

## Bibliography for Elementary Space Science, K - 8

### Scope

Invoking curiosity and engaging young minds is a challenge in itself. Engaging young minds to get excited about science is another challenge all together. This bibliography is aimed at K-8 libraries that are interested in developing their science, non-fiction collection for science discovery about space and the universe. Resources in this collection were based on recommendations based on common core standards and from science educators and authors, 2012 and 2013 award winning non-fiction books, respected reviewers for children's literature, and the National Science Teachers Association.

### Common Core Standards Links

[NSTA Position Statement: Elementary School Science](#)

[CCSS – Literacy in Science and Technical Subjects](#)

[Elementary School Earth & Space Science Standards \(ESS\)](#)

[Middle School Earth & Space Science Standards \(MS-ESS\)](#)

[CCSS English Language Arts, Information Text \(CCS.ELA-Literacy. RI\)](#)

### Atlases

Trefil, J. (2012). *Space atlas: Mapping the universe and beyond*.  
Washington, D.C.: National Geographic.

Solar system – Atlases  
ISBN: 9781426209710

#### Features

200 color illustrations; 40 maps; glossary; list of map terms; place-name index; 3 parts: the planets, the stars, and the universe; brief biographies of pertinent scientists; fact boxes

#### Critical Evaluation of Resource

Meeting a common core standard of analyzing and interpreting data to integrate information expressed in words expressed visually and analyze and interpret data to determine scale properties of objects in the solar system, this up-to-date atlas from a well-known publisher and the audience is aimed at students, or even teachers using the atlas as a teaching tool in space science. It's also been reviewed by the *School Library Journal*, which mentions its user friendliness and contains specific details for a student's curiosity in a non-technical text.

#### Description

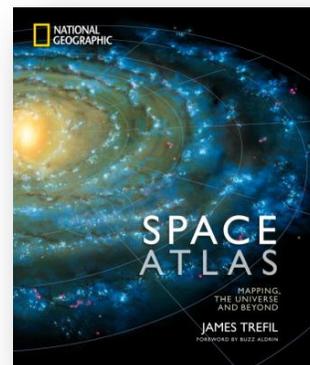
Gr 6 & up, \$32.05, hardcover, 336 page atlas to the universe

#### Reviews

"Finding guides make it highly user friendly." – *School Library Journal*

"A gorgeous, fact-filled must for reference sections." – *Library Journal* starred review

"A joy to look at...For all those who ever dreamed of traveling to the stars, Space Atlas will surely keep those fantasies alive." – *Seattle Post-Intelligencer*



“An atlas of such beauty is rare indeed.” – *Science Books & Film*

**Astronomy Magazine. (2013). *Star Atlas: Tour the night sky*. Retrieved from <http://www.astronomy.com/>**

### Features

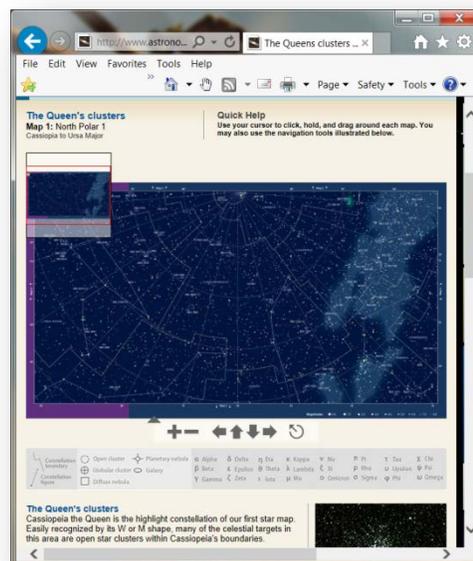
Interactive; zooming; 24 color maps; official boundaries; 1,000 deep-sky objects; 45,000 stars down to magnitude 8.0; five map sets of North Polar, North Equatorial, Equatorial Region, South Equatorial, and South Polar; magazine subscription

### Critical Evaluation of Resource

This is an online interactive star atlas that is completely focused on stars and comes from a contributing source well known and established for Astronomy facts. Names and regions may confuse the younger audience, but the gallery of images is for all ages and is a vital reference resource for star images and names. Each map is labeled and filled with section-specific data.

### Description

Gr 4 and up, \$42.95 yearly subscription, Astronomy’s online magazine for a complete star atlas



## Biographies

**Anderson, M. (2013). *Pioneers in astronomy and space exploration*. (1st ed.). New York, NY: Britannica Education Pub. in association with Rosen Education Svc.**

Astronomers – Biography – Juvenile literature  
ISBN: 9781615306954

### Features

Chronologically arranged; full-color photographs; glossary; index; for further information section

### Critical Evaluation of Resource

From a dedicated publisher well-known for creating student reference resources and meeting common core standards for reading and comprehending literary and informational texts independently and proficiently and gathering relevant information from multiple print and digital sources by accessing the credibility and accuracy of each source and integrating the information without plagiarism, this selection is aimed at students whose interest is on the biographical details of scientific explorers and theorists of the past to the present. Though some areas and people are missing, this 2013 selection still contributes greatly as a biographical resource.

### Description

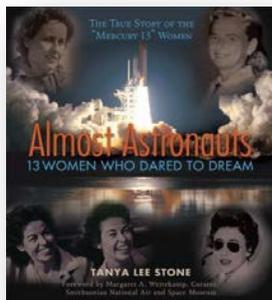
Gr 7 & up, \$27.98, library binding, 141 page biographical chronicle of scientific people past and present



### Reviews

“This provides useful material for assignments where the original online source isn’t available.” – *Booklist*

“The volume includes the contributions of women and important psychiatrists in the mental health field but shortchanges some African Americans.” – *School Library Journal*



Stone, T. L. (2009). *Almost astronauts: 13 women who dared to dream.* (1st ed.). Somerville, MA: Candlewick Press.

Women astronauts – United States – Biography – Juvenile literature  
ISBN: 9780763636111

### Features

Index; color illustrations and photographs; references for further reading; available websites; bibliography; endnotes; Foreword by Margaret A. Weitekamp, Curator, Smithsonian National Air and Space Museum

### Awards:

Robert F. Sibert Informational Book Medal, 2010

Orbis Pictus Honor, 2010

Notable Social Studies Trade Books for Young People, 2010

Outstanding Science Trade Books for Students K-12, 2010

### Critical Evaluation of Resource

This selection is a many times over, award winning current biographical and historical angle not taken in another recent biographical resource; and for that reason, it contributes greatly as a biographical resource for students. With the use of actual historical records and photographs, the content is reliable and the text is correctly aimed at the appropriate audience.

### Description

Gr 5 - 8, \$14.03, hardcover 144 page biographical and historical account of the Mercury 13 women

### Reviews

“Illustrated with sheaves of photos, and based on published sources, recently discovered documents, and original interviews with surviving members of the ‘Mercury 13’...” – *School Library Journal*

“The book is readable and useful as a reference.” – *Children’s Literature*

“Handsomely illustrated with photographs, this empowering, impassioned story will leave readers inspired. (foreword, source notes, bibliography, index) (Nonfiction. 10 & up)” – *Kirkus Reviews*

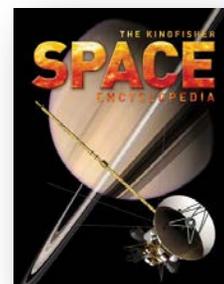
## Encyclopedias

Goldsmith, M. (2012). *The kingfisher space encyclopedia.* New York, NY: Macmillan.

Astronomy – Encyclopedias, Juvenile  
ISBN: 9780753468050

### Features

Color photographs; glossary; index; web sites for further reading; thematically arranged



**Critical Evaluation of Resource**

Meeting core standards of literacy for determining a central idea and analyzing sentences for ideas, a well-known children's reference book and author from the astronomy field makes this text a current and correctly aimed, through clear and short sections, a student reference filled with factual and introductory information on the solar system and history of space exploration. Color photos and outside web references provide a student a way to explore further and become interactive with the text.

**Description**

Gr 3 - 8, \$8.43, hardcover 160 page encyclopedia of space

**Reviews**

This is a great book for young space enthusiasts with up to the date information. There is a great balance of pictures to text allowing a young reader to not feel overwhelmed with text. – *GoodReads.com*

“Intended for a middle school audience, this space encyclopedia has information that would be interesting to high school students, but is presented in such a way that upper elementary students could understand most of it as well.” – *Library Media Connection*

“Author Goldsmith uses his PhD in astrophysics and his background writing children's nonfiction to illuminate the complexities of space in a way that children can understand. The visuals, which are plentiful throughout the text, provide eye-catching examples of the concepts being explained. This is an excellent starting point for up-to-date information on space for young readers. This student encyclopedia is ideal for inclusion in a reference collection or general circulation in a school or public library. The cost of this volume would allow for any library to add this as an update to its collection.” – *BookList*

(2010). *Space: A visual encyclopedia*. New York, NY: DK Publishing.

Astronomy – Encyclopedias, Juvenile  
ISBN: 9780756662776

**Features**

NASA photographs; charts; stories; contributions by NASA astronauts and experts

**Critical Evaluation of Resource**

Meeting core standards of literacy for determining a central idea and analyzing sentences for ideas, this is a reference with true and current photographs from space and contributions from NASA astronauts. Contributors alone offer authority on the subject and broad coverage of subjects offer an introductory look for the target reader interested in using the reference as a supplementary tool in school.

**Description**

Gr 4 – 6, \$7.51, hardcover 256 page visual encyclopedia of space

**Reviews**

“Presented largely in the customary single-topic spreads, coverage is very broad, ranging from the practice of astronomy and the history of our ventures into space to the components of the solar system and of the cosmos at large. The lack of any resource lists makes this more suitable for casual enquiry and browsing than systematic study.” – *School Library Journal*

Students will enjoy learning about space through this information-packed volume. There are color illustrations, diagrams, and charts as well as a glossary, timeline, and index. Although no topic is examined in great detail, those working on reports or projects would find this book helpful.” – *Library Media Connection*

## Print Reference

*Seven Wonders (2011). Minneapolis, MN: Twenty-First Century Books.*

Astronomy – Juvenile literature

ISBN: 9780761354543, Seven Wonders beyond the Solar System

ISBN: 97807613-54512, Seven Wonders of Asteroids, Comets, and Meteors

ISBN: 97807613-42410, Seven Wonders of Exploration Technology

ISBN: 97807613-54529, Seven Wonders of Space Phenomena

ISBN: 97807613-54536, Seven Wonders of Space Technology

ISBN: 97807613-54499, Seven Wonders of the Gas Giants and Their Moons

ISBN: 97807613-54482, Seven Wonders of the Rocky Planets and Their Moons

ISBN: 97807613-54505, Seven Wonders of the Sun and Other Stars

### Features

Bibliography; biographies of astronomers; reproduction of notes; progress of scientific discovery; color illustrations and photographs; further reading, glossary; index; source notes; timeline; websites

### Critical Evaluation of Resource

This series is selected based on meeting grades 3 - 8 Elementary Earth and Space Science Standards, aimed with current content appropriate for those young readers looking for easily referenced and clear facts about the objects in the universe. The author (Ron Miller) is also a children's contributor that has won numerous awards such as the following: Junior Library Guild Selection, Films Best Books, NSTA/CBC Outstanding Trade Books for Students K-12, SSSI Book Award, American Institute of Physical Science Writing Award, Children's Book of the Year, and VOYA Nonfiction Honor List.

### Description

Gr 5 and up, \$24.95 per, library bound series guide for the universe

### Review

“Highly recommended for the capable and/or talented reader in middle school, and up through high school. The text is readable but the content is deep and the information is wide-ranging and detailed. It would provide many anecdotes and interesting detail for the teacher who gives mini-lectures as well.” – NSTA

### Selected Evaluation of Resource (from a series)

*Bortz, F. (2011). Seven wonders of space technology. Minneapolis, MN: Twenty-First Century Books.*

Outer Space – Exploration – Juvenile literature

ISBN: 9780761354536

Unlike the other books selected in this series the author of this book is a physicist from the field who as was designated a Selector's Choice on the National Science Teacher's Association's list of Outstanding Trade Books for Children and won Booklist Top 10 Science Books for Youth, this book is specifically selected based on coverage of space technology. No other current reference source for children covers space technology as well as this book in a series.



### Description

Gr 5 and up, \$24.95, library bound 80 page space technology reference guide

**Reviews**

“Within each chapter readers are introduced to the history as well as the most current science regarding each topic. Throughout the book clear, descriptive photos and illustrations bring to life the complex ideas and concepts within the text.” – *Children’s Literature*

"In this useful, well-organized volume, Bortz profiles seven major technological advancements in space exploration." – *The Horn Book Guide*

**Selected Evaluation of Resource** (from a series)

Ward, D. J. (2011). *Seven wonders of space phenomena*. Minneapolis, MN: Twenty-First Century Books.

Astronomy – Miscellanea – Juvenile literature

ISBN: 9780761354529

This selection was picked specifically based on the coverage of space phenomena, which includes dark matter and traveling through space and time that no other reference resource for children covers. The author of this book is a high school science teacher of physics, astronomy, geology, and earth science.

**Description**

Gr 5 and up, \$24.95, library bound 80 page space phenomena reference guide

**Reviews**

“Within each chapter readers are introduced to the history as well as the most current science regarding each topic. Throughout the book clear, descriptive photos and illustrations bring to life the complex ideas and concepts within the text.” – *Children’s Literature*

"In this useful, well-organized volume, Bortz profiles seven major technological advancements in space exploration." – *The Horn Book Guide*

DeCristofano, C., & Carroll, M. (2012). *A black hole is not a hole*. Watertown, MA: Charlesbridge.

Black holes (Astronomy) – Juvenile literature

ISBN: 9781570917837

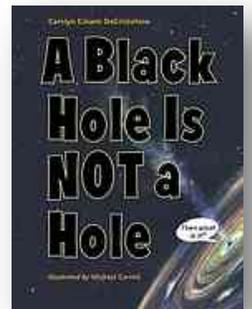
Hardcover, 80 pages

**Features**

Timeline, glossary, color photographs and illustrations, bibliography

\$13.64

Gr 2 – 6

**Critical Evaluation of Resource****Description**

Introduces black holes, describing their physical features, how they were discovered, what causes them, and where they exist in space.

**Reviews**

“DeCristofano handles the material with wit, style and singularly admirable clarity, frequently employing easy-to-understand and, yes, down-to-earth ideas and scenarios to help make complex principles comprehensible to readers of all ages.” – *Kirkus Reviews*

“While this won't get you into a graduate level physics class, it is a great starting point for younger readers. Beautiful illustrations of the universe keep the text from getting too heavy. Highly recommended.” – *Children's Literature*

**Mattern, J. (2011). *Our earth*. Mankato, MN: Capstone Press.**

Solar system – Juvenile literature

ISBN: 9781429653954

Library Binding, 32 pages

Captions with vocabulary definitions, color illustrations and photographs, glossary, index, suggesting reading list and websites

\$17.98

Gr 3 – 6

### Description

Describes planet Earth, including its place in space, earth forms, and weather. It's the third planet from the Sun. And it's the only planet known to support life. Get an in-depth view of the planet we call home. The view of space from our spot on Earth is a spectacular sight. But there's so much we can't see from our backyards. In this series, the latest information, engaging photos, and dynamic charts give you a guided tour of our solar system and beyond.

### Reviews

“Within each chapter the author uses clear language with a conversational tone. Technical, content specific vocabulary is explained in the text by the use of highlighting as well as inset captions containing vocabulary definitions.” – *Children's Literature*

“This book is targeted for grades 3 and 4 but it can be used with older children, especially those with reading difficulties, because of its interest and motivational value. The scientific content is accurate, including the facts and diagrams. Its broad appeal makes it an attractive purchase.” – *NSTA*

## Guidebooks 2.0

### Summary

Elementary school libraries are supplementing their library with iPads and eBooks. This section offers reference guidebooks in an electronic format.

***Pocket Genius: Space*. (2012). New York, NY: DK Publishing. [iPad eBook]. Retrieved from <http://itunes.apple.com>**

Astronomy – Juvenile literature

iBook 2

### Features

Interactive materials; video; galleries of space objects; 213 screens covering all space topics; mobile

### Critical Evaluation of Resource

This series meets common core standards, according to the publisher's description, but as a digital reference guide offering interactive learning materials and based on it being from a well-known publisher for children's reference books, this selection was a choice because it concisely covers everything in existence for space and is

a great resource for a quick fact check.

### Description

Gr 3 – 9, \$2.99, electronic book guide for fast facts on the universe

*Astronaut Travel Guide Series (2013). Chicago, IL: Heinemann-Raintree.*

Astronomy – Juvenile literature

ISBN: 9781410951465, The Moon

ISBN: 9781410951458, Mercury and Venus

ISBN: 9781410951441, Mars

ISBN: 9781410951410, Comets, Asteroids, Meteors

ISBN: 9781410951472, Stars and Galaxies

ISBN: 9781410951489, The Sun

ISBN: 9781410951434, Jupiter and the Outer Planets

ISBN: 9781410951427, Earth

### Features

Color illustrations and photographs; maps; further reading; glossary; index; websites; fact files; interviews with astronauts

### Critical Evaluation of Resource

This series is selected based on it being an Accelerated Reader Capstone series that meets Elementary Earth and Space Science Standards, aimed with content appropriate for those young readers looking for easily referenced and clear facts about planets. Each book in the series has an AR Quiz number, AR points, and lexile level for reference that promotes engaged reading. Capstone materials are highly ranked among preK through high school students and is a highly recommended choice among librarians and teachers.

### Description

Gr 3 – 6, \$24 per, electronic book series guide for the universe

## Manual

*Dell, P. (2011). Mapping the Sky. New York, NY: Marshall Cavendish Benchmark.*

Astronomy – Charts, diagrams, etc. – Juvenile literature

ISBN: 9781608703593

### Features

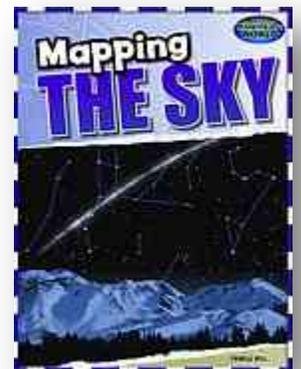
Reading maps; glossary; index

### Critical Evaluation of Resource

Selection for this text was based on the limited current manuals available to children that introduce maps and mapping skills. Pamela Dell is also a well-established children's author and mapping skills are an essential skill for any budding young astronomer.

### Description

Gr 4 – 8, \$28.50, electronic 32 page manual for mapping skills



## Internet Reference (Resources)

### Summary

Elementary school libraries are not just for checking out books anymore, they have been offering students Internet access and exercises in finding facts. Here is a list of resources very useful for finding facts about the universe.

**Old Farmer's Almanac for Kids. (2013). *Sky watch*. Retrieved from <http://www.almanac4kids.com/sky/index.php>**

### Features

Color photos and illustrations; sky facts; moon phases; astronomy facts

### Critical Evaluation of Resource

Selection for this almanac is based on the information aimed directly for kids and simple text that is easily readable and fact based. Online availability offers quick access and current news on astronomy facts for the computer user, and Old Farmer's is a well-known contributor of almanacs for children.

### Description

Gr K – 4, free almanac for astronomy facts

**Oracle Education Foundation. (2009). *ThinkQuest: Astronomy*. Retrieved from <http://thinkquest.org/>**

### Features

Age-sorted content; site protected (free from ads); student collaboration of knowledge; subject-sorted

### Critical Evaluation of Resource

Though this has the potential to become outdated without ongoing contributions from students, the websites built offer students exploration of multimedia from students worldwide, reference facts about the universe, and the chance to use technology in a protected learning platform.

### Description

Gr K – 12, free Oracle Education Foundation index of astronomy student-sharing websites for astronomy knowledge

**NASA. (2013). *Planetquest: The search for another earth*. Retrieved from <http://planetquest.jpl.nasa.gov/>**

### Features

Historic timeline; exoplanet atlas; images and video; current news; external web links; professional resources; planet-finding methods; interactive planet games for discovery and learning; quizzes; maps and graphs

### Critical Evaluation of Resource

No other website is as authoritative or covers exoplanet facts as NASA does. This site is also a constantly updated and interactive source that could answer any reference questions about exoplanets.

### Description

Gr 4 and up, free, NASA's website for searching for new worlds

**NASA. (2013). *Solar system 101*. Retrieved from <http://solarsystem.nasa.gov/kids/index.cfm#>**

### Features

Planet facts; learning games; project guides; current news; external web links; NASA employee career profiles

**Critical Evaluation of Resource**

NASA provides another authoritative source especially for children that seem to take facts about the solar system come right out of the galaxy. This source is not only rich in content about the solar system, it's also a current database of facts.

**Description**

Gr K and up, free, NASA's website for planet facts

**NASA. (2013). *Solar system exploration*. Retrieved from <http://solarsystem.nasa.gov/planets/profile.cfm>**

**Features**

Solar system facts; videos and images; current news and headlines; NASA employee career profiles; science and technology features; historic timeline of events; FAQs for each planet profile; lesson guides (K – 12)

**Critical Evaluation of Resource**

No other database reference is as authoritative or provides in depth multimedia and content about the universe and historic facts. NASA is an authoritative source that gives a planet profile in depth.

**Description**

Gr 3 and up, free, NASA's website for solar system facts

## Library 2.0, iTunes Applications (as a reference resource)

**Summary**

Many elementary school libraries are now opening their doors to iPads and Nooks, in addition to increased computer use. Here is a list of reference apps that promote interactive learning and can answer all kinds of space science reference questions while meeting the challenge of interest and relevancy.

**Kids Discover. (2012). *Kids discover space (Version 2.0)* [Mobile application software]. Retrieved from <http://itunes.apple.com>**

**Kids Discover. (2013). *Kids discover galaxies (Version 1.1)* [Mobile application software]. Retrieved from <http://itunes.apple.com>**

**Features**

Interactive space facts; over 200 photos; interactive diagrams; read-aloud narration; optimized graphics; timeline

**Critical Evaluation of Resource**

This application was reviewed by the School Library Journal and selected based on interactive learning that focuses on a singular core curriculum and paves a way for a child to naturally find and remember facts about space. In addition to providing current facts, Kids Discover is an award winning app, winning: the Parents' Choice Gold Award, the EdPress Golden Lamp Award, and the AEP Distinguished Achievement Award.

**Description**

Gr 5 – 8, \$3.99 (Kids Discover Space) and Free (Kids Discover Galaxies), iTunes application for space discovery of facts



### Reviews

“Jam packed with facts, figures, and stunning images, these apps are both visually arresting and informative. All in all, these apps are sure to please parents and educators as well as youngsters.” – *School Library Journal*

“As a teacher that has to get students to understand the history of space exploration, I was very pleased to find all my students needed to know in one place. The images, videos, and photos are superb and engaging.” – *Elementary School Teacher*