

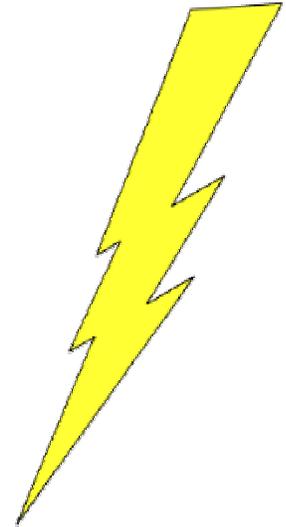
NASAexplores

Summer Reading 2002

Summer holidays are the perfect time to re-charge your personal batteries with some good books!

We've put together lists of some selected titles to get you started. Most of these books—and many other excellent similar materials—may be found at your local library.

- **Pre-Kindergarten**, pages 2-3
- **Elementary Readers**, pages 4-6
- **Middle School Readers**, pages 7-9
- **High School & Adult Readers**, pages 10-13
- **Parent & Teacher Resources**, pages 14-17



If you are a voracious reader, don't despair! More good books may be found on the *NASAexplores'2001 Reading Lists*, http://nasaexplores.com/extras/reading_lists/summer_2001/reading_2001.html

More lists of titles are available from other NASA web sites. Links for some of these may be found on the NASAexplores 2002 Summer Reading page at http://www.nasaexplores.com/extras/reading_lists/summer_2002/summer_reading_2002_home.html



NASAexplores

Summer Reading 2002: For Very Young Readers

Amelia's Fantastic Flight

Bursik, Rose (1992).

Amelia builds a plane and takes it around the world. Maps allow the reader to follow her journey. .

Anno's Counting Book.

Anno, Mitsumasa (1986).

A counting book depicting the growth in a village and surrounding countryside during twelve months.



Astronaut PiggyWiggy.

Fox, Christyan (2002).

PiggyWiggy, his beloved toy, Teddy and all their friends sample space flight. They are properly outfitted, they know how to make repairs to their spaceship, and they are eager to make friends with aliens—as long as they get back to Earth in time for breakfast!

Big Silver Space Shuttle

Wilson-Max, Ken (2000).

With more than 15 flaps, pull-tabs, and other manipulative parts, this big, bold book invites children to blast off with the Space Shuttle again and again.

Blue Skidoos to the Planets

Santomero, Angela C. (1999).

This Blue's Clues sticker book introduces children to the planets and their places in the solar system.

Clifford the Big Red Dog Magnet Math.

Bridwell, Norman (2002).

Young children learn to count and add with magnet manipulatives and a fun rhyme.





How Long?

Dale, Elizabeth (1998).

When Caroline's mother tells her it will be ten minutes until lunch or twenty minutes until moonrise, Caroline tries to get a sense of how long that means by seeing how many toy trucks or daisies she can string together until each event occurs.

Hush Little Alien

Kirk, Daniel (2001).

In an intergalactic twist on the traditional "Hush, Little Baby," an alien Papa helps his little green son rebuild their spaceship after the son mistakenly melts it with his new laser beam. .

Little Critter, Astronaut

Mayer, Mercer (1996).

Going into space is all in a day's work for Astronaut Critter.

Space Station

Lippman, Peter (1999).

Die-cut in the shape of a space station, this book tells a rhyming story about a trio of astrodogs and their robot helper as they observe the lunar sky, get caught in a meteor shower, then zoom off to Planet X to collect samples.



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Summer Reading 2002: Elementary

Mathematics

Captain Invincible and the Space Shapes

Murphy, Stuart J. (2001).

After conquering galaxies, Captain Invincible and his space-dog, Comet, prepare for an adventurous return to Earth in their spaceship Hawk. Using the Space Shaper panel, with its three-dimensional buttons that include a cube, a cone, and a pyramid, the captain and the pup wage a battle against a meteor shower, poison gas, a flying saucer, and a galactic beast.

The Grapes of Math: Mind Stretching Math Riddles.

Tang, Greg (2001).

Picture puzzles accompanied by clues in verse encourage readers to embark on some inspired problem solving.

Math Curse

Scieszka, Jon (1995).

Everything is a math problem.

Pigs on a Blanket: Fun With Math and Time

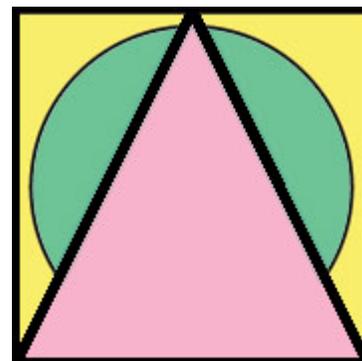
Axelrod, Amy (1996).

The concept of time is presented in this Reading Rainbow Book about a family of pigs as they prepare and begin their journey to the beach, but through mishaps and bad planning, they reach their destination too late. This silly story is a useful tool for honing time-telling and math skills.

Sir Cumference and the Great Knight of Angleland: A Math Adventure

Neuschwander, Cindy (2001).

Radius, the son of Sir Cumference and Lady Di of Ameter, ventures on a heroic quest to earn his knighthood. So he is sent off to rescue the missing King Lell. Falling bridges, a cryptic riddle, a crocodile-infested moat, and a winding labyrinth all must be mastered before finding the king.



Science

The Adventure of Echo The Bat

Butcher, Ginger (2000).

Prepared especially for elementary school students by NASA, this book introduces children age 5 through 9 to satellite imagery and the habitats of bats through heartwarming narrative and interactive, lift-the-flap illustrations. Fun drawings and satellite images set the stage for the five diverse habitats Echo visits as he travels from where he was born to a bat cave in Arizona.

Arty the Part-Time Astronaut

Carbin, Eddie (2000).

Arty and his new-found alien friend, Guplo, quest through the solar system to find Gupio's family. Along the way kids will learn facts about our solar system and its planets.

How to Fly a 747

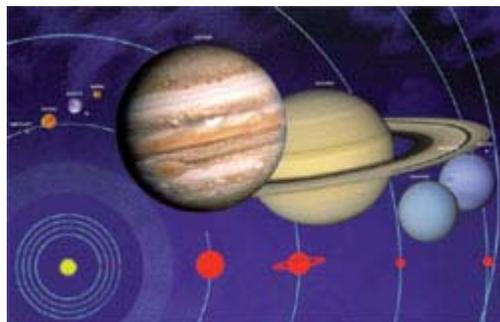
Graham, Ian (2000).

An Illustrated guide to the basics of aviation and avionics. After reading the book, kids will have a basic understanding of flight and aerodynamics

The Life of an Astronaut

Walker, Niki (2000).

This book explains how candidates train to become astronauts or "star sailors." It looks at how they prepare for a mission, what they do in space, and what they experience along the way. Kids will discover how astronauts eat, sleep, and spend their day in weightless conditions.



The Planets in Our Solar System

Branley, Franklyn Mansfield (1998).

An illustrated introduction to the solar system.

Social Studies

Ellen Ochoa: The First Hispanic Woman Astronaut

Romero, Maritza (1998).

A biography of Ellen Ochoa, the first Hispanic woman to orbit the earth.

Mae Jemison: The First African American Woman Astronaut

Burby, Liza N. (1998).

A short, clearly written biography of Mae Jemison for beginning readers.



On the Go

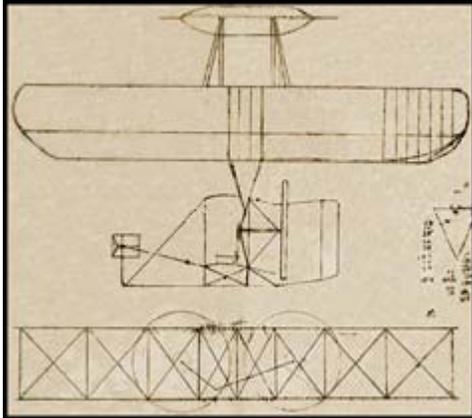
Morris, Ann (1999).

Brilliant color photographs show the many modes of transport used by people around the world.

One Giant Leap: The Story of Neil Armstrong

Brown, Don (1998).

This picture-book biography begins with two-year-old Neil Armstrong watching an airplane race. The second part of the book focuses on Armstrong's flight to the moon.



Taking Flight: The Story of the Wright Brothers

Krensky, Stephen (2000).

A detailed account of how the Wright brothers arrived at the first powered flight at Kitty Hawk, North Carolina, as well as background on earlier attempts to achieve flight.



NASAexplores

Summer Reading 2002: Middle School

Mathematics

Math for Smarty Pants

Burns, Marilyn (1982).

Fundamental math concepts are conveyed through puzzles, tricks and word problems. This book proves that numbers are only a part of math.

Math Trek: Adventures in the Mathzone

Peterson, Ivars (1999).

Explores various mathematical concepts—such as knots, fractals, secret codes, and chaos theory—and relates them to everyday life.

Math Wizardry for Kids

Kenda, Maragret (1995).

200+ puzzles and games allow children to explore mathamatics. A Glossary and a section for parents and teachers help make this book ideal for use as a classroom math supplement.

Science

Earthlings Inside and Out: A Space Alien Studies the Human Body

Wyatt, Valerie (1999).

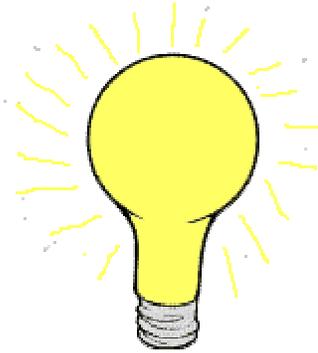
When a traveler from the planet Memo veers off course and encounters a boy named Pete, a study of human anatomy results. Anatomical definitions, descriptions, biological facts, and ideas for science projects are presented in the book. .



Everyday Science: Fun and Easy Projects for Making Practical Things

Levine, Shar, and Johnson, Leslie (1995).

Science projects that children can do with adult supervision. The projects can be adapted for older children.



How Things Work: Planes, Gliders, Helicopters

Jennings, Terry (1993).

The author explains how hot air balloons fly, why the shape of a wing is important, how gliders glide, and much more.

The Way Science Works

Kerrod, Robin et al (2002).

More than 60 hands-on projects testing key scientific theories in magnetism, gravity, liquid density, etc.

Wild Blue Wonders: Exploring the Magic of Flight

Wallace, Lane (2001).

NASA and the Experimental Aircraft Association partnered to produce an aviation book designed for middle school students. The book has a forward by the legendary test pilot, Chuck Yeager.

History

Brainstorm!: The Stories of Twenty American Kid Inventors

Tucker, Tom (1998).

The 20 stories drawn from the eighteenth, nineteenth, and twentieth centuries record the invention of such things as earmuffs (1873), popsicles (1905), water skiing (1922), and colored car wax (1991).

John Glenn: Space Pioneer

Bredeson, Carmen (2000).

A biography of astronaut and Ohio senator John Glenn.



Sally Ride: Space Pioneer

Hopping, Lorainne J. (2000).

A biography of Sally Ride, the first American woman and the youngest American astronaut to orbit the earth.

The Wright Brothers: Pioneers of American Aviation

Reynolds, Quentin (1981).

A detailed biography of Wilbur and Orville Wright provides the factual story of these two famous brothers not only designed but also built and flew the world's first airplane.

Fiction

Phantom Tollbooth

Juster, Norton (1961).

A perennial favorite, this fantasy is full of math jokes and puns.



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Summer Reading 2002: High School and Adult

Mathematics

Fermat's Enigma: The Epic Quest to Solve the World's Greatest Mathematical Problem

Singh, Simon (1997).

Fermat's Last Theorem, a 350-year-old mathematical puzzle, is solved after long labor by a Princeton professor.

Innumeracy: Mathematical Illiteracy and Its consequences

Paulos, John Allen (2001).

The author demonstrates popular misperceptions and problems resulting from the inability to understand large numbers, statistics, and mathematical concepts encountered in everyday life.

The Joy of Pi

Blatner, David (1997).

The history of an irrational number from the days of the ancient Egyptians to the modern day.



Life by the Numbers

Devlin, Keith (1999).

This highly acclaimed companion to the PBS television series illustrates the pervasiveness of mathematics and the numerous career opportunities for the mathematically inclined.

Science

Blind Watchers of the Sky: The People and Ideas that Shaped Our View of the Universe.

Kolb, Rocky (1996).

Theoretical astrophysicist Rocky Kolb presents a popular history of astronomy and scientific cosmology from Tycho Brahe to the latter half of the 20th century.



A Brief History of Time: From the Big Bang to Black Holes

Hawking, Stephen (1998 reprint).

A Brief History of Time, first published in 1988, was a landmark volume in science writing. The author discusses in non-technical language the origin, evolution, and fate of the universe.

The Double Helix

Watson, James D. (1991).

Originally published in 1968, the author recreates the excitement of the discovery of the structure of DNA, and demonstrates to the non-scientist how the scientific method works.

Invention by Design: How Engineers Get From Thought to Thing

Petroski, Henry (1996).

The author shows how engineers work, on large projects and small.



Secret House: 24 Hours in the Strange and Unexpected World in Which We Spend Our Nights and Days

Bodanis, David (1986).

The microbiological drama of a day in the life of a house is explored.

Silent Spring

Carson, Rachel (1962).

Written over the years 1958 to 1962, it took a hard look at the effects of insecticides and pesticides on songbird populations throughout the United States, whose declining numbers yielded the silence to which her title attests. Instrumental in launching the environmental movement, Carson's book is without question one of the landmark books of the twentieth century. Available in various editions from multiple publishers, as well as from most public libraries.



History

The Cuckoo's Egg: Tracking a Spy through the Maze of Computer Espionage

Stoll, Cliff (1989; republished 2000).

An unwilling detective, an astronomer turned systems manager at Lawrence Berkeley Lab when a 75-cent accounting error alerted him to the presence of an unauthorized user on his system.

Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time

Sobel, David (1996 reprint).

An 18th century clockmaker solved the problem of accurately determining longitude, a life-and-death matter for sailors.



Queen Bess : Daredevil Aviator

Rich, Doris L. (1995).

Here is the brief but intense life of Bessie Coleman, America's first African American woman aviator. Born in 1892 in Atlanta, Texas, she became known as "Queen Bess", a barnstormer and flying-circus performer who defied the strictures of race, sex, and society in pursuit of a dream. .

Where Wizards Stay Up Late: The Origins of the Internet

Hafner, Katie and Lyon, Matthew (1996; reprinted 1998).

This history of the Internet includes extensive interviews with the creators.

Space Shuttle: The First 20 Years — The Astronauts' Experiences in Their Own Words

Air & Space / Smithsonian Magazine (2002).

An look at the Space Shuttle experience from more than 75 people who have flown on the Shuttle. .

Wright Brothers: How They Invented the Airplane

Freedman, Russell (1992).

The author tells the story of this dramatic achievement in the history of aeronautics, illustrated with many photographs taken by the Wright Brothers themselves.



Fiction

Flatland

Abbot, Edwin A. (1998).

Flatland is one of the very few novels about mathematics and philosophy that can appeal to almost any layperson. First published in Victorian England in the 1880's, this short fantasy takes place in a completely flat world of two physical dimensions where all the inhabitants are geometric shapes. .



NASAexplores

Summer Reading List 2002: Parent and Teacher Resources

Mathematics

Family Math, the Middle School Years.

Mayfield-Ingram, Karen et al (1998).

Ages ten to fourteen are crucial to our children's advanced mathematics education. Together, families unlock the mystery of algebra with entertaining, non-threatening activities. .

The Math Teacher's Book of Lists

Muschla, Judith A. (1994).

This resource is suitable for grades 4-12. Organized into eight sections: Numbers, Measurement, Geometry, Algebra, Trigonometry and Calculus, Math in Everyday Life, Potpourri, and Teacher Reference Lists. .

Math Wizardry for Kids

Kenda, Maragret (1995).

200+ puzzles and games allow children to explore mathamatics. A Glossary and a section for parents and teachers help make this book ideal for use as a classroom math supplement.

Science

Cosmic Science: Over 40 Gravity-Defying, Earth-Orbiting, Space-Cruising Activities for Kids

Wiese, Jim (1997).

Cosmic Science teaches children how to use everyday household objects to learn everything they ever wanted to know about space science. Contains over forty easy-to-do illustrated experiments for elementary and middle school science teachers. .



Everyday Science: Fun and Easy Projects for Making Practical Things

Levine, Shar, and Johnson, Leslie (1995).

Science projects that children can do with adult supervision. The projects can be adapted for older children.

Space Songs for Children: Fun Songs and Activities About Outer Space

Weimer, Tonja Evetts (1999).

The author wrote Space Songs for Children at the request of NASA to help give young children a fun way to learn about a space. Space Songs for Children has been taken into space and played by the astronauts, and Mission Control has used it to wake up the astronauts working on the space station.

The Way Science Works

Kerrod, Robin et al (2002).

More than 60 hands-on projects testing key scientific theories in magnetism, gravity, liquid density, etc.



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Note: Annotations are provided as an aid to the reader and are the personal opinions of the author. No endorsements of the works or ideas presented are implied.

