



Bibliography

This bibliography contains resources about Newton; calculus, physics, and astronomy; and the history of science and mathematics.

Newton's Life and Works Books

In the Presence of the Creator: Isaac Newton and His Times

by Gale E. Christianson.
Free Press, 1984.

Examines the scientist's reclusive personality, recreates the turbulent intellectual atmosphere of seventeenth-century Europe, and details Newton's discoveries in physics, optics, and astronomy. (A)

Isaac Newton

by James Gleick.
Pantheon Books, 2003.

Looks at Newton's significant letters and unpublished notebooks to illuminate the importance of his work in physics, optics, and calculus. (A)

Isaac Newton

by Paul Mason.
Raintree Steck-Vaughn, 2001.
Explains Newton's contributions to science and how the bubonic plague and political and religious changes affected both Newton and society. Illustrated with maps, diagrams, photographs, and reproductions of paintings. Includes primary-source quotes. (C)

Isaac Newton and Gravity

by Steve Parker.
Chelsea House, 1995.
Relates Newton's accomplishments as well as interesting vignettes of his life. Includes illustrations of his experiments. (C)

Isaac Newton: Discovering Laws That Govern the Universe

by Michael White.
Blackbirch Press, 1999.
Presents a biography of Newton with illustrations, boxed quotes, and a time line of important events. (C)(YA)

Isaac Newton: The Greatest Scientist of All Time

by Margaret J. Anderson.
Enslow, 1996.
Provides a biography of Newton's life. (C)

Isaac Newton: Organizing the Universe

by William J. Boerst.
Morgan Reynolds, 2004.
Describes Newton's life and explores his accomplishments in relation to historical events within the scientific community. Includes reproductions of period paintings, drawings, and documents. (C)(YA)

Isaac Newton: Reluctant Genius

by D.C. Ipsen.
Enslow, 1985.
Provides a look at Newton and some of his discoveries, including the theory of gravity, the secrets of light and color, and the system of calculus. (YA)

Isaac Newton and the Scientific Revolution

by Gale E. Christianson.
Oxford University Press, 1996.
Relates a biography of Newton as both a great scientist and a man with all-too-human faults. Explores his rivalries, working style, and his interest in alchemy. (YA)

Let Newton Be!

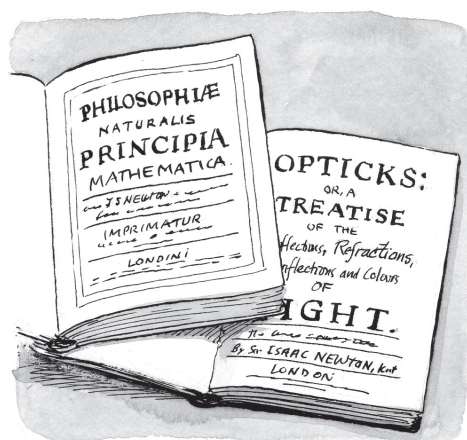
by John Fauvel, ed.
Oxford University Press, 1988.
Explores the diverse facets of Newton's life from mathematics to theology, mechanics to music, and optics to alchemy. (A)

The Life of Isaac Newton

by Richard S. Westfall.
Cambridge University Press, 1993.
Examines Newton's personal life and scientific career. (A)

Key:

- (C)=Children
- (YA)=Young Adult
- (A)=Adult



Newton's Life and Works (cont.)

Books

Newton's Gift: How Sir Isaac Newton Unlocked the System of the World

by David Berlinski.

Free Press, 2000.

Follows Newton's life from childhood through adulthood, outlining his many advances in scientific and mathematical thought. (YA) (A)

On the Shoulders of Giants: The Great Works of Physics and Astronomy

by Stephen W. Hawking, ed.

Running Press, 2002.

Places selections from Newton's Principia in the context of selected writings of Copernicus, Kepler, Galileo, and Einstein. Includes biographies of each scientist. (A)

Opticks: Or, a Treatise of the Reflections, Refractions, Inflexions and Colours of Light

by Isaac Newton.

Dover, 1952.

Describes Newton's own experiments with spectroscopy, color, lenses, reflection, refraction, and more in easy-to-understand language. Based on the Fourth Edition (London, 1730). Includes a foreword by Albert Einstein. (A)

The Principia: Mathematical Principles of Natural Philosophy

by Isaac Newton.

University of California Press, 1999.

Presents, in Newton's own mathematical terms, the principles of time, force, and motion that have helped to guide the development of modern physical science. Corrects errors and modernizes language of earlier translations. (A)

Videos & DVDs

Biography: Sir Isaac Newton

A&E Home Video, 1998.

Profiles Newton as one of the greatest minds in history. (YA) (A)

Newton's Dark Secrets

WGBH, 2005.

Examines Newton's life and work, and chronicles his interest in alchemy and religion. (YA) (A)

Web Sites

NOVA—Newton's Dark Secrets

www.pbs.org/nova/newton

Find articles, interviews, interactive activities, and resources in this companion Web site to the program. (C) (YA) (A)

Footprints of the Lion

www.lib.cam.ac.uk/exhibitions/Footprints_of_the_Lion

Presents a broad view of Newton's life through a collection of original documents held by the Cambridge University Library. Examines the expanse of Newton's work and the extensive thought behind it. (A)

The Newton Project

www.newtonproject.ic.ac.uk

Features a high-quality electronic facsimile of Newton's papers, consisting of digital images alongside text-encoded transcriptions. (YA) (A)

Sir Isaac Newton

www-history.mcs.st-andrews.ac.uk/Mathematicians/Newton.html

Provides a comprehensive time line of Newton's life and accomplishments. (A)

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Calculus, Physics, and Astronomy

Books

Calculus for the Utterly Confused

by Robert Oman.

McGraw-Hill, 1999.

Explains and applies calculus concepts to such fields as business, medicine, physics, and health. (A)

The Handy Physics Answer Book

by P. Erik Gundersen.

Visible Ink Press, 1999.

Contains more than 800 questions and answers on a number of topics. (C)(YA)

The Kingfisher Young People's Book of Space

by Martin Redfern.

Kingfisher, 1998.

Introduces topics such as the Big Bang and life in the universe. (C)

Nightwatch: A Practical Guide to Viewing the Universe

by Terence Dickinson.

Firefly Books, 1998.

Provides an introductory how-to for nighttime viewing. (YA)(A)

The Rainbow Mystery

by Jennifer Dussling.

Kane Press, 2002.

Presents a story that explains the colors of a rainbow. (C)

Six Easy Pieces: Essentials of Physics Explained by Its Most Brilliant Teacher

by Richard P. Feynman.

Addison-Wesley, 1995.

Discusses gravity in a simplified manner. (YA)(A)

Waves: Principles of Light, Electricity, and Magnetism

by Paul Fleisher.

Lerner Publications, 2002.

Offers an overview of light, electricity, and magnetism within a historical context. (C)(YA)

Videos & DVDs

Life by the Numbers

Monterey Video, 1998.

Offers seven one-hour programs that explain the role of mathematics in real life, such as in sports, technology, and space exploration. (C)(YA)

Roller Coaster

WGBH Educational Foundation, 1993.

Explores the science of roller coasters. (C)(YA)(A)

Web Sites

Amusement Park Physics:

Roller Coaster

www.learner.org/exhibits/parkphysics/coaster.html

Allows users to design and test-drive their own online roller coasters. (YA)(A)

Astronomy Picture of the Day

antwarp.gsfc.nasa.gov/apod/astropix.html

Provides a daily image or photograph of the universe. (C)(YA)(A)

Fear of Physics

www.fearofphysics.com

Illustrates the laws of physics behind sports and everyday activities. Includes homework help and a physics dictionary. (YA)

Visual Calculus

archives.math.utk.edu/visual.calculus

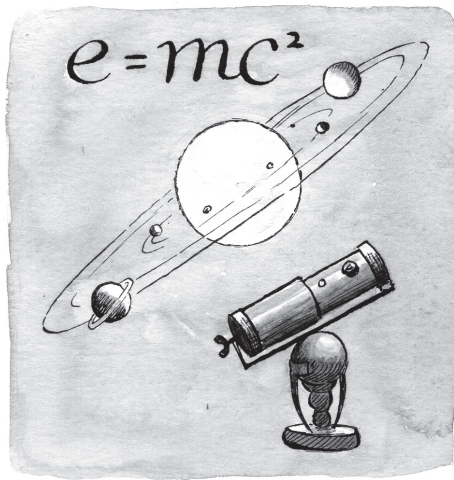
Features a collection of modules that can be used to study or teach calculus. Various plug-ins are needed to view some of the pages. (YA)(A)

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History of Science and Mathematics

Books

The Crest of the Peacock: The Non-European Roots of Mathematics
by George Gheverghese Joseph.
Princeton University Press, 2000.

Focuses on non-European mathematics—the influence of the Egyptians and Babylonians on the Greeks; the major creative contributions of the Arab people; and the mathematics of India and China. (A)

Everything's Relative: And Other Fables from Science and Technology
by Tony Rothman.
Wiley, 2003.

Chronicles milestones in the history of science, emphasizing omissions and inaccuracies in long-accepted accounts of invention and discovery. (YA)(A)

Eyes on the Universe
by George Reed.
Marshall Cavendish, 2001.

Summarizes the history of astronomy. (C)(YA)

Lost Discoveries: The Ancient Roots of Modern Science—From the Babylonians to the Maya
by Dick Teresi.
Simon and Schuster, 2002.

Examines scientific advances made by early non-Western societies and looks at the impact of the advances on Western science. (YA)(A)

Math and Mathematicians: The History of Math Discoveries Around the World

by Leonard C. Bruno.
UXL, 2003.

Compiles biographies of mathematicians throughout history and provides articles describing math concepts and principles.

(A)

Science in Ancient Greece

by Kathlyn Gay.
Franklin Watts, 1998.

Discusses theories and discoveries of ancient Greek philosophers and scientists, and the impact of their discoveries on modern science. Provides an experiment for readers to conduct at home. (C)(YA)

Science in Early Islamic Culture

by George Beshore.
Franklin Watts, 1998.

Outlines the scientific discoveries of the Islamic world after the birth of Mohammed in A.D. 571, and discusses the impact of the discoveries on Western civilization. (C)(YA)

Videos & DVDs

Galileo's Battle for the Heavens
WGBH, 2002.

Examines Galileo's astronomical discoveries, shares his correspondence with his daughter, and explores his clash with the Catholic Church. (YA)(A)

Infinite Secrets

WGBH, 2003.

Profiles Archimedes' life and work, and the science involved in the restoration of the Palimpsest. (YA)(A)

Web Sites

MacTutor History of Math Archive
www-history.mcs.st-and.ac.uk/history/index.html

Includes numerous biographies of notable mathematicians, searchable by name, location, time, or subject. (YA)(A)

Windows to the Universe:

History and People
www.windows.ucar.edu/tour/link=/people/people.html

Provides information about ancient and modern philosophers, astronomers, and scientists. (C)(YA)(A)

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