ROSEN digital

CORE CONCEPTS

Periodic Table

Digital Resource from Rosen Publishing

CORE CONCEPTS Periodic Table

Supports STEM & Next Generation Science Science Standards!

Core Concepts: Periodic Table makes complex scientific concepts easy to understand and highly engaging. Its intuitive interactive interface encourages hands-on exploration to develop a deep understanding of the 118 elements that make up our world, immersing learners in the building blocks of each element, their discoveries and uses throughout history, and much more.

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Features include:

- Interactive and engaging interface
- Extensive videos, images, diagrams, and data tables, including student-created video from the Chemical Heritage Foundation
- Interactive activities reinforcing skills and core ideas
- Instant translation into over 50 languages
- Curriculum correlations to Common Core, state, national, and provincial science standards
- Optional text-to-speech and text highlighting
- Lesson plans and instructional materials for educators
- iPad, iPhone, iPod Touch, and Android compatibility

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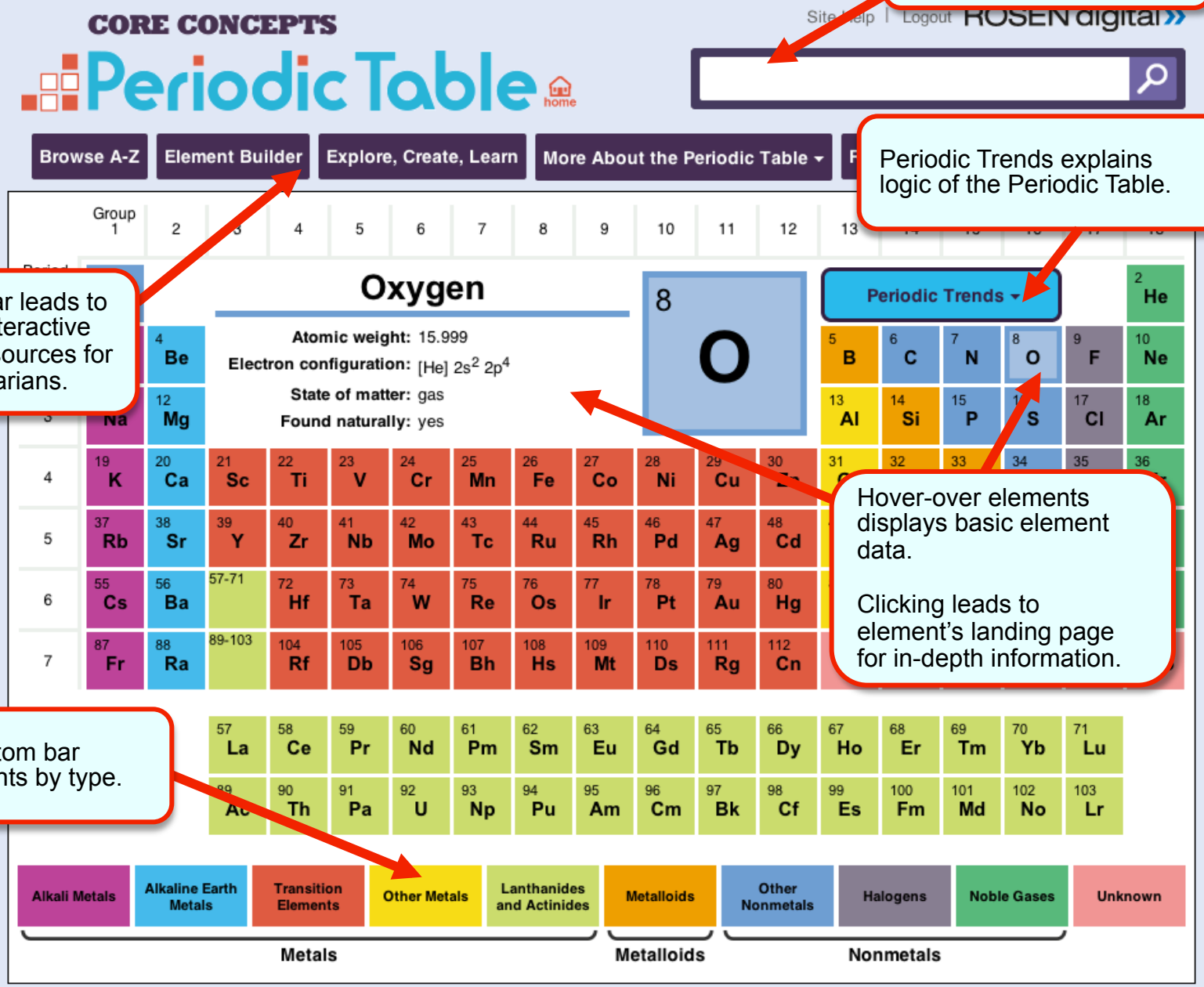
Homepage


Appealing, friendly interface with prominent search tool
CORE CONCEPTS
Periodic Table
home
Site Help | Logout ROSEN digital
Browse A-Z
Element Builder
Explore, Create, Learn
More About the Periodic Table
Periodic Trends explains logic of the Periodic Table.
Top navigation bar leads to article browse, interactive activities, and resources for teachers and librarians.
Oxygen
Atomic weight: 15.999
Electron configuration: [He] 2s2 2p4
State of matter: gas
Found naturally: yes
8
O
Periodic Trends
Hover-over elements displays basic element data.
Clicking leads to element's landing page for in-depth information.
Hover-over bottom bar displays elements by type.
Alkali Metals
Alkaline Earth Metals
Transition Elements
Other Metals
Lanthanides and Actinides
Metalloids
Other Nonmetals
Halogens
Noble Gases
Unknown
Metals
Metalloids
Nonmetals

Navigating an article

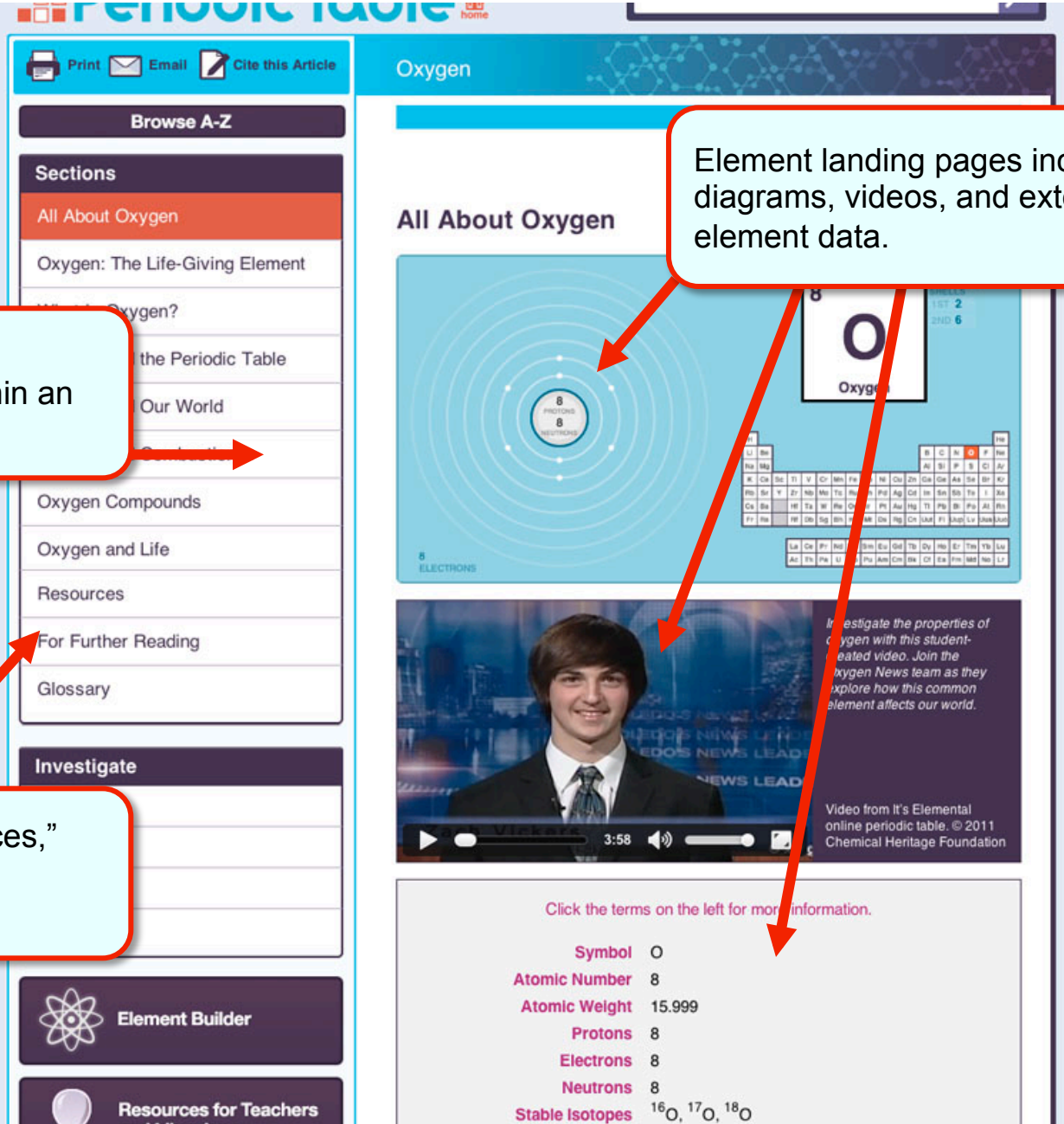
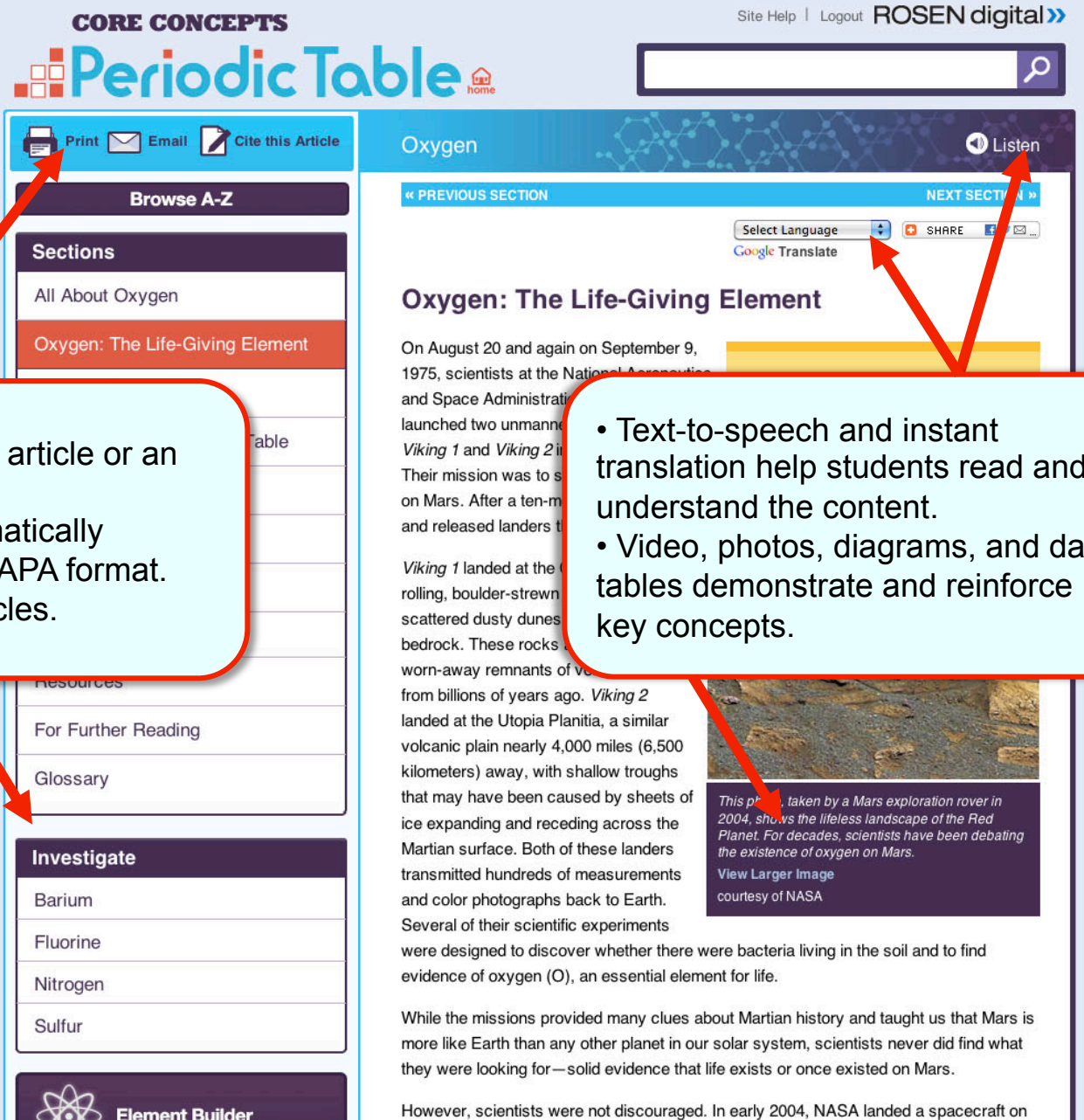


Table of contents allows students to navigate within an article.

Articles feature “Resources,” “Further Reading,” and “Glossary.”

Element landing pages include diagrams, videos, and extensive element data.

Navigating an article



- Print or email an entire article or an article section.
- Citations can be automatically generated in MLA7 and APA format.
- Investigate related articles.

- Text-to-speech and instant translation help students read and understand the content.
- Video, photos, diagrams, and data tables demonstrate and reinforce key concepts.

Navigating an article

Element Builder

Resources for Teachers and Librarians

Explore, Create, Learn

Each page contains links to:

- Interactive Activities
- Resources for Teachers & Librarians

Oxygen: The Life-Giving Element

On August 20 and again on September 9, 1975, scientists at the National Aeronautics and Space Administration (NASA) launched two unmanned spacecraft named *Viking 1* and *Viking 2* into outer space. Their mission was to search for signs of life on Mars. After a ten-month journey, the two spacecraft entered into orbit around Mars and released landers that touched down on July 20 and September 3, 1976.

The element oxygen, which you cannot see, feel, or taste, sustains all life on Earth.

Viking 1 landed at the Chryse Planitia, a rolling, boulder-strewn plain with scattered dusty dunes and outcrops of bedrock. These rocks are believed to be worn-away remnants of volcanic rock from billions of years ago. *Viking 2* landed at the Utopia Planitia, a similar volcanic plain nearly 4,000 miles (6,500 kilometers) away, with shallow troughs that may have been caused by sheets of ice expanding and receding across the Martian surface. Both of these landers transmitted hundreds of measurements and color photographs back to Earth. Several of their scientific experiments were designed to discover whether there were bacteria evidence of oxygen (O), an essential element for life.

This photo, 2004, show Planet. For the existen

View Large

courtesy of

- Call-outs highlight key concepts and real world examples.

While the missions provided many clues about Martian history and taught us that Mars is more like Earth than any other planet in our solar system, scientists never did find what they were looking for—solid evidence that life exists or once existed on Mars.

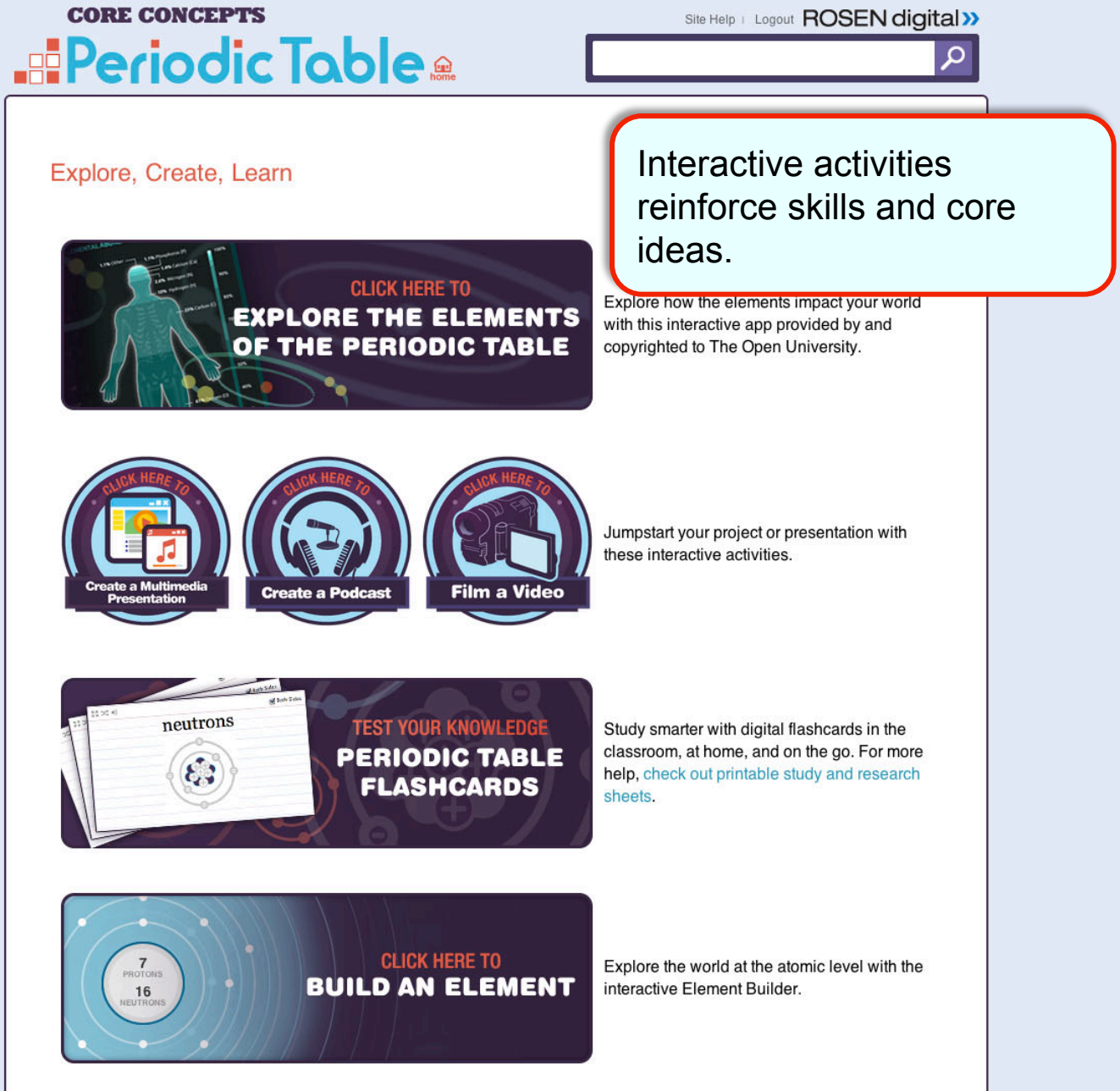
However, scientists were not discouraged. In early 2004, NASA landed a spacecraft on the Martian surface. This time, the craft returned information giving evidence that water once existed on Mars. Water contains large amounts of oxygen, so life may have existed on Mars.

It is the presence of oxygen here on Earth that gives our planet life. This single element allows us to breathe, gives plants the ability to grow, and helps keep our planet warm. The element oxygen, which you cannot see, feel, or taste, sustains all life on Earth. Oxygen is an important element, one that we cannot live without—literally!

« PREVIOUS SECTION NEXT SECTION »

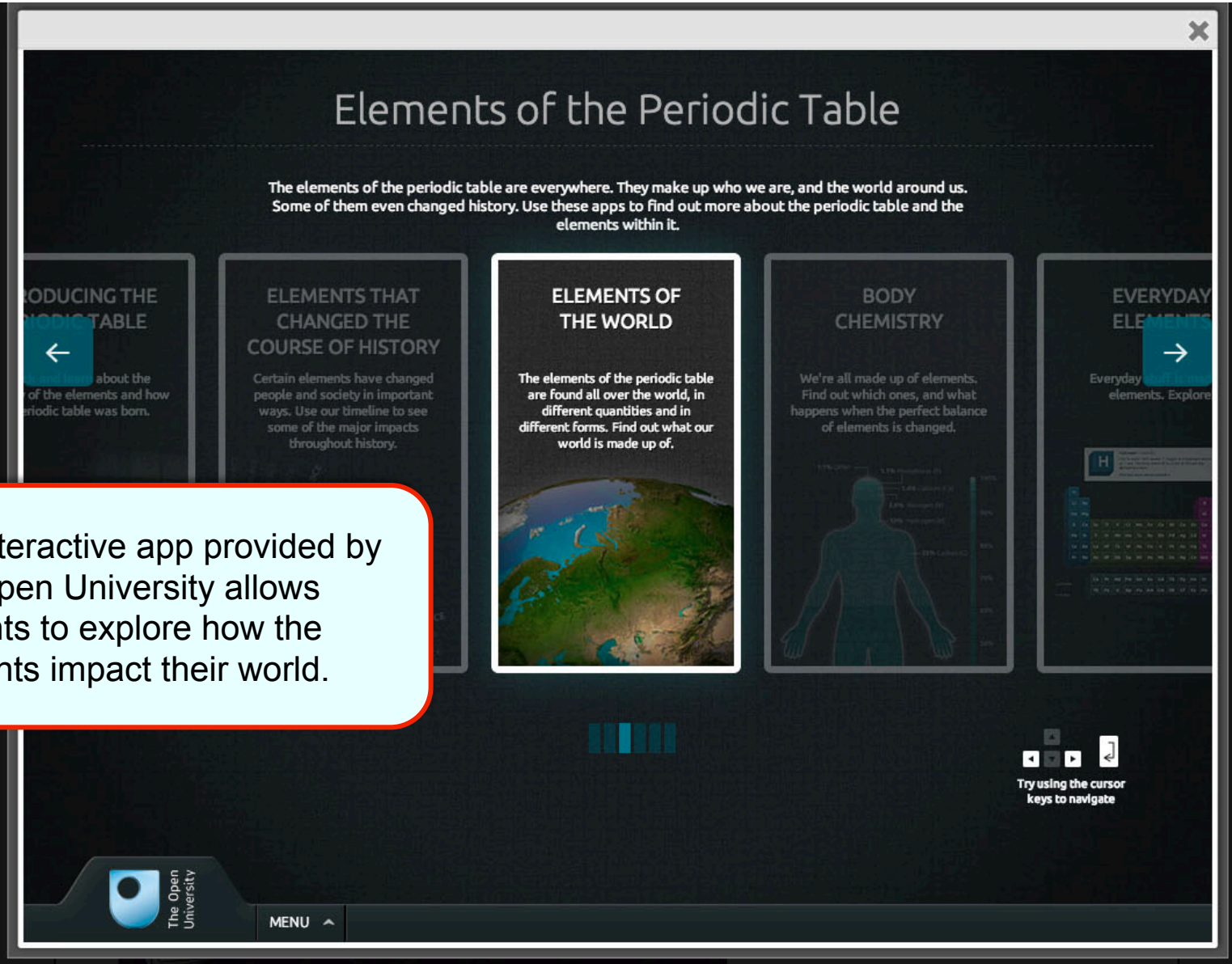
Article Citation in MLA (Modern Language Association) format:

Interactive Activities



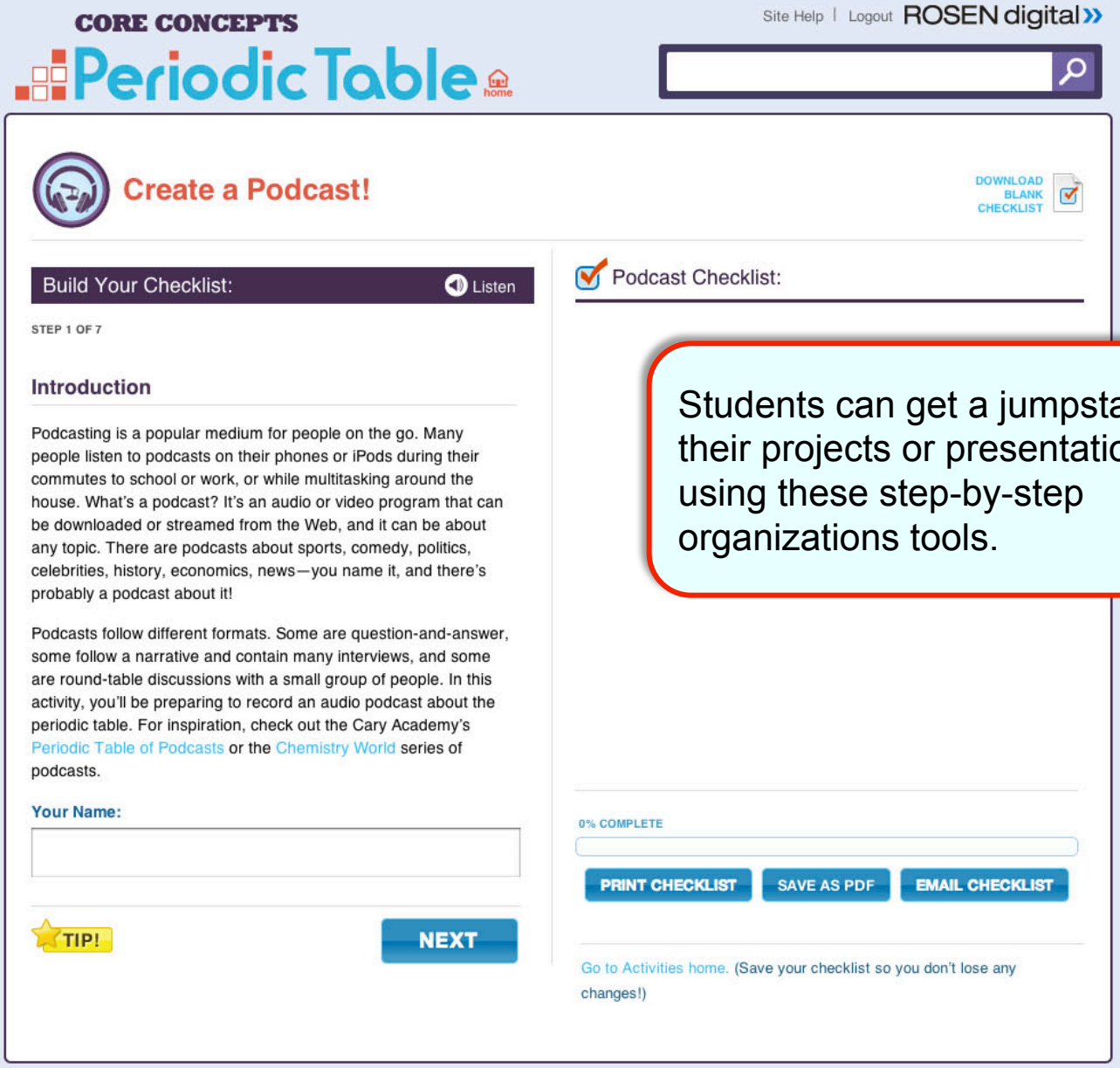
Interactive activities reinforce skills and core ideas.

Interactive Activities



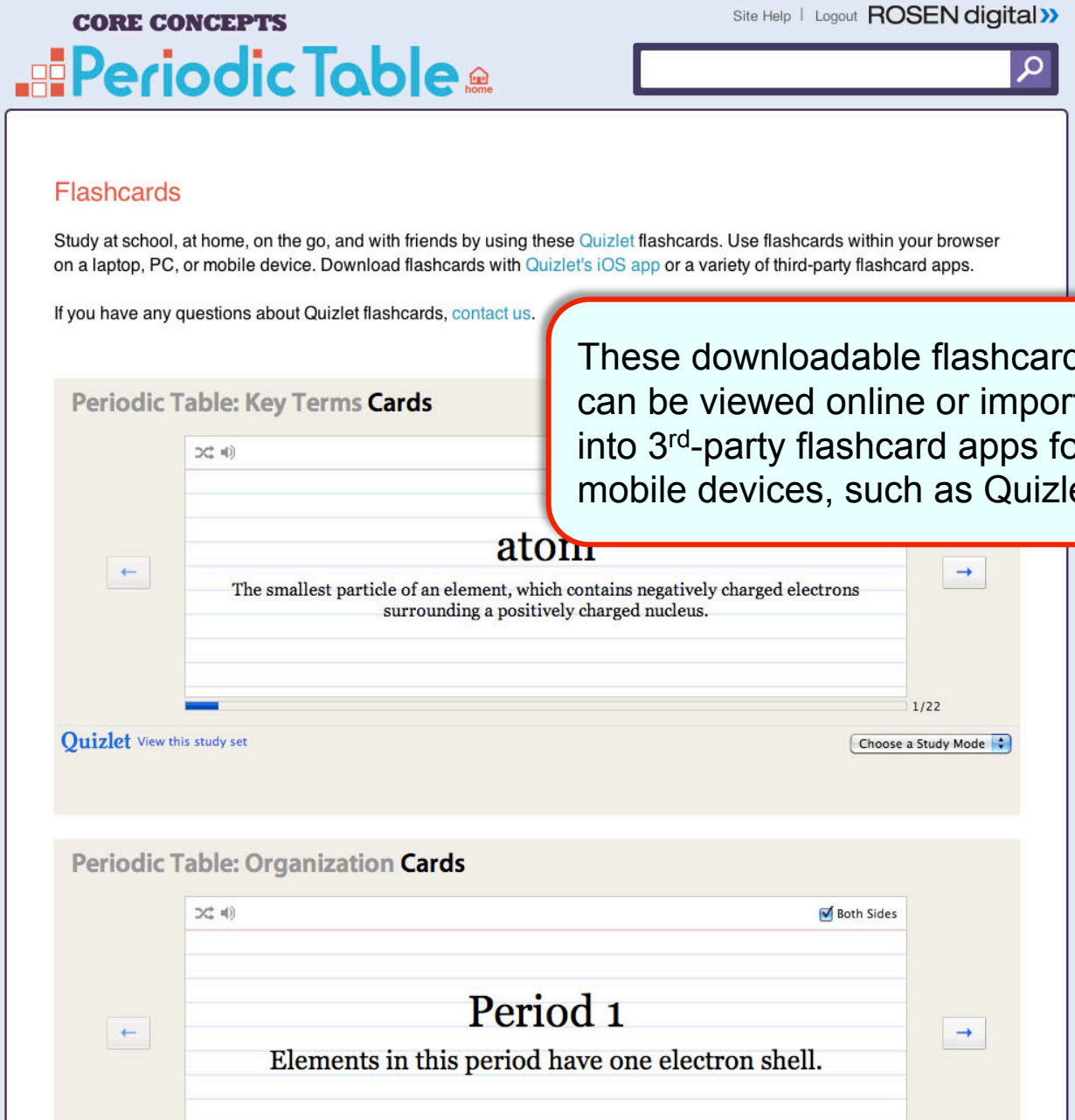
The interactive app provided by The Open University allows students to explore how the elements impact their world.

Interactive Activities



Students can get a jumpstart on their projects or presentations by using these step-by-step organizations tools.

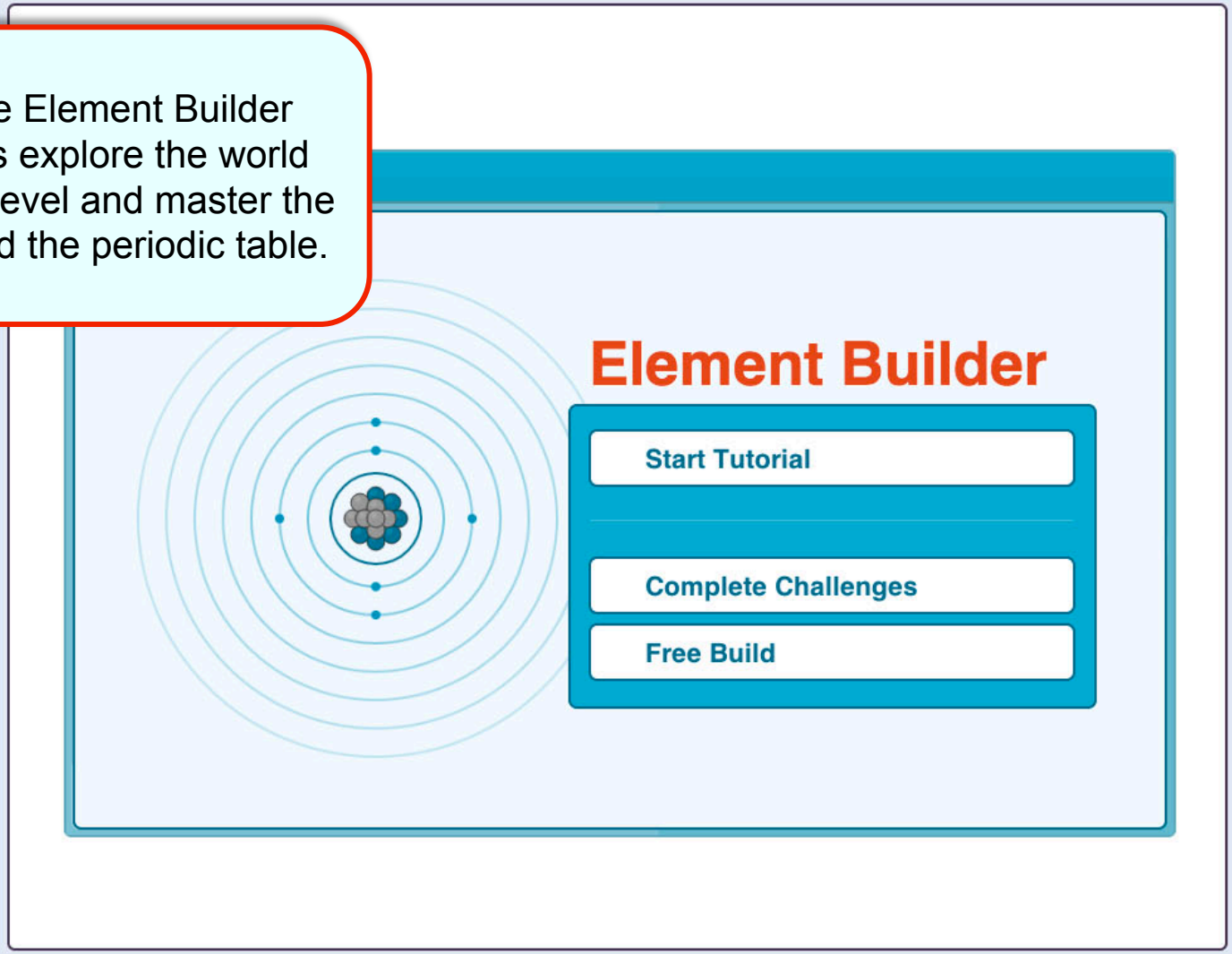
Interactive Activities



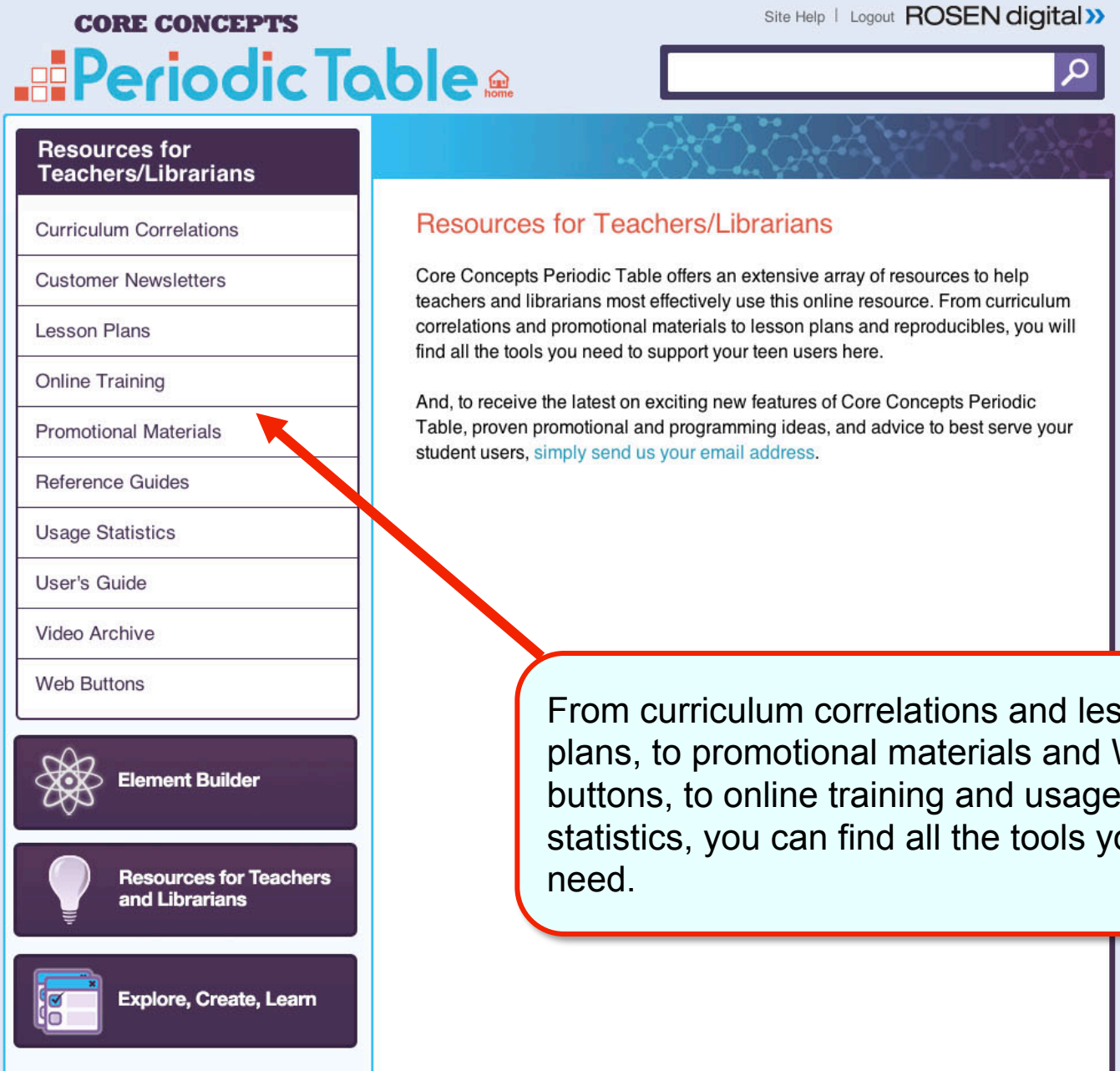
These downloadable flashcards can be viewed online or imported into 3rd-party flashcard apps for mobile devices, such as Quizlet.

Interactive Activities

The interactive Element Builder helps students explore the world at the atomic level and master the science behind the periodic table.



Librarian/Educator Resources



From curriculum correlations and lesson plans, to promotional materials and Web buttons, to online training and usage statistics, you can find all the tools you need.

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About Rosen Publishing

Rosen Publishing is an independent educational publishing house, established in 1950 to serve the needs of students in grades Pre-K to 12th grade with high-interest, curriculum-correlated materials. Rosen publishes more than 750 new print and eBooks each year and has a backlist of more than 7,000 titles.

Rosen Digital launched its inaugural database, the award-winning, critically acclaimed **Teen Health & Wellness: Real Life, Real Answers**, in 2007. The resource has garnered stellar reviews from School Library Journal, Library Journal, Booklist, and American Libraries, and is available in libraries and schools world-wide.

Core Concepts: Periodic Table has been created in collaboration with educators across North America by the same extraordinary Rosen team that built Teen Health & Wellness. Maintaining the gold standard set by Rosen Digital's PowerKnowledge Science Suite, CC: Periodic Table supports STEM learning and delivers curriculum-correlated content, promotes digital literacy and 21st-century learning skills, and offers research, report, and homework help.