragraphs under informative headings lead the reader logically through each topic and subtopic. Nonfiction text features such as subheadings, sidebars, boxed text, timelines, captions, labels, and arrows aid students throughout. The *Knowledge Encyclopedia* opens with a table of contents and concludes with a four-page glossary as well as an eight-page index that indicates visuals as well as text.

Divided into six sections, the *Knowledge Encyclopedia* covers a wide range of subjects related to the curriculum. It moves from space, including astronomy and space exploration, to Earth's geology and weather. The next large section features nature, from dinosaurs and other animals to plants and ecosystems. The human body has extensive coverage, followed by science, which is divided into matter, forces, energy, and electronics. A final section of nearly 100 pages reviews human history from the ancient world to the 21st century.

Reading Informational Text Closely (Anchor Standards 1, 2, and 3)

The Common Core standards put a strong emphasis on informational text, recognizing the vital role of information in the modern world. The first three standards for reading informational text require students to read closely, determine central ideas, and analyze how ideas develop over the course of a text. The *Knowledge Encyclopedia* entries guide students through this process by their logical progression and effective use of text features and visual aids. Teachers can assign entries to individual students or to small groups, asking them to examine and report back to the class on the central ideas and how they are developed.

Technical Vocabulary in Reading Informational Text (Anchor Standard 4)

Under the fourth anchor standard, students must learn to interpret technical language as used in informational text. The *Knowledge Encyclopedia* introduces many technical terms and reinforces them, both through text and graphics; for example, a section headed "Tectonic Earth" defines the word *tectonic* in the first paragraph and uses it in context in the next ones. On the same page, a map shows the Earth's tectonic plates and a diagram of how the plates move, reinforcing the new vocabulary through visuals as well as through text. The *Knowledge Encyclopedia*'s glossary also defines *tectonic plate* for quick reference.

Visual and Multimedia Elements in Informational Text (Anchor Standard 7)

The Common Core recognizes that our world is increasingly visual in how knowledge is presented and understood. The *Knowledge Encyclopedia* embraces this new approach by integrating lots of effective visual elements, from photographs and graphs to cross-sections; these visual features offer students many opportunities to practice acquiring knowledge from graphic presentations. The *Knowledge Encyclopedia* lends itself particularly well to student work in which they "evaluate content presented … visually and quantitatively, as well as in words," as called for by Anchor Standard 7.

Writing Standards (Anchor Standards 2, 7, and 8)

The Common Core standards expect student writing to go beyond personal narratives to "informative/explanatory" writing that examines and analyzes complex ideas. The writing must develop a "topic with facts, definitions, concrete details, quotations, or other information and examples." The *Knowledge Encyclopedia* provides a range of facts, definitions, and concrete details suitable for such writing projects. The writing standards also require students to conduct research projects, both short and long; this is another area where the *Knowledge Encyclopedia* can be a valuable springboard for ideas and initial research that can be pursued further in other books, articles, or on the Internet.

Listening/Speaking Standards (Anchor Standards 1, 4, and 5)

To fulfill the Listening and Speaking standards, students need to participate in different kinds of discussions on a variety of topics. The *Knowledge Encyclopedia* will inspire students to share fascinating facts and processes they've read about in the book's entries. For the more formal presentations described by the standards, students will find topics and information to interest their audiences on intriguing subjects from sharks and spaceships to the Stone Age. The speaking standards require strategic use of visual displays of data, which is effectively modeled on every page of the *Knowledge Encyclopedia*.

Technology Tie-ins and Digital Media

Students must learn to "use technology and digital media strategically and capably" under the Common Core. The *Knowledge Encyclopedia*, with its timely topics about the physical and historical world, presents numerous opportunities for incorporating technology. One perfect tie-in is the Smithsonian's rich website, found at www.si.edu, which includes articles, videos, animal cams, interactive puzzles and quizzes, and much more. A student with a project on airplane flight, for example, can start with the *Knowledge Encyclopedia* article on flight, which includes text and diagrams about how planes fly. An excellent follow-up on the Smithsonian's website is an interactive video titled "Airplane Anatomy," which looks at the similarities between a modern plane and the Wright Brothers' plane. Educators can also combine resources from the book, such as its opening article on the universe, with Smithsonian offerings like the lesson plan "The Universe: An Introduction."

Graphic Organizers

The *Knowledge Encyclopedia* excels at displaying graphic organization of information and concepts in a wide variety of ways, from diagrams and pie charts to colorful infographic tables. Students can practice creating similar presentations of data using digital tools or simply pen and paper. Timelines, for example, appear under certain history and science topics in the book; several websites, such as www.dipity.com and www.xtimeline.com, give students free digital tools for creating their own timelines. A class could also create a long collaborative timeline inspired by the information they discover, using a large paper roll.