Stem Science Titles
Middle School–High School
Fall 2015
Literacy in the Science Classroom
Millie Blandford

Summary
Specific classroom activities created to implement and strengthen literacy skills in the science classroom
To gain a deep understanding of scientific concepts and to work well with a variety of science processes, students must develop essential skills that allow them to read, write, listen to, and speak about scientific texts and presentations. Literacy in the Science Classroom is a handy tool to improve science instruction that integrates science and literacy with a variety of fun, engaging activities and games designed to hone students' skills. Such literacy and science experiences are connected to Common Core State Standards, Next Generation Science Standards, and offer valuable support for any college- and career-readiness standards.

Contributor Bio
Millie Blandford is a National Board Certified educator in science, with experience teaching middle school science for 11 years and high school freshmen science for six years. She is the author of Science and Math in Motion and Teaching the Scientific Method. She is the recipient of numerous awards, including a Who's Who Among America's Teachers Award, and is currently the vice principal of a middle school. She lives in Springfield, Kentucky.

Curious Minds
40 Hands-on Activities to Inspire a Love of Learning
Ty Kolstedt, Dr. Azeem Z. Vasi

Summary
A multidisciplinary activity book from four core academic areas—math, science, language arts, and social studies
Unlike the many activity books devoted solely to one type of activity—science experiments, art activities, math games, brain teasers, and the like—Curious Minds takes a multidisciplinary approach, incorporating science, social studies, math, language arts, world languages, and more in 40 hands-on activities that promote kids' critical thinking and engaged interest in the world they live in. Designed for teachers, parents, or homeschoolers searching for new ways to motivate students aged 9–12, this illustrated resource provides a short mini-lesson for each activity, giving educational background information, related lingo, a materials list, step-by-step directions, and guidance for extending the activity. The wide range of activities—from exploring the physics of parachute flight to making homemade ink to testing how pollutants affect plants—ensures every learner's interest will be piqued.

Contributor Bio
Ty Kolstedt teaches secondary-level social studies and has worked with kids as a wilderness instructor, program coordinator, and teacher for more than 12 years. He lives in Castle Rock, Colorado. Dr. Azeem Z. Vasi is an otolaryngologist who has daily clinic interaction with parents and children dealing with various developmental issues. He lives in Albuquerque, New Mexico.
**The Ugly Animals**
*We Can't All Be Pandas*
Simon Watt

**Summary**

*60 of the world's ugliest and most endangered animals*

This collection of 60 of the world's most ugly (and endangered) animals, features rare imagery and explanatory text. The author is a high-profile biologist but also a stand-up comedian, and the text combines expert research with a light tone.

**Contributor Bio**

*Simon Watt* is an evolutionary biologist, author, stand-up comedian, and host of television nature shows. He is also the founder and chair of The Ugly Animal Preservation Society, and lectures around the UK and internationally on the subject of animal preservation.

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**In Praise of Bees**
*A Cabinet of Curiosities*
Elizabeth Birchall

**Summary**

*A comprehensive study of the bee’s place in human society from prehistoric cave paintings and inscribed clay tablets, through to our contemporary world*

Covering everything about the relationships between human society and bees, this book is filled with nuggets of bee science and practical beekeeping, myth, religion, politics, philosophy, and folklore, plus a selection of verse and a rich variety of illustrations ranging from scientific etchings to modern photographs. It also offers an in-depth look at bees’ complex society and their present plight. The ongoing political and scientific controversies regarding pesticides and other threats are also discussed, given the bee’s importance as plant pollinator in agriculture and the wild.

**Contributor Bio**

*Elizabeth Birchall* has long been interested in bee lore and mythology.
**Eliza's Journal**

**Caelyn AB Williams, Kati Green**

**Summary**

Eliza Wolcott has been sent by her parents to live with her aunt and uncle for the summer on the small community of Orcas Island off the mainland of Washington State. What she imagines to be a fun-in-the-sun vacation quickly turns into a season of assuming responsibility as she is forced by her uncle to get a summer job. Eliza utilizes her talent as an artist and accepts a job as a "natural history illustrator" for the local eccentric Orville Tanner. While Mr. Tanner is strange and gruff, his grandson Charlie is friendly and handsome. As the summer progresses Eliza finds herself illustrating peculiar finds from the geologic past. Guided by curiosity and an uncanny sense that something is very different about the Tanner family, Eliza begins to snoop around for information and unlocks the Tanner family secret. Eliza documents her time on the island by writing and drawing in her journal, which is the format of the novel itself.

**Contributor Bio**

**Caelyn AB Williams** has had a lifelong interest in paleontology, zoology, and particularly Orcas Island in the Puget Sound. She lives near Olympia, Washington. **Kati Green** is a graphic designer.

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**A Journey into the Human Body, Volume 1**

**Soo Oh**

**Summary**

While at school, June, Yuni, and Sunny are asked to draw a picture of the human body. Suddenly they are whisked onto the Anywhere Express, a magic vehicle that takes them on an adventure into the human body, where they learn the functions of the brain, lungs, heart, and various body systems.

**Contributor Bio**

**Soo Oh** is an award-winning syndicated cartoonist. He is the author of *Chorus of Geniuses* and *You'll Get Hurt*. **Seok Yoon** is the illustrator of several educational comics.
Este cuerpo es humano
Anatomía escrita y dibujada
Grassa Toro, José Luis Cano

Summary
Scientifically precise, this fascinating guide to the human body describes some of the most essential organs and systems, including the brain, the heart, the reproductive organs, and the nervous system. Going beyond solely explaining the body's mechanical functions, this reference also contains illustrations modeled on those seen in traditional anatomy books and a section on hygiene and the novelties of the human body, ensuring that this analysis is as engaging as it is informative.

Con precisión científica, esta guía fascinante al cuerpo humano describe algunos de los órganos y sistemas más esenciales, incluyendo el cerebro, el corazón, los órganos reproductivos y el sistema nervioso. Más allá de sólo explicar las funciones mecánicas del cuerpo, esta referencia contiene ilustraciones inspiradas en los tradicionales libros de anatomía y un apartado sobre la higiene y curiosidades del cuerpo humano aseguran que este análisis es tan atractivo como lo es informativo.

Contributor Bio
Grassa Toro is an author and a playwright whose plays have been performed in Cuba, Ecuador, France, and Spain. José Luis Cano is an author, an illustrator, and a cartoonist who has worked on more than 50 books.

Bodies
The Whole Blood-Pumping Story
Glenn Murphy

Summary
A fun, doodle-filled book about how your body works by the author of Why Is Snot Green?

What happens in your head during a headache? What are toes for? Why are some farts eggier than others? These and other important questions are answered in this fun, fascinating book. Packed with doodles and information about all sorts of incredible things, from scabs, cells, and broken bones to brainpower, bacteria, and deadly diseases, this book contains absolutely no boring bits!

Contributor Bio
The Smart Guide to Biology
Anne Maczulak

Summary
From single cells to large, complex ecosystems, the major topics in biology are covered by expert Anne Maczulak in this enjoyable guide. As they work their way through the book, readers are introduced to the structure of the cells that make up the human body; microorganisms, fungi, algae, protists, and plants and animals; the principles of genetics; the body’s major tissues, organs, and systems; the body’s biochemistry; and ecology and ecosystems. The Smart Guide to Biology reveals the relevance of biology to everyday life by explaining how the body works and uses food; how people fit into food chains; how nutrients are cycled through the air; soil, water, and the human body; and how stress affects the body’s normal functioning, among other topics.

Contributor Bio
Anne Maczulak is the author of more than 10 books on biology and ecology, including Allies and Enemies: How the World Depends on Bacteria, The Five-Second Rule and Other Myths About Germs, The Smart Guide to Fighting Infections, and The Smart Guide to Nutrition. She has contributed to articles on germophobia in Psychology Today and has been a regular guest on television and radio, speaking to viewers about the good and bad microbes that lurk in households. As a regular guest expert on Martha Stewart Living Radio, she answers questions on disinfectants, infection, food-borne germs, and other topics. She lives in Santa Barbara, California.

Cells and Life Processes
Denise Walker

Summary
This series for students of 11-14 years offers accessible introductions to the science syllabuses for this age range. The books complement rather than compete with textbooks within the classroom. Cells and Life Processes introduces the reader to the living things that are all around us. Find out what it means to be alive, learn about cells and the biological processes that make life possible, and discover the ways in which scientists are trying to uncover the origins of life.

Contributor Bio
Denise Walker is the author of the Science Essentials - Biology series and the Science Essentials - Chemistry series.
The Naked Scientist
Everyday Life Under the Microscope
Chris Smith

Summary
A fascinating new book from a member of the Naked Scientists—a group of scientists and researchers committed to promoting science to the general public—that lays bare the truth about the science we use everyday.

Why use expensive beauty products when you can moisturize with jellyfish? Have you ever suspected pollution was to blame for your children's plummeting IQ? Ready to take a sea change—on Mars? And how about chopping an onion that doesn't make you cry? Compelling, quirky, and packed fully of curious facts, this book is the perfect present for inquiring minds, a treasure trove of cutting-edge research, far-flung factoids, and the ability to see into our scientific future, answering those fascinating questions you never thought to ask.

Contributor Bio
Chris Smith is a medical doctor and scientist, and the coauthor of Spectacular Science. He is also the founder and driving force behind The Naked Scientist, a live weekly BBC radio show. The Naked Scientists have won six national and international awards for popularizing science in the last three years, and are one of the most downloaded science shows in the world.

Magnificent Minds
16 Pioneering Women in Science and Medicine
Pendred E. Noyce

Summary
Full of the inspirational stories girls need for exploring a future in science

Did you know that Florence Nightingale pioneered the use of statistics in public health? That Marie Curie is still the only person to have won the Nobel Prize in both physics and chemistry—and the only winner whose daughter also won a Nobel Prize? That in the 17th century, the most accomplished scholar in mathematical astronomy was a Polish woman, Maria Cunitz? That the physicist who first explained nuclear fission was a woman, Lise Meitner? That two of the pioneers of computer science were women, Ada Lovelace and Grace Hopper? For centuries, women have risen above their traditional roles to pursue new understanding of the natural world. This book, which grows out of an exhibit at the Grolier Club in New York, introduces the lives, sayings, and dreams of sixteen women over four centuries and chronicles their contributions to mathematics, physics, chemistry, astronomy, computer science, and medicine. Sweeping and inspirational, this book should be read by all girls and young women who share curiosity about the...

Contributor Bio
Pendred E. Noyce is a physician, an advocate for science education, and a mother of five. She has helped lead National Science Foundation education projects and helps run a foundation dedicated to math and science education. Her past books for children include the award-winning Lexicon series and several Galactic Academy of Science adventures with inset miniobiographies of scientists. She lives in Boston, Massachusetts.
**Collins Elt Readers ? Amazing Scientists (Level 3)**

Anne Collins, Fiona MacKenzie

**Summary**
The inspiring stories of 6 people who changed history.

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**On Teaching Science**

Principles and Strategies That Every Educator Should Know

Jeffrey Bennett

**Summary**
Focusing on solutions specific to science and math education both for K–12 and college, this book explores how students learn in general and helps teachers develop successful techniques for the classroom.

*On Teaching Science* is a short, practical guide to key principles and strategies that will help students learn in any subject at any level but with special focus on the STEM (science, technology, engineering, and mathematics) subjects. Though aimed primarily at current and future teachers, the ideas covered will be of interest to anyone involved in education, including parents, school administrators, policymakers, community leaders, and research scientists. The book describes how important it is to instill the notion that learning requires study and effort; presents big picture ideas about teaching; provides general suggestions for successful teaching; and includes pedagogical strategies for success in science teaching. With a combination of personal experience and research-based studies to discuss the current state of education in the United States, the author shows how it can be im...

**Contributor Bio**

Jeffrey Bennett, winner of the 2013 American Institute of Physics Science Communication Award, is an astrophysicist and educator who proposed the idea for and helped develop the Voyage Scale Model Solar System—the first science-oriented exhibit approved for permanent installation on the National Mall in Washington, DC. He is the lead author of college textbooks in four subjects—astronomy, astrobiology, mathematics, and statistics—and has written critically acclaimed books for the general public including *Beyond UFOs* and *On the Cosmic Horizon*. He is also the author of children's books, including those in the Science Adventures with Max the Dog series and *The Wizard Who Saved the World*. He lives in Boulder, Colorado.
The Big Book of Building
Everything Minecraft®? Imagine it? Create it? Build it

Summary
Brought to you by the authors and editors that created the Minecrafter and Minecrafter 2.0 Advanced guide books, The Big Book of Building features more of everything—more mods, more mining, more mobs, and more Minecraft! Up to date for the 2014 holiday season, The Big Book of Building is packed with the most recent training, tools, and techniques to help readers get more out of their favorite sandbox game. 2014 was a pivotal year for Minecraft, and this book captures all the latest and greatest things that have happened to one of the most brilliant and immersive games in video game history. From a brief overview of the game to advanced farming, mining, and building techniques, this guide touches on everything Minecraft enthusiasts could ever ask for. Featuring authoritative and engaging content from our internal experts, The Big Book of Building also highlights some of the most influential builders in the Minecraft community today and examines their creations and techniques that catapulted them to fame.

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Contributor Bio
Triumph Books is a leader in quality and innovation in sports publishing and also publishes pop culture and current events books. They are based in Chicago.

The Big Book of Building, Mods & Circuits
Minecraft®? Imagine It . . . Create It . . . Build It

Summary
With more than 100 million participants, Minecraft has become a global craze and is one of the most popular video games ever

Brought to you by the authors and editors that created The Big Book of Building, this guide book features more of everything—more mods, more mining, more mobs, and more Minecraft. The Big Book of Building, Mods & Circuits is packed with the most recent training, tools, and techniques to help readers get more out of their favorite sandbox game. 2015 was a pivotal year for Minecraft, and this book captures all the latest and greatest things that have happened to one of the most brilliant and immersive games in video game history. From a brief overview of the game to advanced farming, mining, and building techniques, this guide touches on everything Minecraft enthusiasts could ever ask for. Featuring authoritative and engaging content from our internal experts, it also highlights some of the most influential builders in the Minecraft community today and examines their creations and techniques that catapulted them to fame.

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Contributor Bio
Triumph Books is a leader in quality and innovation in sports publishing and also publishes pop culture and current events books. They are based in Chicago.
Minecraft 2.0 Advanced
The Unofficial Guide to Minecraft & Other Building Games

Summary
One of the most popular video games of all time, Minecraft has become a global craze thanks to nearly 40 million registered users worldwide across all platforms. In Minecraft 2.0 Advanced, those who mastered the basics laid out in the first Minecrafter strategy guide now find tips on more complex areas of game play, including Redstone circuitry and other inventions, and advice for beating "The End." This must-have guide for even the most advanced of experts includes the game’s latest innovations and features 100 color images.

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Contributor Bio
Triumph Books is a leader in quality and innovation in sports publishing and also publishes pop culture and current events books. They are based in Chicago.

The Ultimate Creator
Minecraft® Secrets and the World's Most Awesome Builds

Summary
Minecraft is one of the most popular video games of all time, with more than 35 million participants having made the game a global craze. In The Ultimate Minecraft Creator, players at all levels can fully explore the most popular aspect of the game: building. Including detailed, colorful guides to builds of various sizes—with tips for aesthetic concerns and giant builds—this book is a must-have guide for even the most advanced of experts. It has more original, expert-created content than any other source available online or in print in North America: more hints, tips, and cheats to get the most out of players’ Minecraft gaming time and dollars.

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Contributor Bio
Triumph Books is a leader in quality and innovation in sports publishing and also publishes pop culture and current events books. They are based in Chicago.
**Model Planes**
**Aerofoils and Wings**
Martyn Pressnell

**Summary**

A guide to the aerodynamic principles of flying model planes

Model flying is a skillful and diverse hobby and a recognized international sport. The broad principles of flight as applied in full-size aviation are equally important to flying models, but are not always recognized or understood by aeromodelers. This book explains the aerodynamic principles of the "aerofoil" and the way that wings produce lift, which is essential to establishing flight. It includes 48 sheets of aerofoils, drawn for the direct use of aeromodelers, and a detailed method of plotting these on a home computer is given, using Excel or a similar platform. Written by a distinguished aerospace engineer with a passion for modeling, this comprehensive volume is perfect for enthusiastic aeromodelers looking to hone their craft.

**Contributor Bio**

Martyn Pressnell is a former model designer and former airframe structures engineer.

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**Designing and Building a Miniature Aero-Engine**

Chris Turner

**Summary**

Aimed at home metalworkers, engineers, hobbyists aero-engine builders, and airplane enthusiasts, this guide offers instructions on how to build a miniature aero-engine

Designing and building a miniature aero-engine is an exciting and rewarding task. Whether a professional engineer or an amateur looking to build an engine to fly your model airplane, this book will safely guide you through all the stages of designing and constructing an aero-engine at home. With practical advice and detailed diagrams throughout, the book includes information on the machine tools, materials, and accessories required, and details on designing the engine, including a focus on proportion, valve timing, and engine balancing. There is also information on the manufacture of carburetors, assembly, and setting up, as well as how to choose an aircraft for a home-designed miniature engine.

**Contributor Bio**

Chris Turner has worked as a draughtsman in private industry, a chief engineer for the design and development of special purpose machinery, and has taught technical studies and art.
Cool Architecture
Filled with Fantastic Facts for Kids of All Ages
Simon Armstrong

Summary
Explore the iconic buildings of the world, the history of homes and public buildings, and meet some of the architects who created them

Want to know more about the buildings around you? Can’t tell a Doric from a Corinthian column? Interested in how the Egyptians built the pyramids, and how on earth a dome stays up? Packed with absorbing facts and quirky illustrations, this book tells you everything you need to know about architecture around the world, from the simple dwellings created by the earliest humans to today’s most innovative buildings, via forbidding medieval strongholds, great 18th-Century palaces, and the classic Art Deco skyscrapers of New York. Learn about the great architectural movements and the personalities that created them, and explore the most iconic buildings in the world, from the Parthenon in Greece to the (current) world’s tallest skyscraper, the Khalifa Tower in Dubai. This book is a perfect introduction to what's cool about the fascinating world of architecture.

Contributor Bio
Simon Armstrong is the book buyer for Tate Modern and Tate Britain, the author of Cool Art, a record collector, and a DJ.

Power
Kate Ravilious

Summary
How do science, and decisions that scientists make, affect us? What are the universal problems facing modern science? How are these issues dealt with in different societies? This series explores our role in monitoring, developing, and controlling scientific advances in a wide range of topics.
**Engineering the City**  
*How Infrastructure Works*  
Matthys Levy, Richard Panchyk

**Summary**
How does a city obtain water, gas, and electricity? Where do these services come from? How are they transported? The answer is infrastructure, or the inner, and sometimes invisible, workings of the city. Roads, railroads, bridges, telephone wires, and power lines are visible elements of the infrastructure; sewers, plumbing pipes, wires, tunnels, cables, and sometimes rails are usually buried underground or hidden behind walls. *Engineering the City* tells the fascinating story of infrastructure as it developed through history along with the growth of cities. Experiments, games, and construction diagrams show how these structures are built, how they work, and how they affect the environment of the city and the land outside it.

**Contributor Bio**
Matthys Levy, an architectural engineer, is a principal of Weidlinger Associates, a structural engineering firm. He has won numerous awards, including the AIA Institute Honor Award. Richard Panchyk is the author of *Archaeology for Kids, Franklin Delano Roosevelt for Kids, Galileo for Kids, Keys to American History, Our Supreme Court,* and *World War II for Kids.*

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**What the Frack?**  
*Everything You Need to Know About Coal Seam Gas*  
Paddy Manning

**Summary**
Australia’s new $50 billion industry—coal seam gas—carries unprecedented environmental risks, but it could be the path to energy salvation by being cleaner than coal, safer than nuclear energy, and a complement to renewables. While big oil and gas companies believe Australia could be the biggest liquid natural gas exporter in the world, farmers and environmentalists are united in their opposition to coal seam gas extraction from the nation’s most fertile agricultural lands. Does interfering with thousands of coal seam gas wells poison food resources? Does coal seam gas really aid in tackling climate change? Where will they drill next? Visiting drill sites, boardrooms, pipelines, parliamentary offices, and farm gate protests, this book demonstrates how coal seam gas extraction may be one boom that is happening too fast.

**Contributor Bio**
Paddy Manning is an award-winning business and personal finance journalist and a senior business writer with the *Sydney Morning Herald* and the *Age,* specializing in energy and agriculture. He founded *Ethical Investor* and previously worked for the *Australian Financial Review* and the *Australian.*
Corn Ethanol

Who Pays? Who Benefits?
Ken G. Glozer

The author documents the political history of federal corn ethanol policy, showing how it has evolved from 1977 through 2008. He then offers an in-depth, fact-based look at the major assertions made by the advocates of the policy, providing the results of an evaluation of the claims made by the architects of the Renewal Fuels Standard in 2005 during its consideration by Congress.

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Contributor Bio

Ken G. Glozer is currently president of OMB Professionals, a Washington, D. C. based energy consulting firm. He was a senior executive service career professional with the White House Office of Management and Budget in the energy, environment, and agriculture area for twenty-six years.

Defending Your Castle

Build Catapults, Crossbows, Moats, Bulletproof Shields, and More Defensive Devices to Fend Off the Invading Hordes
William Gurstelle

Summary

A man’s home is his castle, or so the saying goes, but could it withstand an attack by Attila and the Huns, Ragnar and the Vikings, Alexander and the Greeks, Genghis Khan and the Mongols, or Tamerlane and the Tartars? Backyard Ballistics author William Gurstelle poses this fascinating question to modern-day garage warriors and shows them how to build an arsenal of ancient artillery and fortifications aimed at withstanding these invading hordes. Each chapter introduces a new bad actor in the history of warfare, details his conquests, and features weapons and fortifications to defend against him and his minions. Clear step-by-step instructions, diagrams, and photographs show how to build a dozen projects, including “Da Vinci’s Catapult,” “Carpini’s Crossbow,” a “Crusader-Proof Moat,” “Alexander’s Tortoise,” and the “Cheval-de-frise.” With a strong emphasis on safety, the book also gives tips on troubleshooting, explains the physics behind many of the projects, and shows where to buy the materials. By the time they’ve reached the last page, at-home defenders everywhere will have succeed...

Contributor Bio

William Gurstelle is the author of Absinthe & Flamethrowers; The Art of the Catapult; Backyard Ballistics; Building Bots; Notes from the Technology Underground; and Whoosh, Boom, Splat. He is a professional engineer who has been researching and building model catapults and ballistic devices for more than 30 years and is a contributing editor at Popular Mechanics, a columnist for Make magazine, and writes frequently for the Atlantic, Maxim, and Wired as well as other national magazines. He lives in Minneapolis, Minnesota.
Sir Edwin Lutyens
Designing in the English Tradition
Elizabeth Wilhide, Candia Lutyens

Summary
A reissue of a superbly illustrated book tracing Sir Edwin Lutyens’s formidable achievements of both grand public buildings and his many beautiful country houses.

Through his architecture of New Delhi, Lutyens had the unofficial status of Britain’s “architect laureate,” but it is in his wonderful country houses that his creative genius can most fully be appreciated. Elizabeth Wilhide traces the development of the Lutyens style and illustrates his remarkable blend of function and artistry, from the imposing granite of Castle Drogo and Lindisfarne to the restful appeal of Munstead Wood, which he designed for his long-term collaborator and friend, Gertrude Jekyll. Wilhide also devotes a large section of the book to Lutyens’s wonderful interiors. With commissioned photographs showing interiors and gardens, as well as original designs for furniture, this elegant monograph provides a fresh insight into a rich and enduring heritage of design.

Contributor Bio
Elizabeth Wilhide was born in the United States and has lived in England since the 1960s. She is a leading expert on interior design and has written numerous books on the subject, including Eco, Lighting: A Design Source Book, Small Spaces, and The Ultimate House Book. Candia Lutyens is Sir Edwin Lutyens’s granddaughter.

How to Think Like Einstein
Daniel Smith

Summary
Learn how Einstein, the man who evolved and altered the scientific landscape forever, viewed the world, and how his theories and the way he researched changed what we now take for granted—now in paperback.

The German theoretical physicist, Albert Einstein, developed the world’s most famous equation, E=mc^2, helped to establish quantum theory, and published over 300 scientific papers in his lifetime. He questioned the accepted classical worldview and tore it apart with his theories of relativity. It is for many reasons that his name has become synonymous with the word “genius.” How to Think Like Einstein reveals just how he accomplished his achievements with a strong determination, visualized his goals to develop a clear strategy, and viewed each success as a stepping-stone for his next challenge, never believing his work was complete. Comprehensive yet accessible, this book will have you thinking like the great man in no time.

Contributor Bio
Daniel Smith works in publishing as a writer, editor, and researcher of non-fiction. His previous books include How to Think Like Steve Jobs, How to Think Like Sherlock, Is Their Alot Wrong with this Centence?, and other books.
The Naked Scientist: Everyday Life Under the Microscope
Chris Smith

Summary
A fascinating new book from a member of the Naked Scientists—a group of scientist and researchers committed to promoting science to the general public—that lays bare the truth about the science we use everyday.

Why use expensive beauty products when you can moisturize with jellyfish? Have you ever suspected pollution was to blame for your children's plummeting IQ? Ready to take a sea change—on Mars? And how about chopping an onion that doesn't make you cry? Compelling, quirky, and packed fully of curious facts, this book is the perfect present for inquiring minds, a treasure trove of cutting-edge research, far-flung factoids, and the ability to see into our scientific future, answering those fascinating questions you never thought to ask.

Contributor Bio
Dr. Chris Smith is a medical doctor and scientist, and the coauthor of Spectacular Science. He is also the founder and driving force behind The Naked Scientist, a live weekly BBC radio show. The Naked Scientists have won six national and international awards for popularizing science in the last three years, and are one of the most downloaded science shows in the world.

Newton y la mecánica celeste
Jean-Pierre Maury

Summary
The books in this wonderfully diverse series cover topics such as archaeology, art, culture, history, literature, science, and religion in a dynamic and informative way. The texts are bolstered by rigorous historical information and accompanied by vibrant photographs and boxes that summarize key points. All of the volumes in this collection are a thorough introduction to the subject being discussed.

With full-color reproductions of 160 documents that paint a complete portrait of Isaac Newton, this attractive biography details key moments of the brilliant astronomer and physicist's life, including his studies in Cambridge, his theory of colors, the invention of the reflecting telescope, his explanation of the law of gravity, and other important achievements. Written in an accessible language, this book is sure to fascinate readers looking to learn more about the man whose legacy continues to influence science and mathematics to this day.

Contributor Bio
Jean-Pierre Maury was a professor of physics at Paris Diderot University and is the author of several science books.
**Inmortal: la vida en un clic**

**Vivir eternamente está a nuestro alcance**

Jorge Blaschke

**Summary**

In September 2013, the headline on *Time* magazine read “Can Google Solve Death?” A few months prior to the article, some of the most brilliant minds on the planet gathered in Silicon Valley to launch an ambitious project titled Initiative 2045, in which biotechnologists, physicians, engineers, physicists, and computer scientists worked together with the goal to achieve immortality. Yes, it is as disturbing as it sounds. This controversial project is perhaps the most fantastic adventure that has taken man from his laboratories, a job that confronts unpredictable ethical and moral consequences. The author of this book, well versed in science, brings all questions of this revolutionary breakdown to the table. Step by step, he comments on advances that are taking place all around us. Are stimulants helpful to keep a brain active? Can every human being choose if he or she wants to live or not? What global laboratories are working on prolonging life? Are we closer to achieving immortality than we know?

**Contributor Bio**

**Jorge Blaschke** won the National Journalism Award in 1982 and has been a correspondent for *El País* and the director of the radio program *Cròniques del Futur*. He is the author of more than 60 books, including *Cerebro 2.0*, *La ciencia de lo imposible*, *Los gatos sueñan con física cuántica y los perros con universos paralelos*, and *Los pájaros se orientan con física cuántica*.

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**London Architecture (2nd Edition)**

Marianne Butler, Maxwell Hutchinson

**Summary**

A revised and expanded, authoritative guide taking the reader through almost 2,000 years of architectural achievement. From the remains of the Roman amphitheater to the soaring glass structures of the 21st-century city, London offers a unique architectural experience. Each chapter in this guide contains readily accessible examples of buildings of every period and sets them in their historical contexts. It includes nine fully described walks and easy-to-follow maps to accompany a saunter through the fascinating story of the city’s architecture. Also featured are some of the many shops, bars, and restaurants of architectural interest, making this an essential resource for both Londoners and visitors alike.

**Contributor Bio**

**Marianne Butler** is a freelance researcher, writer, tour guide, and lecturer. She divides her time between the Scottish Borders and London. **Maxwell Hutchinson** is the former president of the Royal Institute of British Architects. His London buildings include Pink Floyd’s Britannia Row recording studios.
Black Americans in Science and Engineering
Contributors of Past and Present
Eugene Winslow

Summary
This collection features biographies of African American achievers, including Benjamin Banneker, George Washington Carver, Percy Julian, Meredith Gourdine, and George R. Carruthers, among others.

Why There's Antifreeze in Your Toothpaste
The Chemistry of Household Ingredients
Simon Quellen Field

Summary
Explaining why antifreeze is a component of toothpaste and how salt works in shampoo, this fascinating handbook delves into the chemistry of everyday household products. Decoding more than 150 cryptic ingredients, the guide explains each component's structural formula, offers synonymous names, and describes its common uses. This informative resource can serve curious readers as a basic primer to commercial chemistry or as an indexed reference for specific compounds found on a product label. Grouped according to type, these chemical descriptions will dissolve common misunderstandings and help make consumers more product savvy.

Contributor Bio
The Smart Guide to the Solar System (2nd Edition)
Philip Seldon

Summary
This definitive guide to the solar system is a primer on the basics, including planets, asteroids, meteors, stars, comets, black holes, and solar flares. It goes on to include the latest developments and discoveries of our neighbors in the celestial sphere.

Contributor Bio
Philip Seldon is the founding editor and publisher of Popular Astronomy magazine and the coauthor of The Smart Guide to Astronomy. He lives in New York City.

What Does the Moon Smell Like?
151 Astounding Science Quizzes
Eva Everything

Summary
What Does The Moon Smell Like? is an all ages quiz book that feeds your brain tasty, bite-sized tidbits of cool science trivia. It tickles your brain while giving it a workout, so your brain won’t even know that it’s been to the gym! From the surprising science behind everyday life, to the mysteries on the frontiers of scientific discovery, What Does The Moon Smell Like? explores anything and everything in a user-friendly quiz format. Fun, fascinating, and little-known facts leap off every page — bound to make you, not just brainier, but a big hit around the water cooler too. Topics include the earth, the moon, and stars, the universe, space travel, amazing cars, toys, sports, food and drink, icky things, pets and other animals, nature, the environment, technology, geniuses, science fables, foibles, and myths, inventions, discoveries, the brain, the body, and mind, laughter, success, attraction ... and chocolate. What Does The Moon Smell Like? gives you a context for the fascinating facts you’re absorbing. Both the lead-ups to the questions, and the answers, are spiced with even more ...

Contributor Bio
Eva Everything is a music and video artist, an award-winning science writer, and a Discovery Channel science quizmaster. She lives in Toronto.
What Does the Earth Sound Like?
159 Astounding Science Quizzes
Eva Everything

Summary
"This is a great book. It became a popular table game in the summer holidays with two teams competing with all your questions. It makes an excellent change from celebrity trivia." — Peter Gabriel, Rock and Roll Hall of Fame member, on What Does the Moon Smell Like? From the surprising science behind everyday life to the mysteries on the frontiers of scientific discovery, this quiz book for all ages explores anything and everything in a fun, user-friendly format. Topics include the earth, the moon, and the stars; satellites and space travel; pets and other animals; nature and the environment; the brain and the body; and the psychology of food, behaviour, success, and attraction. The introductions to each question are peppered with interesting tidbits of information, and the fascinating answers to these quiz questions are explained in detail and given full context. Whether used as an individual brain workout or as a fun game at social gatherings, What Does the Earth Sound Like? is smile-inducing and thought-provoking.

Contributor Bio
Eva Everything is a music and video artist, an award-winning science writer, and a Discovery Channel science quizmaster. She is the author of "What Does the Moon Smell Like? "She lives in Toronto, Ontario.

The Smart Guide to Astronomy
Kevin Marvel, Philip Seldon

Summary
Featuring beautiful photographs of celestial objects, this book covers all aspects of astronomy—from the solar system and our Milky Way galaxy to outer space and space probes. With information on all of the fascinating and latest developments in the field, this is the perfect resource for anyone wanting to learn more about astronomy and our place in the galaxy.

Contributor Bio
Kevin Marvel is the executive officer of the American Astronomical Society, the largest individual membership organization for professional astronomers in the world. He has a PhD in astronomy from New Mexico State University. He lives in Alexandria, Virginia. Philip Seldon is the founding editor and publisher of Popular Astronomy magazine and the author of The Smart Guide to the Solar System. He lives in New York City.
A Down to Earth Guide to the Cosmos
Mark Thompson

Summary
A comprehensive guide to the night sky for stargazers and amateur astronomers of all ages

To the beginner, the star-filled night sky can seem mysterious and unfathomable. But with this book as a guide the awesome nature of the Cosmos is brought down to Earth. Over the course of 12 chapters it will take you on a journey through space, tackling the key concepts of astronomy and unlocking the secrets of the sky. From the origins of our Universe to the ever evolving techniques used to explore deep space, this book traces the journey of galactic discovery that has obsessed mankind for thousands of years. Accompanying the narrative, a series of monthly sky guides focus on the astronomical highlights visible at each given time of year, with handy charts to show you exactly what to look for and how to navigate around the sky at night.

Contributor Bio
Mark Thompson is one of the presenters on the BBC One award nominated show Stargazing Live and the resident astronomer on ITV’s The Alan Titchmarsh Show. He writes for a number of websites including Discovery News’ Space pages and the Space Exploration Network.

Other Formats

Cool Astronomy
50 Fantastic Facts for Kids of All Ages
Malcolm Croft

Summary
Discover how telescopes are made, learn about invisible light, and study the scale of the universe—in a way you’ll never forget

Inside this mega-jam-packed book are 50 fact-tastic ways to advance and improve your astronomy skills so you’ll never feel alone in the universe again! Learn amazing space-related tricks such as how to watch a solar eclipse safely and mapping stars from your own back garden, right down to expertly simplifying the supermassive numbers and distances involved in the space between space so you’ll never forget them. You’ll discover everything you need to know about the universe, from Asteroids to Zubeneelgenubi, and almost everything in between.

Contributor Bio
Malcolm Croft is a writer of popular reference books.
Earth & Space Science BASIC/Not Boring 6-8+
Inventive Exercises to Sharpen Skills and Raise Achievement
Imogene Forte, Marjorie Frank, Kathleen Bullock

Summary
This set of standards-based reproducible activity pages is basic, not boring. In Earth and Space Science, students compare characteristics of each planet, explain seasons and eclipses, diagram the ocean floor, explain erosion and weathering, and more. An assessment and glossary of terms is provided.

Blunderbuss Wanderlust
Being an Account of the Temporal Travels of Colonel Victor Von Vector and the Eras of His Ways
David R. Shapiro, Christopher Herndon

Summary
Colonel Victor Von Vector has a blunderbuss gun with a peculiar recoil. When he shoots, he gets kicked back in time 600 million years to the Cambrian Period. With each subsequent shot, Victor moves through geologic time, encountering beasts of the past and wandering through the varied environments that have colored Earth’s history. Utilizing the Shakespearian sonnet as his means of record, Victor’s journey from the Cambrian through various other time periods, and back to his own Edwardian time is presented in 17 poems with 17 illustrated plates.

Contributor Bio
David R. Shapiro is the founder of Craigmore Creations. He has worked as an animal tracker, interpretive guide, youth educator, and summer camp director. He is the author of the a web comic series, Around the World with Haley Zoic; several children’s picture books; and an illustrated book of sonnets. He lives in Portland, Oregon. Christopher Herndon is an artist, the creator of two comic book series, and the illustrator of numerous album covers, games, and magazines. His previous works include the children’s book Tool Time Twist and the graphic novels Blunderbuss Wanderlust and Living with Zombies. He lives in Portland, Oregon.
Poisoned Planet
How Constant Exposure to Man-Made Chemicals Is Putting Your Life at Risk
Julian Cribb

Summary
By the author of The Coming Famine, this book sounds a wake up call: we cannot rely on governments or industry to clean up the toxic manmade chemicals we've surrounded ourselves with, it's up to us to repair our poisoned planet.

We want things to be cheap, convenient, and useful. Our food arrives contaminated with pesticides and wastes, wrapped in plastic made of hormone-disrupting chemicals. We bathe and dress our children in petrochemicals. Even our coffee contains minuscule traces of arsenic, cup by cup adding to the toxins accumulating in our bodies. Man-made chemicals are creating a silent epidemic. Our children are sicker; cancer, obesity, allergies, and mental health issues are on the rise in adults; and, frighteningly, we may be less intelligent than previous generations. A poisoned planet is the price we pay for our lifestyle, but Julian Cribb shows we have the tools to clean it up and create a healthier, safer future for us all.

Contributor Bio
Julian Cribb is a distinguished science writer with more than 30 awards for journalism. He is a former newspaper editor, the founder of the influential ScienceAlert website, and the author of eight books.

My First Summer in the Sierra
John Muir, Robert MacFarlane

Summary
The classic, best-loved book by the founding father of modern conservation

In the summer of 1869, John Muir set out from California's Central Valley with a flock of sheep and trekked into the foothills of the Sierra Nevadas. His journals describe the summer he spent in what would become Yosemite National Park. Celebrating the Sierra's lizards and mountain lions, tall trees and waterfalls, fierce thunderstorms and bears, Muir introduces a spiritual dimension to our awareness of nature. John Muir is internationally acknowledged as one of the founding fathers of modern conservation and his vision, passion, and integrity continue to inspire readers today.

Contributor Bio
John Muir (1836-1914) is America's most famous naturalist and conservationist. He is the founder of the Sierra Club; an activist whose work helped to preserve such areas as the Grand Canyon, Mt. Rainier, Sequoia National Park, and Yosemite Valley; and the author of books and essays which have been read my millions.
**El roble**
*La aventura de vivir*
Calros Silvar

**Summary**
Featuring tremendously detailed and realistic illustrations, this educational and charming book presents a grand old oak tree that explains to children what its life is like, season by season. It also describes its relationship with the other creatures that live in and around its trunk and branches. Most poignantly, however, it details its long and occasionally tumultuous relationship with humans, whom it presents as its greatest obstacle to a long life. Children will not only learn basic scientific facts about one of the world’s most important and ubiquitous trees, they will also gain an appreciation for the importance of conservation.

**Contributor Bio**
Calros Silvar is an illustrator and a graphic designer who has worked with a number of publishing houses and periodicals and who has taught courses on drawing, illustration, and photography.

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**Nuestro planeta, la Tierra**
Séverin Husson, Yvette Veyret

**Summary**
Engaging and encyclopedic, this compilation has realistic illustrations, dynamic comics, and fun facts about planet Earth. Divided into six sections—The Earth, A Living Planet; The Earth's Energy; The Earth's Resources; The Earth's Diversity; Man's Earth; and Exploring the Earth—this investigation will give children a comprehensive understanding of many aspects of the world.

Atractiva y enciclopédica, esta compilación tiene ilustraciones realistas, cómics dinámicos y hechos divertidos sobre el planeta. Dividida en seis secciones—La Tierra, un planeta vivo; La energia de la Tierra; Los recursos de la Tierra; La diversidad de la Tierra; La Tierra de las personas y Explorar la Tierra—esta investigacion dará a los niños un conocimiento comprensivo de muchos aspectos del mundo.

**Contributor Bio**
Séverin Husson has been an editor of children’s books at Editorial Bayard for 10 years. Yvette Veyret is a professor of geography and a member of the Gecko Laboratory at the Paris X University Nanterre.
Stargazers: Copernicus, Galileo, the Telescope and the Church
Understanding the Heavens 1500-1700
Allan Chapman

Summary
A comprehensive history of how the heavens were discovered and mapped, by the leading astronomers from 1500 onwards

Building on the work of the Greek and Arabian astrologers before him, the idea of a sun-centered universe was proposed by a church lawyer called Nicholas Copernicus. It was later popularized by Galileo—a fantastic debater whose abrasive style won him many enemies—who presented new evidence, which suggested that the earth moved. This thorough examination of Galileo explores both his achievements and influences. It then goes on to trace the impact of his ideas on those who followed him, including Sir Francis Bacon, Dr. John Wilkins, Dr. Robert Hooke, Sir Isaac Newton, and Rev. Dr. James Bradley. Chapman investigates the church’s role and its intriguing relationship with the astronomers of the day. The support and involvement of the church meant that research could be undertaken, but at times the relationship was fractious, leading Galileo to famously declare, "the Bible is to teach us how to go to Heaven, not how the heavens go." In 1728, the theory of the moving earth was...

Contributor Bio
Allan Chapman is a Fellow of the Royal Astronomical Society and author of eight books, including Gods in the Sky and Robert Hooke and the English Renaissance. He has appeared in history of science documentaries on BBC2 and National Geographic.

Patrick Moore's Astronomy
Teach Yourself
Sir Patrick Moore

Summary

Is this the right book for me?

Patrick Moore's Astronomy will ensure you recognize what you are seeing in the night sky. You will investigate the sun, moon, planets, comets and stars and learn how to observe them. This comprehensive guide, complete with star charts, will map out the skies and allow you to impress your friends with your knowledge of the sky at night.

Patrick Moore's Astronomy includes:

Chapter 1: Introducing Astronomy
Chapter 2: The spinning sky
Chapter 3: Sky-watchers
Chapter 4: The astronomer's telescope
Chapter 5: Into space
Chapter 6: The Sun
Chapter 7: The Moon
Chapter 8: The Sun's family
Chapter 9: The inner planets
50 descubrimientos, ideas y conceptos en astronomía
François Fressin

Summary
Everyone has questions about our universe: How hot is Venus? Can you distinguish between a pulsar and a quasar? Is there a universe or a multiverse? Where do we fit into the infinitely grand scheme of things? How do we map the Cosmic Microwave Background? Most tantalizing of all: Is there anyone out there? This small volume encapsulates the terrifying hugeness of the cosmos into bite-sized particles that mere earthlings can understand. It takes you on a cosmic tour, shedding light on the most awesome of objects and places and explaining some very big ideas, concepts, and discoveries. It also presents the scientists and observers who have done so much to understand life and the universe.

Contributor Bio
François Fressin is an astronomer and data scientist at Harvard Smithsonian Center for Astrophysics in Cambridge, Massachusetts. He discovered the first Earth-sized planets orbiting a star other than the sun and is on a team of astronomers working as part of NASA's Kepler mission.

Understand The Weather
Peter Innes

Summary
"Understand the Weather is a comprehensive and practical guide to the workings of the atmosphere. It will ensure that you not only understand what causes changes in the weather on a local, national and global scale but that you can also fully interpret weather broadcasts and are able to make your own predictions. Packed full of case studies, this book will explain both the weather we experience daily (winds, cold fronts, rain and shine) and the extreme weather that makes the headlines all too often (El Nino, Hurricane Katrina, floods). It will also focus on climate change and its effects - how will our weather be different in the future? Whether your job or leisure pursuits rely on the weather, or you just want to understand more about it, this book is ideal.

NOT GOT MUCH TIME?
One, five and ten-minute introductions to key principles to get you started.

AUTHOR INSIGHTS
Lots of instant help with common problems and quick tips for success, based on the author?s many years of experience.

EXTEND YOUR KNOWLEDGE
Extra online articles at www.teachyourself.com to give you a richer understanding.

Contributor Bio
"Peter Innes is a Lecturer and Senior Research Fellow at the Department of Meteorology, University of Reading. Prior to this, Peter was an Instructor at the Met Office College and a Research Scientist at the Hadley..."
Supergeek! Dinosaurs, Brains and Supertrains
Glenn Murphy

Summary
The world cannot survive without quick-witted geek wisdom—do you qualify? This book can also be played as a game.

What kind of animal was a megalodon? How large would an asteroid have to be to wipe out all human life on the planet? How much do you really know about the science that matters? This book features more than 300 fun science questions and answers to test your knowledge. Find out all about dinosaurs and prehistoric life, blood and guts, brains, senses and feelings, weather and climate change, natural disasters, trains, planes and transportation, and lots more! There are instructions at the back of the book that allow you to "play" the book too, on your own or in a group.

Contributor Bio

Supergeek! Robots, Space and Furry Animals
Glenn Murphy

Summary
Are you a supergeek? Further test yourself in this second volume of the book that’s also a game.

This book features more than 300 fun science questions and answers to test your knowledge. Find out all about blood and guts, senses and feelings, robots, furry animals, and space. There are instructions at the back of the book that allow you to "play" the book too, on your own or in a group.

Contributor Bio
**The Robot Book**  
*Build & Control 20 Electric Gizmos, Moving Machines, and Hacked Toys*  
Bobby Mercer

**Summary**
Drones, RC cars, artificial limbs, Roombas—the robots have arrived! Don't you want your own? Author and physics teacher Bobby Mercer will show you how to turn common household objects and repurposed materials into 20 easy-to-build robots for little or no cost. Turn a toothbrush, an old cell phone or pager, and scrap wire into a Brush Bot, or hack a toy car to hotwire a Not-So-Remote Bot. A small electric fan, several craft sticks, and rubber bands make a Fan-Tastic Dancing Machine, and drinking straws, string, tape, and glue can be used to construct a working model of the human hand.

Every hands-on project contains a materials list and detailed step-by-step instructions with photos for easy assembly. Mercer also explains the science and technology behind each robot, including concepts such as friction, weight and mass, center of gravity, kinetic and potential energy, electric circuitry, DC vs. AC current, and more. These projects are also perfect for science fairs or design competitions.

**Contributor Bio**  
Bobby Mercer has been sharing the fun of science for over two decades as a high school physics teacher. He is the author of *The Flying Machine Book, The Racecar Book, and Junk Drawer Physics.*

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**How Do You Build a Time Machine?**  
*And Other Puzzles with Science*  
Erwin Brecher

**Summary**
Learn strange trivia and pick up amazing science facts with 100 fascinating puzzles

*Why do cats' eyes glow green?*

*How big would the world be if all the empty space was squeezed out of it?*

*Can you build a time machine?*

This book is filled with fascinating scientific and mathematical puzzles, all based on real-world scientific principles. Learn why the size of the moon appears to change, the probability that any two children are girls, and what noise ice cubes make if you drop them into hot soup. The answer to each problem explains a scientific or mathematical principle in easy-to-understand terms, so not only are you solving puzzles, you are learning the secrets behind the most puzzling mysteries of the universe.

**Contributor Bio**  
Erwin Brecher has written more than 20 books, including *How Do You Get an Egg into a Bottle, How Do You Walk on Fire?, Lateral Thinking Posers,* and *Lateral Thinking Puzzles.*
**Fast Brain Workouts**
*Exercises, Tests and Puzzles to Keep Your Brain Super-Fit*

Gareth Moore

**Summary**
Fight the mental flab and exercise your mind with these brain training workouts that will leave your brain fit and memory sharp

Does simple mental arithmetic exhaust you? Do you struggle to remember important birthdays, your PIN, or what you went upstairs for? Does your mind wander when you really should be concentrating? If so, you need to exercise your brain, whip it into shape, and give it a good workout. *Fast Brain Workouts* is the equivalent of a session at the gym for your grey matter, designed to sharpen up your mental reflexes and get those synapses snapping like firecrackers. Research has shown that regularly tackling challenging puzzles increases the flow of blood to the brain, boosting the supply of oxygen, which can stave off aging. Featuring a wide range of puzzles—number, logic and reasoning, language, memory and observation— including the ever-popular Sudoku, number darts, comprehension problems and more, *Fast Brain Workouts* provides a fun pastime for puzzle fans and is the perfect way to keep your thinking muscle active and healthy.

**Contributor Bio**
Dr Gareth Moore is the author of *The Brain Workout, The Kids' Book of Crosswords, The Little Book of Puzzles,* and *Train the Brain.*

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**How Do You Survive on an Iceberg?**
*And Other Puzzles with Science*

Erwin Brecher

**Summary**
With 100 interesting questions and corresponding science facts, be prepared to have fun while learning

Why do boomerangs come back?  
Can you burst a beer barrel with water?  
Could you survive on a diet of celery and ice cubes?

This book is filled with fascinating scientific and mathematical puzzles, all based on real-world principles. Learn why birds fly in formation, how to steer a rudderless boat, and why the water levels of the Atlantic and Pacific oceans are not always the same. Pen portraits of influential mathematicians and philosophers are included, so you can discover more about how the greatest thinkers of all time have influenced us and our surroundings.

**Contributor Bio**
Erwin Brecher has written more than 20 books, including *How Do You Get an Egg into a Bottle, How Do You Walk on Fire?, Lateral Thinking Posers,* and *Lateral Thinking Puzzles.*
**Robot Technology**
Ian Graham

**Summary**
*Robot Technology* looks at robots that are used in space exploration, and developments that may happen in the future, for example, landing on Mars. It looks at robot explorers that go to places humans cannot reach, such as the sea bed, and into the craters of volcanoes. The title explores military machines, and discusses the possibility of humanoid robots. It also asks important questions about whether advances in robot technology could threaten humans. New Technology is an exciting, up-to-date look at new technology and the effect it is having on the world. Each title looks forward to likely future technological advances that will affect our everyday lives.

**Contributor Bio**
Ian Graham is the author of *Cherished Library*, as well as the Danger Zone series, the Mighty Machines series, and the New Technology series.

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**Cool Science Tricks**
Daniel Tatarsky

**Summary**
From making matches dance without touching them to making sound waves visible, 50 very cool science tricks

As we all know now, the geeks have inherited the earth and, it’s official, science is now cool! This book offers 50 amazing tricks that reveal the wonder of science. That’s 50 awesome new ways to make 50 new friends. This action-stuffed book is for kids of all ages who love to experiment with peculiar physics, mind-boggling biology, and crazy chemistry, and want to learn more fascinating factoids than you can shake a Bunsen burner at.

**Contributor Bio**
Daniel Tatarsky is the author of *Everything You Need to Know About Everything You Need to Know About.*
The Smart Guide to Chemistry
Brian Nordstrom

Summary
Become acquainted with the wonderful world of atoms and molecules in this guide written for readers who have little-to-no exposure to chemistry. The book provides an elementary introduction to chemistry or can be used as a good review of the subject and discusses topics including chemical reactions; the periodic table of the elements; nuclear processes; acids, bases, and salts; chemical bonding; environmental chemistry; and organic and biochemistry. The contributions of famous chemists are highlighted, along with interesting anecdotal information from their lives. Lavishly illustrated with photographs and other helpful graphics, it can be read through from cover-to-cover or used as a handy reference to look up information about individual topics.

Contributor Bio
Brian Nordstrom is a professor of chemistry at Embry-Riddle Aeronautical University. He has more than 35 years of college teaching experience, which has covered a wide range of academic disciplines—chemistry, physics, mathematics, statistics, and environmental science. He has published several articles in revered journals and recently coauthored a set of six books about the elements in the periodic table. He lives in Prescott, Arizona.

Why Is Milk White?
& 200 Other Curious Chemistry Questions
Alexa Coelho, Simon Quellen Field

Summary
Covering a wide variety of everyday chemistry concepts from the very simple to the more complex, this question-and-answer primer provides straightforward, easy-to-understand explanations for inquisitive young scientists’ questions. A dozen unique experiments to try at home—from lifting latent fingerprints from a “crime scene” using super glue (for smooth surfaces) or iodine (for paper) to hollowing out the zinc interior of a penny using muriatic acid—are interspersed with the answers to such questions as What makes soda so fizzy? and Why do you get cavities when you eat too much sugar? From separating food coloring into its component dyes to using easy-to-find chemicals to create “slime,” Silly Putty, or bouncing balls, this handy guide is the ideal resource for the budding chemist.

Contributor Bio
Alexa Coelho is a curious teenager who asks a lot of chemistry questions. Simon Quellen Field is the author of Culinary Reactions, Gonzo Gizmos, and Why There’s Antifreeze in Your Toothpaste and the creator of the popular website www.scitoy.com. They both live in Los Gatos, California.
Junk Drawer Chemistry
50 Awesome Experiments That Don't Cost a Thing
Bobby Mercer

Summary
A children's instructional book on how to use readily available materials to turn the house into a science lab

Science teacher Bobby Mercer provides readers with more than 50 great hands-on experiments that can be performed for just pennies, or less. Each project has a materials list, detailed step-by-step instructions with illustrations, and a brief explanation of the scientific principle being demonstrated. From turning three pennies and two galvanized washers into a simple battery to crushing a soda can using atmospheric pressure, the experiments in this book call for materials that are recycled or repurposed—crayons, plastic drink bottles, balloons, ice cubes, and other basic items found around the house. Junk Drawer Chemistry also includes sidebars of fascinating chemistry facts. Educators and parents will find this title a handy resource to teach children about chemistry topics that include atoms, compounds, solutions, mixtures, reactions, thermodynamics, acids and bases, and more, while having fun at the same time.

Contributor Bio
Bobby Mercer has been a high school physics teacher for more than two decades and is the author of Junk Drawer Physics, The Flying Machine Book, and The Racecar Book. He lives outside of Asheville, North Carolina.

50 elementos químicos
Qué son y qué representan
Eric Scerri

Summary
The chemical elements are the building blocks of life, but could you discuss the periodic table over the dinner table? Which elements put the blue into blu-ray and the lime into limelight? And do you know enough about antimony, arsenic, and aluminum to illuminate the bar with your elemental knowledge? This book presents the foundations of chemical knowledge, distilling the 50 most significant chemical elements into individual entries, each of 300 words and one picture. Divided into seven chapters, this volume includes the atomic details of the other 68 elements and the relationships of all 118, as well as biographies of the chemists who transformed scientific knowledge and unlocked the mysteries of life itself. Illustrated with explosive graphics, this book is the quickest way to know your arsenic from your europium.

Contributor Bio
Eric Scerri is a chemist and a leading philosopher of science specializing in the history and philosophy of the periodic table. He is the founder and editor in chief of the international journal Foundations of Chemistry and the author of The Periodic Table: Its Story and Its Significance and A Very Short Introduction to the Periodic Table. He is a full-time lecturer in the department of chemistry and biochemistry at the University of California–Los Angeles. He lives in Los Angeles.
Junk Drawer Physics
50 Awesome Experiments That Don't Cost a Thing
Bobby Mercer

Summary
A children's instructional book on how to use readily available materials to turn the house into a science lab
Physics teacher Bobby Mercer provides readers with more than 50 great hands-on experiments that can be performed for just pennies, or less. Turn a plastic cup into a pinhole camera using waxed paper, a rubber band, and a thumbtack. Build a swinging wave machine using a series of washers suspended on strings from a yardstick. Or construct your own planetarium from an empty potato chip canister, construction paper, scissors, and a pin. Each project has a materials list, detailed step-by-step instructions with illustrations, and a brief explanation of the scientific principle being demonstrated. Junk Drawer Physics also includes sidebars of fascinating physics facts, such as did you know the Eiffel Tower is six inches taller in summer than in winter because its steel structure expands in the heat? Educators and parents will find this title a handy resource to teach children about physics topics that include magnetism, electricity, force, motion, light, energy, sound, and more, ...

Contributor Bio
Bobby Mercer is a high school physics teacher and the author of several books, including The Flying Machine Book, How Do You Light a Fart?, Quarterback Dad, and Smash It! Crash It! Launch It! He lives outside of Asheville, North Carolina.

100 preguntas de física
¿Por qué vuelan los aviones de papel, y por qué vuelan los de verdad?
Jordi Mazón Bueso

Summary
By posing a number of basic questions about everyday life and observable phenomena, this engaging piece of popular science seeks to demonstrate the importance of physics to daily activity. From simple questions such as Why does the shower curtain stick to one's legs when the faucet is turned on? and Why does metal turn red when it gets hot, instead of green? to more complex concerns such as why there is more matter than antimatter in the universe and why light can travel through a vacuum when sound cannot, the book seeks to show that science, while absolutely essential to life, can also be exceptionally fascinating and fun.

Contributor Bio
Jordi Mazón Bueso is a former high school physics teacher and currently a professor of physics in the department of applied physics at the Polytechnic University of Barcelona. He is a member of the Catalan Association for Science Communication and the author of many articles and books on popular science.
100 mitos de la ciencia
Daniel Closa i Autet

Summary
Exploring the histories behind 100 scientific myths with clear and simple language, this book separates scientific truth from fictitious invention. Since every myth is based on some truth, the goal is to discover at which point the facts were altered by imagination and how much of the myth is true. Among the myths explored are the beliefs that human beings use only 10 percent of their brains, that there are more births during a full moon, that ostriches bury their heads in the ground, and that water drains in the opposite direction in the southern hemisphere.

Contributor Bio
Daniel Closa i Autet is an award-winning author, a biologist, and a researcher.

100 enigmas que la ciencia (todavía) no ha resuelto
Daniel Closa i Autet

Summary
Outlining 100 concepts and phenomena that science has not yet been able to fully explain, this survey examines topics such as the origins of the universe, the possible existence of wormholes, animal migrations, sexual orientation, diseases, cold fusion, and a host of others. In looking at the farthest reaches of time and space; the Earth and the solar system; the human body, health, and life; and technological innovations and challenges, this book demonstrates that for all of the many mysteries science has helped resolve, many others remain—and in some cases, the answers are tantalizingly close.

Contributor Bio
Daniel Closa i Autet is a biologist and a researcher at the Spanish National Research Council, and the author of 100 mitos de la ciencia.
En la mente de los superhéroes
Juan Scaliter, Manuel Cuadrado

Summary
Superheroes have long served as powerful archetypes of the goods and ills of society and humankind's capabilities, from the irredeemable evil of Carnage to the altruistic sacrifice of the Silver Surfer, the brilliance of Reed Richards, and the artificial intelligence of Deathlok. This study examines this symbolism, with an eye as well toward what superheroes can reveal about the mechanisms of the human brain and reactions. The authors discuss dozens of heroes and villains, including Blackheart and the ability to read minds through empathy; Namor the Sub-Mariner and the sense of good and evil; the Hulk and primitive instinctual responses to aggression; Superman and the story of a timid and insecure man; and Batman and the process of overcoming fears. Through these and other characters, this book explores the physics and chemistry of the brain in an engaging and entertaining way.

Contributor Bio
Juan Scaliter is a journalist and the science editor for the Spanish magazine Revista Quo, which specializes in topics relating to science and technology. He was formerly the science editor at the magazine Muy Interesante in Argentina. He is the author of La ciencia de los superhéroes. Manuel Cuadrado is an award-winning writer and scriptwriter.

1001 curiosidades de los superhéroes
Tomás Pardo, Pedro Monje

Summary
The extraordinary abilities of the Watchmen, Flash Gordon, and Batman have been overtaken by current technology. The writers and creators of comics imagined a universe of heroes and villains, making them faster than a speeding bullet and more powerful than a train. Today, their exploits have been analyzed. This book recounts the highlights and dark sides of some of the most recognized characters in the world of comics, suggesting that sometimes the impossible can become reality.

Contributor Bio
Pedro Monje is an engineer specializing in aviation. He has collaborated on many books, including Marvel Ahora! and Vengadores. Tomás Pardo has been an editor of the magazine La Razón since 2006. He has edited publication sections devoted to comics, video games, and movies.
Culinary Reactions
The Everyday Chemistry of Cooking
Simon Quellen Field

A chef is just a scientist in disguise

Summary
When you’re cooking, you’re a chemist! Every time you follow or modify a recipe, you are experimenting with acids and bases, emulsions and suspensions, gels and foams. In your kitchen you denature proteins, crystallize compounds, react enzymes with substrates, and nurture desired microbial life while suppressing harmful bacteria and fungi. And unlike in a laboratory, you can eat your experiments to verify your hypotheses.

In Culinary Reactions, author Simon Quellen Field turns measuring cups, stovetop burners, and mixing bowls into graduated cylinders, Bunsen burners, and beakers. How does altering the ratio of flour, sugar, yeast, salt, butter, and water affect how high bread rises? Why is whipped cream made with nitrous oxide rather than the more common carbon dioxide? And why does Hollandaise sauce call for “clarified” butter? This easy-to-follow primer even includes recipes to demonstrate the concepts being discussed, including:

- Whipped Creamsicle Topping—a foam
- Cherry Dream Cheese—a protein gel
- Lemonade with Chameleon Eggs—an acid indicator

Contributor Bio

Haywired
Pointless (Yet Awesome) Projects for the Electronically Inclined
Mike Rigsby

Summary
Unless you live in a haunted house, the eyes on your paintings probably don’t follow you around. However, with a couple of motion sensors, two motors, a few transistors, resistors, diodes, and wires you can convert a Van Gogh print into a macabre masterpiece with a mind of its own. Haywired proves that science can inspire odd contraptions. Create a Mona Lisa that smiles even wider when you approach it. Learn how to build and record a talking alarm, or craft your own talking greeting card. Construct a no-battery electric car toy that uses a super capacitor, or a flashlight that can be charged in minutes, then shine for 24 hours. Written for budding electronics hobbyists, author Mike Rigsby offers helpful hints on soldering, wire wrapping, and multimeter use. Each project is described in step-by-step detail with photographs and circuit diagrams. Includes Web sites listing suppliers and part numbers.

Contributor Bio
Mike Rigsby is a professional electrical engineer and the author of Amazing Rubber Band Cars. He has contributed to Byte, Circuit Cellar, Modern Electronics, Robotics Age, and other magazines.
**Unscrewed**

Salvage and Reuse Motors, Gears, Switches, and More from Your Old Electronics

Ed Sobey

**Summary**

Admit it: you love to explore how things work. Screwdriver and pliers in hand, no castoff electronics or old appliances are safe. But once you’ve pulled apart your prey, do you really just want to screw it back together again . . . assuming you could? *Unscrewed* is the perfect resource for all UIYers—Undo It Yourselfers—looking to salvage hidden treasures or repurpose old junk.

Author Ed Sobey will show you how to safely disassemble more than 50 devices, including: Laser Printer, Radio-Controlled Car, Zip Drive, Videocassette Recorder, Paper Shredder, Audiocassette Player, Electric Drill, Computer Mouse, Keyboard, Fax Machine, Joystick, Floppy Drive, Videocassette Camera, Electric Clock, and More!

Each deconstruction project includes a "treasure cache" of the components to be found, a required tools list, and step-by-step instructions, with photos, on how to extract the working components. It also includes suggestions on how to repurpose your electronic finds. Why pay good money to an electronics store when you probably already have what you need in that old VCR...

**Contributor Bio**


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**Forensic Technology**

Ian Graham

**Summary**

*Forensic Technology* looks at new and future developments in fingerprint technology, and detecting and understanding trace evidence left at scenes of crimes. It also explores DNA profiling and how it can be used, and how forensics experts use new technology to uncover information about fires and explosions, and detect fakes and forgeries. The New Technology series is an exciting, up-to-date look at new technology and the effect it is having on the world. Each title looks forward to likely future technological advances that will affect our everyday lives.

**Contributor Bio**

Ian Graham was born in Belfast in 1953. After taking a degree in applied physics and a postgraduate diploma in journalism at City University, London, he went to work as a writer and editor for a group of electronics, computer, and video magazines in London. After three years, he went freelance and has been writing mainly children's illustrated non-fiction books ever since then. He has had more than 230 books published on a wide range of topics, including space exploration, aircraft, forensic science, robots, military technology, transport, engineering, and general science.
Kinetic Contraptions
Build a Hovercraft, Airboat, and More with a Hobby Motor
Curt Gabrielson

Summary
Hobby motors—every workbench warrior has a few that have been pulled out of broken toys or rescued from old electronics kits. They're cheap, available, and with Kinetic Contraptions, essential to build some ingenious moving creations. The two dozen contraptions found in this handy resource are assembled primarily from low-cost or recycled materials, batteries, and a single motor.

You'll learn how to build vehicles that move across the land, over the sea, and through the air. Construct a hovercraft out of a Styrofoam plate, two corks, and binder clips. Build a double paddle-wheeler out of paint stirrers, plastic bottles, and disposable knives. Kinetic Contraptions even has "bizarre" devices, such as a waterless snow globe, a tornado in a bottle, and a mechanical bubble maker—no blowing required!

Each project is clearly explained through materials and tools lists, step-by-step instructions with photographs, and scientific background on the concepts being explored. Budding engineers will get experience working with tools, testing simple circuits, modifying and improving their designs, a...

Contributor Bio
Curt Gabrielson is the director of the Watsonville Environmental Science Workshop and author of Stomp Rockets, Catapults, and Kaleidoscopes.

Technology
John Turney

Summary
How do science, and decisions that scientists make, affect us? What are the universal problems facing modern science? How are these issues dealt with in different societies? This series explores our role in monitoring, developing, and controlling scientific advances in a wide range of topics.

Contributor Bio
Jon Turney has been a science writer most of his life, with excursions into cultural history, poetry, futures studies - and stints in academia, the civil service (briefly), and publishing (even more briefly). He is the author of Lovelock and Gaia, A Quark for Mister Mark, The Rough Guide to The Future, and Science, Not Art.
**Mad Like Tesla**  
**Underdog Inventors and Their Relentless Pursuit of Clean Energy**  
Tyler Hamilton

**Summary**  
Climate change solutions so crazy they just might work! A search for the contemporary Nikola Tesla - considered a mad scientist by his society for predicting global warming more than 100 years ago - fuels this analysis of climate issues, which introduces thinkers and inventors who are working to find possible ways out of the energy crisis. From Louis Michaud, a retired refinery engineer who claims we can harness the energy of man-made tornadoes, to a professor and a businessman who are running a company that genetically modifies algae so it can secrete ethanol naturally, these individuals and their unorthodox methods are profiled through first-person interviews, exposing the social, economic, financial, and personal barriers that prevent them from making an impact with their ideas. The existing state of green energy technologies, such as solar, wind, biofuels, smart grid, and energy storage, is also explored, creating a sense of hope against a backdrop of climate dread.

**Contributor Bio**  
Tyler Hamilton writes a weekly green energy and technology column for the "Toronto Star" and a popular blog called "Clean Break." He is the author of "Privacy Payoff." He lives in Toronto.

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**Math for Life**  
**Crucial Ideas You Didn't Learn in School**  
Jeffrey Bennett

**Summary**  
How can we solve the national debt crisis? Should you or your child take on a student loan? Is it safe to talk on a cell phone while driving? Are there viable energy alternatives to fossil fuels? What could you do with a billion dollars? Could simple policy changes reduce political polarization? These questions may all seem very different, but they share two things in common. First, they are all questions with important implications for either personal success or our success as a nation. Second, they all concern topics that we can fully understand only with the aid of clear quantitative or mathematical thinking. In other words, they are topics for which we need math for life—a kind of math that looks quite different from most of the math that we learn in school, but that is just as (and often more) important. In *Math for Life*, award-winning author Jeffrey Bennett simply and clearly explains the key ideas of quantitative reasoning and applies them to all the above questions and many more. He also uses these questions to analyze our current education system, identifying both shortfalls...

**Contributor Bio**  
Jeffrey Bennett is an astrophysicist and educator who proposed the idea for and helped develop the Voyage Scale Model Solar System—the first science-oriented exhibit approved for permanent installation on the National Mall in Washington, DC. He is the lead author of college textbooks in four subjects—astronomy, astrobiology, mathematics, and statistics—and has written critically acclaimed books for the general public including *Beyond UFOs* and *On the Cosmic Horizon*. He is also the author of children's books, including those in the Science Adventures with Max the Dog series and *The Wizard Who Saved the World*. He lives in Boulder, Colorado.
Math to Build On
A Book for Those Who Build
Johnny Hamilton, Margaret Hamilton

Summary
Since everything assembled consists of either straight lines, curved lines, or a combination of both, the ability to calculate circles and right triangles is essential for anyone who works in a building trade. This simple and straightforward book explains the basic math used in construction, manufacturing, and design. Starting with fractions and decimals and moving to mitered turns and arcs, these principles are presented with detailed illustrations, practical applications, and in larger print for easy reading. The result is increased efficiency, productivity, and confidence in one’s work from initial design to final product.

Taming the Infinite
The Story of Mathematics from the First Numbers to Chaos Theory
Ian Stewart

Summary
From ancient Babylon to the last great unsolved problems, an acclaimed mathematician and popular science writer brings us his witty, engaging, and definitive history of mathematics.
In his famous straightforward style, Ian Stewart explains each major development—from the first number systems to chaos theory—and considers how each affected society and changed everyday life forever. Maintaining a personal touch, he introduces all of the outstanding mathematicians of history, from the key Babylonians, Greeks, and Egyptians, via Newton and Descartes, to Fermat, Babbage, and Godel, and demystifies math’s key concepts without recourse to complicated formulae. Written to provide a captivating historic narrative for the non-mathematician, this book is packed with fascinating nuggets and quirky asides, and contains plenty of illustrations and diagrams to illuminate and aid understanding of a subject many dread, but which has made the world what it is today.

Contributor Bio
Ian Stewart is a world-renowned popularizer of mathematics, having won many awards for furthering public understanding of science, including the Royal Society’s Michael Faraday Medal and the Gold Medal of the Institute for Mathematics. He is the author of more than 20 popular science and mathematics titles including Flatterland, Professor Stewart’s Cabinet of Mathematical Curiosities, and Why Beauty Is Truth. He is the mathematics consultant for New Scientist and a former columnist for Scientific American, has consulted for Encyclopaedia Britannica, and has collaborated with Terry Pratchett on the Science of Discworld titles.
A Handbook of Essential Mathematical Formulae
Alan Davies, Diane Crann

Summary
Intended for students of mathematics as well as of engineering, physical science, economics, business studies, and computer science, this handbook contains vital information and formulas for algebra, geometry, calculus, numerical methods, and statistics. Comprehensive tables of standard derivatives and integrals, together with the tables of Laplace, Fourier, and Z transforms are included. A spiral binding that allows the handbook to lay flat for easy reference enhances the user-friendly design.

Contributor Bio
Alan Davies is a professor of mathematics at the University of Hertfordshire and has been teaching mathematics to engineers, scientists, and mathematicians for more than 30 years. He is the author of An Introduction to Computational Geometry for Curves and Surfaces. Diane Crann is a mathematics graduate with more than 10 years of experience in organizing mathematics-related activities for people of all ages, including the Royal Institution Mathematics Masterclass Series.

The Smart Guide to Practical Math (2nd Edition)
Jim Stein

Summary
Regardless of whether they are housewives or auto mechanics, doctors or lawyers, or students or businessmen, The Smart Guide to Practical Math provides readers with responses to the questions they want answered about everyday math. From how many pounds of hamburger are required to make meatloaf to feed 12 people to how much to invest annually to be able to send a child to college, and whether it's really a good idea to buy fuel additive for a car, this guide provides readers with practical mathematical formulas that can serve as templates for a number of real-life scenarios.

Contributor Bio
Jim Stein is an emeritus professor of mathematics at California State University–Long Beach. He is the author of several books that explain mathematics to general audiences, including How Math Can Save Your Life, How Math Explains the World, and The Right Decision. He has been a guest blogger for the Huffington Post and Psychology Today and has conducted conferences for the National Science Foundation. He lives in Redondo Beach, California.
Numeroids
Any Number of Things You Didn’t Know and Some You Did
Donough O’Brien, Anthony Weldon

Summary
More than 1300 numerical nuggets of the most astonishing, bizarre, and quirky numbers, from the number of emails a spammer must send to get a response, to the number of teeth on a tortoise
Numbers are a common language, as every day people use PIN numbers, figure costs, study sports scores, maintain speed limits, check bank balances, play the lottery, and more. This collection reveals hidden and often astonishing numbers, with entries divided into 14 sections, including science, human body, modern life, business, nature, military, music, space, and history. Readers will learn the minimum number of dollars it would be worth Bill Gates' time to bend down and pick it up—a lot, not surprisingly. They'll also be well informed about deadly sins, the pounds per square inch at which champagne is bottled, how many miles of arteries and veins are in the human body, the staggering number of bottles of wine that Napoleon's army took to Russia, the number of chopsticks the Japanese use in a year, and much more.

Contributor Bio
Donough O'Brien is a marketing and public relations executive and the author of several books containing quirky facts, including Banana Skins and In the Heat of Battle. Anthony Weldon started Bene Factum Publishing 15 years ago.

Teaching Secondary School Mathematics
Research and Practice for the 21st Century
Merrilyn Goos, Gloria Stillman, Colleen Vale

Summary
A research-based introduction to the professional knowledge, attributes, and practices needed to be an excellent instructor, this heavily illustrated resource reviews the cores of secondary mathematics. The research contained within discusses the challenges that many secondary mathematics teachers face today, and well-tested classroom examples show how teachers can build on their experiences to ensure students develop concepts and skills in mathematical thinking as well as a positive attitude toward the study. Both math and education professors and secondary school teachers will benefit from the curricula, methods of assessments, and pedagogical studies offered in this informative reference.

Contributor Bio
Merrilyn Goos is an associate professor in the School of Education at The University of Queensland. Gloria Stillman is senior lecturer of mathematics at the University of Melbourne. Colleen Vale is senior lecturer in the School of Education at Victoria University.
Chambers Adult Learners' Guide to Numeracy
Geoff Mainwaring

Summary
This new edition of Chambers Adult Learners' Guide to Numeracy is aimed at adults who lack confidence in their numeracy skills, now in a new, more accessible format. The book provides users with an understanding of the key concepts and methods, then applies them in real-world situations such as calculating distances or working out interest payments. The two-color text is clearly and spaciously laid out, and plentiful examples, diagrams, and exercises reinforce all the learning points. The book is based around the "Skills for Life" numeracy curriculum created by the Department for Education and Skills.

Contributor Bio
Geoff Mainwaring is a highly experienced teacher and lecturer in numeracy.

Common Core Math Grade 6
Activities That Captivate, Motivate, & Reinforce
Marjorie Frank

Summary
A collection of motivating and fun activities perfectly aligned with sixth grade Common Core State Standards for Mathematics
Full of engaging puzzles, stories, and adventures, these supplemental activities deepen student understanding and reinforce specific math skills. Connections to core standards are listed for each activity, including these topics and more: ratios and proportional relationships, the number system, expressions and equations, geometry, statistics and probability, and mathematical practices. Assessments are also provided to measure a student's strengths and weaknesses in each major skill area. Ideal for differentiated instruction in a classroom with varying skill levels, this comprehensive collection helps the busy educator to teach to the Common Core State Standards.

Contributor Bio
Marjorie Frank is an author, a consultant, and a teacher with more than 30 years of experience teaching and creating materials for middle level students, college students, and practicing teachers. She has also served as an editorial consultant for Incentive Publications. She lives in Ashland, Oregon.
Common Core Math Grade 7
Activities That Captivate, Motivate, & Reinforce
Marjorie Frank

Summary
A collection of motivating and fun activities perfectly aligned with seventh grade Common Core State Standards for Mathematics

Full of engaging puzzles, stories, and adventures, these supplemental activities deepen student understanding and reinforce specific math skills. Connections to core standards are listed for each activity, including these topics and more: ratios and proportional relationships, the number system, expressions and equations, geometry, statistics and probability, and mathematical practices. Assessments are also provided to measure a student's strengths and weaknesses in each major skill area. Ideal for differentiated instruction in a classroom with varying skill levels, this comprehensive collection helps the busy educator to teach to the Common Core State Standards.

Contributor Bio
Marjorie Frank is an author, a consultant, and a teacher with more than 30 years of experience teaching and creating materials for middle level students, college students, and practicing teachers. She has also served as an editorial consultant for Incentive Publications. She lives in Ashland, Oregon.

Common Core Math Grade 8
Activities That Captivate, Motivate, & Reinforce
Marjorie Frank

Summary
A collection of motivating and fun activities perfectly aligned with eighth grade Common Core State Standards for Mathematics

Full of engaging puzzles, stories, and adventures, these supplemental activities deepen student understanding and reinforce specific math skills. Connections to core standards are listed for each activity, including these topics and more: ratios and proportional relationships, the number system, expressions and equations, geometry, statistics and probability, and mathematical practices. Assessments are also provided to measure a student's strengths and weaknesses in each major skill area. Ideal for differentiated instruction in a classroom with varying skill levels, this comprehensive collection helps the busy educator to teach to the Common Core State Standards.

Contributor Bio
Marjorie Frank is an author, a consultant, and a teacher with more than 30 years of experience teaching and creating materials for middle level students, college students, and practicing teachers. She has also served as an editorial consultant for Incentive Publications. She lives in Ashland, Oregon.
Advanced Computational Skills
Stan Collins

Summary

Gives teachers and parents helpful techniques for struggling students who need more math practice

Designed for parents and teachers of children, this book is a simple, straightforward way to increase computational fluency. It advances beyond the lessons taught in Basic Computational Skills, using multiple-digit numbers to perform the operations of addition, subtraction, multiplication, and division. The skills taught in these pages parallel those recognized by local, state, and national entities seeking to strengthen the standards for mathematical and performance.

Contributor Bio

Stan Collins is the founder of Garlic Press and the author of numerous educational materials on English, math, sign language, and substitute teaching. He has been involved with the creation, editing, production, and marketing of publications for more than 20 years. He lives in Eugene, Oregon.

Algebra, Book 1
Steve Jahnke

Summary

Topics include: Distributive Law; Linear Equations; Exponential Properties; Polynomials; Factoring Polynomials. Practice, review, and testing included.

Contributor Bio

Steve Jahnke is the author of numerous educational materials on English, math, and social studies. He lives in Eugene, Oregon.
**Algebra, Book 2**  
Steve Jahnke

**Summary**  
Topics include: Graphing Linear Equations; Systems of Equations; Rational & Radical Expressions; Quadratic Equations. Practice, review, and testing included.

Garlic Press  
9781930820050  
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Wt

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**Trigonometry**  
Steve Jahnke

**Summary**  
Topics include: Facts about Triangles; Trigonometric ratios; Applications; Non-right Triangles. Practice, review, and testing included.

Garlic Press  
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Wt
Pre-Calculus
Stan Vernooy

Summary
Topics include: Introduction to Calculus: Functions; Inequalities; Solving & Graphing Polynomial & Rational Functions for Zero; Trigonometric, Exponential & Logarithmic Functions. Practice, review, and testing included.

Contributor Bio
Stan Vernooy has been a mathematics instructor at several colleges and universities in Oregon, Washington, California, Arkansas, and most recently at the College of Southern Nevada. His primary interests of mathematical study are abstract algebra and the history and philosophy of mathematics. As a teacher, he believes that teachers are to serve their students first and foremost. Outside the classroom, Stan is interested in music, history, philosophy, and visiting waterfalls! He is a lifetime member of the U. S. Chess Federation.

Calculus AB, Vol. 1
Stan Vernooy

Summary
Topics include: Limits and Continuity; Derivatives, Applications of Derivatives. Practice, review, and testing included.

Contributor Bio
Stan Vernooy has been a mathematics instructor at several colleges and universities in Oregon, Washington, California, Arkansas, and most recently at the College of Southern Nevada. His primary interests of mathematical study are abstract algebra and the history and philosophy of mathematics. As a teacher, he believes that teachers are to serve their students first and foremost. Outside the classroom, Stan is interested in music, history, philosophy, and visiting waterfalls! He is a lifetime member of the U. S. Chess Federation.
Calculus AB, Vol. 2
Stan Vernooy

Summary
Topics include: Anti-derivatives; Definite Integrals. Practice, review, and testing included.

Contributor Bio
Stan Vernooy has been a mathematics instructor at several colleges and universities in Oregon, Washington, California, Arkansas, and most recently at the College of Southern Nevada. His primary interests of mathematical study are abstract algebra and the history and philosophy of mathematics. As a teacher, he believes that teachers are to serve their students first and foremost. Outside the classroom, Stan is interested in music, history, philosophy, and visiting waterfalls! He is a lifetime member of the U. S. Chess Federation.

Common Core Mathematics Grade 6
SOLARO Study Guide

Summary
A comprehensive study guide with age- and grade-appropriate content designed to familiarize students with new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the complementary online version, and is designed to be used by students throughout the school year for reviewing and understanding course content, preparing for as...

Contributor Bio
Castle Rock Research Corp. is an educational resource development company that serves individual learners, schools and jurisdictions, education ministries, colleges, universities, and corporate clients with an array of print products and online services. It is based in Edmonton, Alberta.
**Common Core Mathematics Grade 7**

**SOLARO Study Guide**

**Summary**

*A comprehensive study guide with age- and grade-appropriate content designed to familiarize students with new Common Core State Standards*

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the complementary online version, and is designed to be used by students throughout the school year for reviewing and understanding course content, preparing for as...

**Contributor Bio**

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**Common Core Mathematics Grade 8**

**SOLARO Study Guide**

**Summary**

*A comprehensive study guide with age- and grade-appropriate content designed to familiarize students with new Common Core State Standards*

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the complementary online version, and is designed to be used by students throughout the school year for reviewing and understanding course content, preparing for as...

**Contributor Bio**

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Common Core Accelerated Mathematics Grade 7 Traditional
SOLARO Study Guide

Summary
A comprehensive study guide with age- and grade-appropriate content designed to familiarize students with new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the complementary online version, and is designed to be used by students throughout the school year for reviewing and understanding course content, preparing for as...

Contributor Bio
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Common Core High School Mathematics I
SOLARO Study Guide

Summary
A comprehensive mathematics study guide that helps students, educators, and parents alike navigate the new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the accompanying online version, allows educators to manage all of their classes with an intuitive interface through mobile apps or any web browser, and offers parents...

Contributor Bio
Castle Rock Research Corp. is an educational resource development company that serves individual learners, schools and jurisdictions, education ministries, colleges, universities, and corporate clients with an array of print products and online services. It is based in Edmonton, Alberta.
Common Core Accelerated Mathematics I
SOLARO Study Guide

Summary
A comprehensive study guide for advanced middle school students that will prepare them for high school and familiarize them with the new Common Core standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the accompanying online version, allowing educators to manage all of their classes with an intuitive interface through mobile apps or any web bro...

Contributor Bio
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Common Core High School Mathematics II
SOLARO Study Guide

Summary
A comprehensive mathematics study guide that helps students, educators, and parents alike navigate the new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the accompanying online version, allowing educators to manage all of their classes with an intuitive interface through mobile apps or any web browser, and offers parents...

Contributor Bio
Castle Rock Research Corp. is an educational resource development company that serves individual learners, schools and jurisdictions, education ministries, colleges, universities, and corporate clients with an array of print products and online services. It is based in Edmonton, Alberta.
Common Core High School Mathematics III
SOLARO Study Guide

Summary
A comprehensive mathematics study guide that helps students, educators, and parents alike navigate the new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the accompanying online version, allows educators to manage all of their classes with an intuitive interface through mobile apps or any web browser, and offers parents...

Contributor Bio
Castle Rock Research Corp. is an educational resource development company that serves individual learners, schools and jurisdictions, education ministries, colleges, universities, and corporate clients with an array of print products and online services. It is based in Edmonton, Alberta.

Common Core Algebra I
SOLARO Study Guide

Summary
A comprehensive mathematics study guide that helps students, educators, and parents alike navigate the new Common Core State Standards

With content developed by a team of teachers and curriculum specialists and reviewed by assessment experts with a minimum of five years of classroom teaching experience, SOLARO mathematics study guides are wholly curriculum aligned and serve as an excellent source of material for review and practice. Each guide breaks down the Common Core State Standards into teachable units, making it simple for educators and students to identify key learning concepts and how they align with the accompanying exercises and assessments. The practice questions and sample tests have detailed solutions that show problem-solving methods, highlight concepts that are likely to be tested, and point out potential sources of errors. The multiplatform SOLARO study solution also features additional learning tools in the accompanying online version, allows educators to manage all of their classes with an intuitive interface through mobile apps or any web browser, and offers parents...

Contributor Bio
Castle Rock Research Corp. is an educational resource development company that serves individual learners, schools and jurisdictions, education ministries, colleges, universities, and corporate clients with an array of print products and online services. It is based in Edmonton, Alberta.
**Common Core Accelerated Algebra I**  
**SOLARO Study Guide**  

**Summary**  
A comprehensive study guide for advanced middle school students that will prepare them for high school and familiarize them with the new Common Core standards  

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**Common Core Algebra II**  
**SOLARO Study Guide**  

**Summary**  
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Common Core Geometry
SOLARO Study Guide

Summary
A comprehensive geometry study guide that helps students, educators, and parents alike navigate the new Common Core State Standards

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