Microbes Discover An Unseen World

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Renewable Energy Joshua Sneideman 2016-04-18 How do we heat our homes, light our rooms, and power our cars? With energy! In 2014, the United States relied on fossil fuels for about 67 percent of its power. But as the fossil fuel supply dwindles and climate change becomes an increasingly urgent issue, individuals, businesses, and governments are expanding their sources of renewable energy, including solar, wind, biofuel, hydro, and geothermal. In Renewable Energy: Discover the Fuel of the Future, readers ages 9 to 12 learn about these renewable energy sources and discover how sunshine can be used to power light bulbs and how the earth's natural heat can be used to warm our houses. Young readers weigh the pros and cons of different energy sources and make their own informed opinions about which resources are the best choices for different uses. Renewable energy industries provide a booming field for future scientists and engineers. This book shows kids these future jobs and gets them excited about contributing to a world run on clean energy. Hands-on projects, essential questions, links to online primary sources, and science-minded prompts to think more about energy, the environment, and the repercussions of our choices make this book a key addition to classrooms and libraries.

Tiny Creatures Nicola Davies 2021-05-04 “Sutton’s large-scale illustrations help children to visualize microorganisms and processes that are too small to see. . . . A handsome and rewarding picture book.” — Booklist (starred review) All around the world—in the sea, in the soil, in the air, and in your body—there are living things so tiny that millions could fit on an ant’s antenna. They’re busy doing all sorts of things, from giving you a cold and making yogurt to eroding mountains and helping to make the air we breathe.

Mycophilia Eugenia Bone 2013-02-26 An incredibly versatile cooking ingredient containing an abundance of vitamins, minerals, and possibly cancer-fighting properties, mushrooms are among the most expensive and sought-after foods on the planet. Yet when it comes to fungi, culinary uses are only the tip of the iceberg. Throughout history fungus has been prized for its diverse properties—medicinal, ecological, even recreational—and has spawned its own quirky subculture dedicated to exploring the weird biology and celebrating the unique role it plays on earth. In Mycophilia, accomplished food writer and cookbook author Eugenia Bone

examines the role of fungi as exotic delicacy, curative, poison, and hallucinogen, and ultimately discovers that a greater understanding of fungi is key to facing many challenges of the 21st century. Engrossing, surprising, and packed with up-to-date science and cultural exploration, Mycophilia is part narrative and part primer for foodies, science buffs, environmental advocates, and anyone interested in learning a lot about one of the least understood and most curious organisms in nature.

Unseen Jungle: The Microbes That Secretly Control Our World Eleanor Spicer Rice 2023-05-02 This lively peek into the amazing world of microbes, replete with a kid-pleasing “ick” factor, is chock-full of facts, humor, and fun illustrations. Microbes are everywhere: outside, indoors, on your body, in your body. In fact, only about half of our bodies' cells are human cells—the rest are microbes. Whether helping people digest their food or using mind-control techniques to lure mice into the path of hungry cats (no, really), microbes form an unseen jungle all around us. Through zany facts, hilarious and sometimes disgusting illustrations, and interviews with experts in their fields, aspiring young scientists (or kids who just want to be grossed out) will discover a hidden world in which your health depends on a myriad of microbes, houseflies get zombified by fungi, and termites are saving the planet one fart at a time. With such extras as sidebars, limericks, and even a lesson on how to draw E. coli, this “eww”-worthy treasure trove for kids is an engrossing romp into the microbe drama unfolding where you might least expect it.

Basher Science: Microbiology Simon Basher 2016-11-08 This latest book from the Basher Science series investigates the unseen world of microbes. Basher's distinctive style presents key microbes as characters with their own voice and personality. Microbiology investigates the "teensy tykes" such as algae and bacteria that are all around us in the living world, as well as a range of so-called "minibeasts", but these are not the usual creepy-crawlies that you might think of. These near-invisible creatures range from the zooplankton "good guys" to the unpleasant tapeworm and fluke. Yuk! Microbiology explains the different building blocks of the human body, as well as the nasty bugs that can make us so ill, whether it's catching a common cold or something much more deadly such as tuberculosis, the second biggest killer in the modern world.

It's Catching Jennifer Gardy 2014 Presents general information about different types of germs, as well as the diseases they cause, and how people work to prevent them from spreading.

Microbiology Nina Parker 2016-05-30 "Microbiology covers the scope and sequence requirements for a single-semester microbiology course for non-majors. The book presents the core concepts of microbiology with a focus on applications for careers in allied health. The pedagogical features of the text make the material interesting and accessible while maintaining the career-application focus and scientific rigor inherent in the subject matter. Microbiology's art program enhances students' understanding of concepts through clear and effective illustrations, diagrams, and photographs. Microbiology is produced through a collaborative publishing agreement between OpenStax and the American Society for Microbiology Press. The book aligns with the curriculum guidelines of the American Society for Microbiology."--BC Campus website.

Intimate Strangers Cynthia Needham 2000 Discusses the world of microbes and their roles

in Earth's environment and human life.

Cells Up Close Maria Nelson 2013-08-01 Explains the purposes of cells and discusses how they function and work together to allow multi-celled creatures survive. Reveals how we view and study cells and includes color photographs, a glossary, and additional reading sources.

Women in Microbiology Rachel J. Whitaker 2020-07-02 Many girls want to become scientists when they grow up, just like many boys do. But for these girls, the struggle to do what they love and to be treated with respect has been much harder because of the discrimination and bias in our society. In Women in Microbiology, we meet women who, despite these obstacles and against tough odds, have become scientific leaders and revered mentors. The women profiled in this collection range from historic figures like Alice Catherine Evans and Ruth Ella Moore to modern heroes like Michele Swanson and Katrina Forest. What binds all of these remarkable women are a passion for their work, a zest for life, a warm devotion to mentoring others—especially younger women—and a sense of justice and fairness that they are willing to fight tirelessly to obtain. Each story is unique, but each woman featured in Women in Microbiology has done so much to expand our knowledge of the natural world while also making it easier for the next generation of scientists to work collaboratively and in an atmosphere where people are judged by their intellect, imagination, skill, and commitment to service regardless of gender or race. Women in Microbiology is a wonderful collection of stories that will inspire everyone, but especially young women and men who are wondering how to find their way in the working world. Some of the names are familiar and some are lesser known, but all of the stories arouse a sense of excitement, driven by tales of new, important scientific insights, stories of overcoming adversity and breaking boundaries, and the inclusion of personal tips and advice from successful careers. These stories are proof that a person can live a balanced and passionate life in science that is rich and rewarding.

Micrographia, Or, Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses Robert Hooke 1665 At one time, Hooke was a research assistant to Robert Boyle. He is believed to be one of the greatest inventive geniuses of all time and constructed one of the most famous of the early compound microscopes.

Unseen Worlds Hélène Rajcak 2019-10 Offers an illustrated exploration of the microscopic and small-scale animal world, with large fold-out illustrations that depict diverse ecosystems and their tiny inhabitants to scale.

Life's Engines Paul G. Falkowski 2015-04-27 The marvelous microbes that made life on Earth possible and support our very existence For almost four billion years, microbes had the primordial oceans all to themselves. The stewards of Earth, these organisms transformed the chemistry of our planet to make it habitable for plants, animals, and us. Life's Engines takes readers deep into the microscopic world to explore how these marvelous creatures made life on Earth possible—and how human life today would cease to exist without them. Paul Falkowski looks "under the hood" of microbes to find the engines of life, the actual working parts that do the biochemical heavy lifting for every living organism on Earth. With insight and humor, he explains how these miniature engines are built—and how they have been appropriated by and assembled like Lego sets within every creature that walks, swims, or flies. Falkowski shows how evolution works to maintain this core machinery of life, and how we and other animals are veritable conglomerations of microbes. A vibrantly entertaining

book about the microbes that support our very existence, Life's Engines will inspire wonder about these elegantly complex nanomachines that have driven life since its origin. It also issues a timely warning about the dangers of tinkering with that machinery to make it more "efficient" at meeting the ever-growing demands of humans in the coming century.

Never Home Alone Rob Dunn 2018-11-06 A natural history of the wilderness in our homes, from the microbes in our showers to the crickets in our basements Even when the floors are sparkling clean and the house seems silent, our domestic domain is wild beyond imagination. In Never Home Alone, biologist Rob Dunn introduces us to the nearly 200,000 species living with us in our own homes, from the Egyptian meal moths in our cupboards and camel crickets in our basements to the lactobacillus lounging on our kitchen counters. You are not alone. Yet, as we obsess over sterilizing our homes and separating our spaces from nature, we are unwittingly cultivating an entirely new playground for evolution. These changes are reshaping the organisms that live with us -- prompting some to become more dangerous, while undermining those species that benefit our bodies or help us keep more threatening organisms at bay. No one who reads this engrossing, revelatory book will look at their homes in the same way again.

Micro Life DK 2021-11-02 Explore the everyday miracle of the microscopic world With spectacular macro photography and microscope images, this ebook reveals a hidden, living world full of intricate structures beyond the naked eye. Included are the tiniest insects and spiders; but looking deeper, you will discover truly microscopic creatures--even bacteria and viruses. Earth is home to more microbes, and more different types of microbes, than any other living organism. Bacteria on Earth outweigh humans by 1,100 to 1; and without them, all world ecosystems would collapse. This ebook reveals this vital, unseen realm, but it includes large life-forms too, in extreme close-up, so that you can wonder at the beauty of a pollen grain, a butterfly egg, the spore of a fungus, and the nerve cell of a human. The spectacular imagery in Micro Life exploits cutting-edge technology, such as focus-stacked macro photographs, as well as micrographs (microscope images) including scanning electron micrographs. Illustrations nearby explain the science--from the workings of an insect's eye to how a plant "breathes" through its leaves. The biology builds into a reference on how life works--and how all organisms, however small, solve the basic problems of movement, reproduction, energy, communication, and defense. Micro Life is a beautiful and surprising look at the natural world.

Microbe Hunters Paul De Kruif 1926 Paul de Kruif's Microbe Hunters is a timeless dramatization of the scientists, bacteriologists, doctors, and medical technicians who discovered microbes and invented the vaccines to counter them. De Kruif reveals the now seemingly simple but really fundamental discoveries of science - for instance, how a microbe was first viewed in a clear drop of rain water, and when, for the first time ever, Louis Pasteur discovered that a simple vaccine could save a man from the ravages of rabies by attacking the microbes that cause it.

Bioengineering Christine Burillo-Kirch 2016-08-22 In Bioengineering: Discover How Nature Inspires Human Designs, young readers explore designs and innovations that come from nature. Leonardo da Vinci studied birds’ wings to draw his design of a man-made flying machine and engineers still look to birds when attempting to make planes more aerodynamic. And a burr on your shirt from walking through a field sticks like Velcro, doesn’t it? The plant

and animal world provides engineers and scientists with a host of ideas to apply to the human world to make it a better place to live. Bioengineering explores different fields, including communication, transportation, and construction, and follows the process of engineering from the raw material of the natural world to the products we use in the human world every day. Activities such as building cantilevers and inventing a new fabric that mimics pinecone behavior require kids to think critically about their own needs and find creative ideas to fulfill those needs using designs from nature. Essential questions and links to digital and primary resources make this book an engaging and illuminating experience.

Me, Microbes and I Philip Bunting 2021-06-02 You are covered in microbes - tiny living things so small that you can't see them without a microscope. Me, Microbes & I is full of fascinating and entertaining information about microbes, and provides young readers with a simple and fun guide to how things like bacteria and viruses work in the body. It is packed with handy tips on how to stay healthy, from enjoying fermented foods to taking care of your immune system, and also provides information on how to stop the spread of nasty viruses - including how to cough like a vampire, and the best way to wash your hands.

Microbes Christine Burillo-Kirch 2015-10-19 If our vision improved one million times, we would be able to see microbes in the air, on our skin, in the soil, in water, and on food! In Microbes: Discover an Unseen World, readers journey through microscopic worlds that collide with our own on a daily basis to encounter bacteria, viruses, fungi, protists, and archaea. There are some microbes we can’t live without, such as those that help us digest our food, while others can harm or even kill us, such as influenza and ebola. Microbes looks at some of the ways the body protects itself from diseases and infections through critical thinking exercises that explore the differences between harmful and beneficial microbes. Follow in the footsteps of the scientists who had both the genius and the imagination to research and discover microbes. Hands-on experiments such as building a mini incubator, making bacterial growth plates, and growing fungi allow children to explore their microbiological surroundings safely while employing the scientific method to discover details about microbes. Fun facts and primary sources make learning fun and integrative, while cartoon illustrations engage kids' imaginations and prod their natural curiosity about this weird and fascinating topic.

Follow Your Gut Rob Knight 2015-04-07 Allergies, asthma, obesity, acne: these are just a few of the conditions that may be caused—and someday cured—by the microscopic life inside us. The key is to understand how this groundbreaking science influences your health, mood, and more. In just the last few years, scientists have shown how the microscopic life within our bodies— particularly within our intestines—has an astonishing impact on our lives. Your health, mood, sleep patterns, eating preferences—even your likelihood of getting bitten by mosquitoes—can be traced in part to the tiny creatures that live on and inside of us. In Follow Your Gut, pioneering scientist Rob Knight pairs with award-winning science journalist Brendan Buhler to explain—with good humor and easy-to-grasp examples—why these new findings matter to everyone. They lead a detailed tour of the previously unseen world inside our bodies, calling out the diseases and conditions believed to be most directly impacted by them. With a practical eye toward deeper knowledge and better decisions, they also explore the known effects of antibiotics, probiotics, diet choice and even birth method on our children’s lifelong health. Ultimately, this pioneering book explains how to learn about your own microbiome and take steps toward understanding and improving your health, using the

latest research as a guide.

Isaac's Laugh Juan Ignacio Peña 2014-10-20 Isaac´s Laugh is a moving story about enjoying life even when circumstances are difficult Guided Reading Level: P, Lexile Level: 710L

The Bacteria Book Steve Mould 2018-05-15 In this fun, fact-packed science book for kids, young readers will discover the bacteria, viruses, and other germs and microbes that keep our bodies and our world running, as well as how and when they can be harmful and the precautions we can take to prevent them from becoming so. Meet a glowing squid, traveling fungus spores, and much more. The Bacteria Book walks the line between "ew, gross!" and "oh, cool!," exploring why we need bacteria and introducing readers to its microbial mates-viruses, fungi, algae, archaea, and protozoa. The Bacteria Book is a fun and informative introduction to a STEM subject that brings kids up-close to the big world of tiny science. With remarkable photography, kooky character illustrations, and lots of fun facts, this book uses real-life examples of microbiology in action to show how tiny microbes affect us in big ways.

The Amoeba in the Room Nicholas P. Money 2014-05 "In The Amoeba in the Room, Nicholas Money explores the extraordinary breadth of the microbial world and the vast swathes of biological diversity that can be detected only using molecular methods. Although biologists have achieved a remarkable level of understanding about the way multicellular organisms operate, Money shows that most people continue to ignore the fact that most of life isn't classified as either plant or animal. Significant discoveries about the composition of the biosphere are making it clear that the sciences have failed to comprehend the full spectrum of life on earth, which is far more diverse than previously imagined. Money's engaging work considers this diversity in all its forms, exploring environments from the backyard pond to the ocean floor to the "mobile ecosystem" of our own bodies. A revitalized vision of life emerges from Money's lively narrative of the lowly, one in which we are challenged to reconsider our existence in proper relationship to the single-celled protists, bacteria, and viruses that constitute most of life on earth. Proposing a radical reformulation of biology education and research in the life sciences, The Amoeba in the Room is a compelling romp through the least visible and yet most prodigiously magnificent aspects of life on earth."--Publisher information.

A Field Guide to Bacteria Betsey Dexter Dyer 2003 Written for curious souls of all ages, this title opens readers eyes--and noses and ears--to this hidden world. Useful illustrations accompany Dyer's lively text.

A World in a Drop of Water Alvin Silverstein 2013-04-09 Fascinating introduction to the world of single-celled organisms recounts the feeding, reproductive, and defensive strategies employed by an array of curious creatures: amoeba, paramecium, suctorian, hydra, others. Easy-to-understand language, 37 illustrations.

Fault Lines & Tectonic Plates Kathleen M. Reilly 2017-01-16 The ground beneath your feet is solid, right? After all, how could we build houses and bridges on land if it was moving all the time? Actually, the ground beneath us really is moving all the time! In Fault Lines and Tectonic Plates: Discover What Happens When the Earth’s Crust Moves, readers ages 9 through 12 learn what exactly is going on under the dirt. The earth's crust is moving constantly, but usually it’s moving too slowly for us to notice it. In Fault Lines and Tectonic

Plates, readers learn about Pangea, the giant landmass that scientists believe existed long ago, and the tectonic plates that Pangea broke into, which we know as continents. And what happens when these slowly drifting continents bump up against each other along fault lines? Earthquakes, volcanoes, and tidal waves! Readers learn the geological reasons behind earthquakes and also practical ways of behaving in those types of natural disasters. In addition to earthquakes, tectonic plates create the landscape of our world over time. Mountains and trenches are the results of the slow movement of the earth's crust. With science-minded projects such as a homemade earthquake "shake table" and edible tectonic boundaries, the complex and fascinating topic of plate tectonics is made accessible for kids to grasp, helping to raise their awareness about this amazing planet we live on. Links to online primary sources and videos make concepts clear and encourage kids to maintain a healthy curiosity in the topic. Guided reading levels and Lexile measurements place this title with appropriate audiences.

All in a Drop Lori Alexander 2019 For fans of the "Who Was" series, this lively, accessible, and full-color chapter book biography shows how a self-taught scientist was the first to observe the microbial life in and around us. By building his own microscope, Antony van Leeuwenhoek advanced humanity's understanding of our oft-invisible world around us. Microbes are everywhere: in the soil and oceans, in snow, and inside our bodies. But in Antony van Leeuwenhoek's time, people believed that what they saw with their own eyes was all that existed in the world. How did a simple tradesman--who didn't go to college or speak English or Latin like all the other scientists--change everyone's minds? Proving that remarkable discoveries can come from the most unexpected people and places, this eye-opening chapter book, illustrated with lively full-color art, celebrates the power of curiosity, ingenuity, and persistence.

The Science and Applications of Microbial Genomics Institute of Medicine 2013-05-02 Over the past several decades, new scientific tools and approaches for detecting microbial species have dramatically enhanced our appreciation of the diversity and abundance of the microbiota and its dynamic interactions with the environments within which these microorganisms reside. The first bacterial genome was sequenced in 1995 and took more than 13 months of work to complete. Today, a microorganism's entire genome can be sequenced in a few days. Much as our view of the cosmos was forever altered in the 17th century with the invention of the telescope, these genomic technologies, and the observations derived from them, have fundamentally transformed our appreciation of the microbial world around us. On June 12 and 13, 2012, the Institute of Medicine's (IOM's) Forum on Microbial Threats convened a public workshop in Washington, DC, to discuss the scientific tools and approaches being used for detecting and characterizing microbial species, and the roles of microbial genomics and metagenomics to better understand the culturable and unculturable microbial world around us. Through invited presentations and discussions, participants examined the use of microbial genomics to explore the diversity, evolution, and adaptation of microorganisms in a wide variety of environments; the molecular mechanisms of disease emergence and epidemiology; and the ways that genomic technologies are being applied to disease outbreak trace back and microbial surveillance. Points that were emphasized by many participants included the need to develop robust standardized sampling protocols, the importance of having the appropriate metadata, data analysis and data management challenges, and information sharing in real time. The Science and Applications of Microbial Genomics summarizes this workshop.

Rare Earth Peter D. Ward 2007-05-08 What determines whether complex life will arise on a planet, or even any life at all? Questions such as these are investigated in this groundbreaking book. In doing so, the authors synthesize information from astronomy, biology, and paleontology, and apply it to what we know about the rise of life on Earth and to what could possibly happen elsewhere in the universe. Everyone who has been thrilled by the recent discoveries of extrasolar planets and the indications of life on Mars and the Jovian moon Europa will be fascinated by Rare Earth, and its implications for those who look to the heavens for companionship.

March of the Microbes John L. Ingraham 2012-05-07 A Choice Outstanding Academic Title Renowned microbiologist John Ingraham rescues the supremely important and ubiquitous microorganisms from their unwonted obscurity by showing us how we can, in fact, see and appreciate them.

The New Science of Metagenomics National Research Council 2007-05-24 Although we can't usually see them, microbes are essential for every part of human life -- indeed all life on Earth. The emerging field of metagenomics offers a new way of exploring the microbial world that will transform modern microbiology and lead to practical applications in medicine, agriculture, alternative energy, environmental remediation, and many others areas. Metagenomics allows researchers to look at the genomes of all of the microbes in an environment at once, providing a "meta" view of the whole microbial community and the complex interactions within it. It's a quantum leap beyond traditional research techniques that rely on studying -- one at a time -- the few microbes that can be grown in the laboratory. At the request of the National Science Foundation, five Institutes of the National Institutes of Health, and the Department of Energy, the National Research Council organized a committee to address the current state of metagenomics and identify obstacles current researchers are facing in order to determine how to best support the field and encourage its success. The New Science of Metagenomics recommends the establishment of a "Global Metagenomics Initiative" comprising a small number of large-scale metagenomics projects as well as many medium- and small-scale projects to advance the technology and develop the standard practices needed to advance the field. The report also addresses database needs, methodological challenges, and the importance of interdisciplinary collaboration in supporting this new field.

An Immense World Ed Yong 2022-06-21 NEW YORK TIMES BESTSELLER • A “thrilling” (The New York Times), “dazzling” (The Wall Street Journal) tour of the radically different ways that animals perceive the world that will fill you with wonder and forever alter your perspective, by Pulitzer Prize–winning science journalist Ed Yong “One of this year’s finest works of narrative nonfiction.”—Oprah Daily ONE OF THE TEN BEST BOOKS OF THE YEAR: The Wall Street Journal, The New York Times, Time, Publishers Weekly, BookPage ONE OF THE BEST BOOKS OF THE YEAR: Oprah Daily, The Washington Post, Kirkus Reviews The Earth teems with sights and textures, sounds and vibrations, smells and tastes, electric and magnetic fields. But every kind of animal, including humans, is enclosed within its own unique sensory bubble, perceiving but a tiny sliver of our immense world. In An Immense World, Ed Yong coaxes us beyond the confines of our own senses, allowing us to perceive the skeins of scent, waves of electromagnetism, and pulses of pressure that surround us. We encounter beetles that are drawn to fires, turtles that can track the Earth’s magnetic fields, fish that fill rivers with electrical messages, and even humans who wield sonar like bats. We

discover that a crocodile's scaly face is as sensitive as a lover's fingertips, that the eyes of a giant squid evolved to see sparkling whales, that plants thrum with the inaudible songs of courting bugs, and that even simple scallops have complex vision. We learn what bees see in flowers, what songbirds hear in their tunes, and what dogs smell on the street. We listen to stories of pivotal discoveries in the field, while looking ahead at the many mysteries that remain unsolved. Funny, rigorous, and suffused with the joy of discovery, An Immense World takes us on what Marcel Proust called "the only true voyage . . . not to visit strange lands, but to possess other eyes." FINALIST FOR THE KIRKUS PRIZE • FINALIST FOR THE ANDREW CARNEGIE MEDAL

Microbes Christine Burillo-Kirch 2015-10 An introduction to microorganisms with instructions for twenty-five projects.

DNA Up Close John M. Shea 2013-08-01 DNA is perhaps the most remarkable scientific discovery of the twentieth century. Found in almost every human cell, DNA holds the instructions for life. Readers discover how these instructions are carried out and how they make us who we are. Readers also learn the implications of genetic engineering and what recent breakthroughs may mean for the future. Amazing photographs include images of cells, DNA, chromosomes, and more.

The Good Germ Hotel Kim Sung-Hwa 2021

TOOLS OF THE ANCIENT GREEKS Kris Bordessa 2006-07-15 Tools of the Ancient Greeks: A Kid's Guide to the History and Science of Life in Ancient Greece explores the scientific discoveries, athletic innovations, engineering marvels, and innovative ideas created more than two thousand years ago. Through biographical sidebars, interesting facts, fascinating anecdotes, and fifteen hands-on activities, readers will learn how Greek innovations and ideas have shaped world history and our own world view.

The Hidden Half of Nature: The Microbial Roots of Life and Health David R. Montgomery 2015-11-16 "Sure to become a game-changing guide to the future of good food and healthy landscapes." —Dan Barber, chef and author of The Third Plate Prepare to set aside what you think you know about yourself and microbes. The Hidden Half of Nature reveals why good health—for people and for plants—depends on Earth's smallest creatures. Restoring life to their barren yard and recovering from a health crisis, David R. Montgomery and Anne Biklé discover astounding parallels between the botanical world and our own bodies. From garden to gut, they show why cultivating beneficial microbiomes holds the key to transforming agriculture and medicine.

Processes in Microbial Ecology David L. Kirchman 2012-02-02 A final chapter is devoted to symbiosis and other relationships between microbes and larger organisms.

Great Civil War Projects Maxine Anderson 2012-06-01 From periscopes to homemade paper, uniforms to telegraphs, Great Civil War Projects You Can Build Yourself explores the Civil War era through hands-on building projects and activities using common household and craft store items. Detailed step-by-step instructions, diagrams, and templates for creating 25 Civil War projects, combined with historical background, facts and anecdotes, and biographies and trivia, give kids a hands-on way to experience the fascinating history of one

of the most important eras in American history.

I Contain Multitudes Ed Yong 2016-08-09 New York Times Bestseller New York Times Notable Book of 2016 • NPR Great Read of 2016 • Named a Best Book of 2016 by The Economist, Smithsonian, NPR's Science Friday, MPR, Minnesota Star Tribune, Kirkus Reviews, Publishers Weekly, The Guardian, Times (London) From Pulitzer Prize winner Ed Yong, a groundbreaking, wondrously informative, and vastly entertaining examination of the most significant revolution in biology since Darwin—a “microbe’s-eye view” of the world that reveals a marvelous, radically reconceived picture of life on earth. Every animal, whether human, squid, or wasp, is home to millions of bacteria and other microbes. Pulitzer Prize-winning author Ed Yong, whose humor is as evident as his erudition, prompts us to look at ourselves and our animal companions in a new light—less as individuals and more as the interconnected, interdependent multitudes we assuredly are. The microbes in our bodies are part of our immune systems and protect us from disease. In the deep oceans, mysterious creatures without mouths or guts depend on microbes for all their energy. Bacteria provide squid with invisibility cloaks, help beetles to bring down forests, and allow worms to cause diseases that afflict millions of people. Many people think of microbes as germs to be eradicated, but those that live with us—the microbiome—build our bodies, protect our health, shape our identities, and grant us incredible abilities. In this astonishing book, Ed Yong takes us on a grand tour through our microbial partners, and introduces us to the scientists on the front lines of discovery. It will change both our view of nature and our sense of where we belong in it.