Two Mile Time Machine Ice Cores Abrupt Climate Change And Our Future

High NoonTimefulnessAssessment of Fuel Economy Technologies for Light-Duty VehiclesFreak the MightyGeowritingEnergy, Environment, and ClimateField Notes from a CatastropheGods, Demigods and DemonsEarth's ClimateSword and CitadelThe Wednesday WarsSimply ScratchPlows, Plagues, and PetroleumThe Future History of the ArcticBeyond Global WarmingAnimal Tracks of Nevada and the Great BasinTwenty Thousand Leagues Under the SeaGeomorphology in the AnthropoceneThe Sun's Influence on ClimateThe Book of 365South to the Naktong, North to the YaluBrave New ArcticPaleoclimatePaleoclimatologyThe Weather MakersThe Two-Mile Time MachineNavy Seal Physical Fitness GuideThe White PlanetGlobal WarmingThe Two-Mile Time MachineThe Dead ZoneLandscapeSnowball EarthCPO Focus on Physical ScienceGlacial GeologyA First Course in Atmospheric RadiationA Speck in the SeaThe Global Carbon CycleNature and the MarketplaceThe Goldilocks Planet

High Noon

Why an awareness of Earth's temporal rhythms is critical to our planetary survival Few of us have any conception of the enormous timescales of our planet's long history, and this narrow perspective underlies many of the environmental problems we are creating. The lifespan of Earth can seem unfathomable compared to the brevity of human existence, but this view of time denies our deep roots in Earth's history—and the magnitude of our effects on the planet. Timefulness reveals how knowing the rhythms of Earth's deep past and conceiving of time as a geologist does can give us the perspective we need for a more sustainable future. Featuring illustrations by Haley Hagerman, this compelling book offers a new way of thinking about our place in time, showing how our everyday lives are shaped by processes that vastly predate us, and how our actions today will in turn have consequences that will outlast us by generations.

Timefulness

An engaging exploration of energy's impact

Assessment of Fuel Economy Technologies for Light-Duty Vehicles

Syukuro Manabe is perhaps the leading pioneer of modern climate modeling. Beyond Global Warming is his compelling firsthand account of how the scientific community came to understand the human causes of climate change, and how numerical models using the world's most powerful computers have been instrumental to these vital discoveries. Joined here by atmospheric scientist Anthony Broccoli, Manabe shows how climate models have been used as virtual laboratories for examining the complex planetary interactions of atmosphere, ocean, and land. Manabe and Broccoli use these studies as the basis for a broader discussion of human-induced global warming--and what the future may hold for a

warming planet. They tell the stories of early trailblazers such as Svante Arrhenius, the legendary Swedish scientist who created the first climate model of Earth more than a century ago, and provide rare insights into Manabe's own groundbreaking work over the past five decades. Expertly walking readers through key breakthroughs, they explain why increasing atmospheric carbon dioxide has caused temperatures to rise in the troposphere yet fall in the stratosphere, why the warming of the planet's surface differs by hemisphere, why drought is becoming more frequent in arid regions despite the global increase in precipitation, and much more.

Freak the Mighty

In the 1990s Richard B. Alley and his colleagues made headlines with the discovery that the last ice age came to an abrupt end over a period of only three years. In The Two-Mile Time Machine, Alley tells the fascinating history of global climate changes as revealed by reading the annual rings of ice from cores drilled in Greenland. He explains that humans have experienced an unusually temperate climate compared to the wild fluctuations that characterized most of prehistory. He warns that our comfortable environment could come to an end in a matter of years and tells us what we need to know in order to understand and perhaps overcome climate changes in the future. In a new preface, the author weighs in on whether our understanding of global climate change has altered in the years since the book was first published, what the latest research tells us, and what he is working on next.

Geowriting

Landscape is a stimulating introduction to and contemporary understanding of one of the most important concepts within human geography. A series of different influential readings of landscape are debated and explored, and, for the first time, distinctive traditions of landscape writing are brought together and examined as a whole, in a forward-looking critical review of work by cultural geographers and others within the last twenty to thirty years. This book clearly and concisely explores ‘landscape’ theories and writings, allowing students of geography, environmental studies and cultural studies to fully comprehend this vast and complex topic. To aid the student, vignettes are used to highlight key writers, papers and texts. Annotated further reading and student exercises are also included. For researchers and lecturers, Landscape presents a forward-looking synthesis of hitherto disparate fields of inquiry, one which offers a platform for future research and writing.

Energy, Environment, and Climate

Earth's climate has undergone dramatic changes over the geologic timescale. At one extreme, Earth has been glaciated from the poles to the equator for periods that may have lasted millions of years. At another, temperatures were once so warm that the Canadian Arctic was heavily forested and large dinosaurs lived on Antarctica. Paleoclimatology is the study of such changes and their causes. Studying Earth's long-term climate history gives scientists vital clues about

anthropogenic global warming and how climate is affected by human endeavor. In this book, Michael Bender, an internationally recognized authority on paleoclimate, provides a concise, comprehensive, and sophisticated introduction to the subject. After briefly describing the major periods in Earth history to provide geologic context, he discusses controls on climate and how the record of past climate is determined. The heart of the book then proceeds chronologically, introducing the history of climate changes over millions of years--its patterns and major transitions, and why average global temperature has varied so much. The book ends with a discussion of the Holocene (the past 10,000 years) and by putting manmade climate change in the context of paleoclimate. The most up-to-date overview on the subject, Paleoclimate provides an ideal introduction to undergraduates, nonspecialist scientists, and general readers with a scientific background.

Field Notes from a Catastrophe

The Anthropocene is a major new concept in the Earth sciences and this book examines the effects on geomorphology within this period. Drawing examples from many different global environments, this comprehensive volume demonstrates that human impact on landforms and land-forming processes is profound, due to various driving forces, including: use of fire; extinction of fauna; development of agriculture, urbanisation, and globalisation; and new methods of harnessing energy. The book explores the ways in which future climate change due to anthropogenic causes may further magnify effects on geomorphology, with respect to future hazards such as floods and landslides, the state of the cryosphere, and sea level. The book concludes with a consideration of the ways in which landforms are now being managed and protected. Covering all major aspects of geomorphology, this book is ideal for undergraduate and graduate students studying geomorphology, environmental science and physical geography, and for all researchers of geomorphology.

Gods, Demigods and Demons

Concise descriptions of the animals and their tracks are combined with detailed drawings of the front and back prints, stride patterns and other important identifying aspects. Each animal is captured in accurate black-and-white illustrations, including pattern and print comparisons. A perfect guide for teachers, parents, hikers and urban adventurers.

Earth's Climate

Set in the fictional town of Castle Rock, Maine A #1 New York Times bestseller about a man who wakes up from a five-year coma able to see people’s futures and the terrible fate awaiting mankind—a “compulsive page-turner” (The Atlanta Journal-Constitution). Johnny Smith awakens from a five-year coma after his car accident and discovers that he can see people’s futures and pasts when he touches them. Many consider his talent a gift; Johnny feels cursed. His fiancée married another man during his coma and people clamor for him to solve their problems. When Johnny has a disturbing vision after he shakes the hand of an

ambitious and amoral politician, he must decide if he should take drastic action to change the future. With “powerful tension that holds the reader to the story like a pin to a magnet” (The Houston Post), The Dead Zone is a “faultlessly paced…continuously engrossing” (Los Angeles Times) novel of second sight.

Sword and Citadel

The essential companion guide for all readers of Greek mythology Do you know the story behind Pandora’s Box, or the difference between Hercules and Heracles? Turn to this alphabetic encyclopedia, with more than 540 entries detailing all the major and minor characters, events, and settings of Greek mythology, from an introduction to the nymph Acantha to a succinct characterization of Zeus, the all-powerful ruler of the gods. This invaluable reference covers all types of heroes, gods, demigods, creatures, demons, and notable mortals, with their classic stories retold in riveting summaries. This comprehensive guide brings Greek mythology to life, and includes a helpful pronunciation key.

The Wednesday Wars

Max is used to being called Stupid. And he is used to everyone being scared of him. On account of his size and looking like his dad. Kevin is used to being called Dwarf. On account of his size and being some cripple kid. But greatness comes in all sizes, and together Max and Kevin become Freak The Mighty and walk high above the world. An inspiring, heartbreaking, multi-award winning international bestseller.

Simply Scratch

From the popular blogger behind Simply Scratch comes a debut cookbook of easy and accessible family recipes — the new bible for cooking with whole foods. For Laurie McNamara, growing up on a farm in the country had major perks: her mother cooked with vegetables from the family garden, they collected fresh eggs from the chicken coop, and absolutely everything—from ketchup to casseroles—was made 100 percent from scratch, with whole foods. When McNamara moved away from home, though, she found herself too busy to prepare from-scratch meals, between working full time and raising two kids. Like most Americans, she relied on boxed brownie mix, canned soup, bottled dressings, and frozen dinners to make home cooking quicker and cheaper. But she soon learned that these so-called shortcuts were in fact both more expensive and light-years less healthy than simply making everything herself. Eventually, she’d had enough and vowed to remake her kitchen into a from-scratch kitchen. Now, five years later, McNamara has helped hundreds of thousands of home cooks prepare from-scratch meals with whole-food ingredients through her blog, Simply Scratch. McNamara’s highly anticipated debut cookbook, Simply Scratch, brings her home-cooking know-how to the nation, with 120 wholesome, tasty recipes along with stunning photography, entertaining anecdotes, and personal musings. This book offers easy recipes for delectable concoctions such as Buckwheat Pancakes, Veggie Pesto Pizza, Creamy Roasted Tomato Soup, and Fudy Chocolate Toffee-Topped Brownies. Simply Scratch will be the must-have bible to cooking beyond

the box and can. Featuring a down-to-earth approach and family recipes that use everyday ingredients, Simply Scratch proves cooking from scratch can be affordable, simple, fun, and—of course—absolutely delicious.

Plows, Plagues, and Petroleum

An insider account of how scientists unraveled the mystery of the thawing Arctic In the 1990s, researchers in the Arctic noticed that floating summer sea ice had begun receding. This was accompanied by shifts in ocean circulation and unexpected changes in weather patterns throughout the world. The Arctic's perennially frozen ground, known as permafrost, was warming, and treeless tundra was being overtaken by shrubs. What was going on? Brave New Arctic is Mark Serreze's riveting firsthand account of how scientists from around the globe came together to find answers. In a sweeping tale of discovery spanning three decades, Serreze describes how puzzlement turned to alarm as researchers concluded that the Arctic is rapidly thawing due to climate change—and humans are to blame.

The Future History of the Arctic

Book 1

Beyond Global Warming

Animal Tracks of Nevada and the Great Basin

The impact on climate from 200 years of industrial development is an everyday fact of life, but did humankind's active involvement in climate change really begin with the industrial revolution, as commonly believed? Plows, Plagues, and Petroleum has sparked lively scientific debate since it was first published--arguing that humans have actually been changing the climate for some 8,000 years--as a result of the earlier discovery of agriculture. The "Ruddiman Hypothesis" will spark intense debate. We learn that the impact of farming on greenhouse-gas levels, thousands of years before the industrial revolution, kept our planet notably warmer than if natural climate cycles had prevailed--quite possibly forestalling a new ice age. Plows, Plagues, and Petroleum is the first book to trace the full historical sweep of human interaction with Earth's climate. Ruddiman takes us through three broad stages of human history: when nature was in control; when humans began to take control, discovering agriculture and affecting climate through carbon dioxide and methane emissions; and, finally, the more recent human impact on climate change. Along the way he raises the fascinating possibility that plagues, by depleting human populations, also affected reforestation and thus climate--as suggested by dips in greenhouse gases when major pandemics have occurred. While our massive usage of fossil fuels has certainly contributed to modern climate change, Ruddiman shows that industrial growth is only part of the picture. The book concludes by looking to the future and critiquing the impact of special interest money on the global warming debate. In the afterword, Ruddiman explores the main challenges posed to his hypothesis, and shows how recent investigations and findings ultimately strengthen the book's original claims.

Twenty Thousand Leagues Under the Sea

The new Second Edition of Glacial Geology provides a modern, comprehensive summary of glacial geology and geomorphology. It is has been thoroughly revised and updated from the original First Edition. This book will appeal to all students interested in the landforms and sediments that make up glacial landscapes. The aim of the book is to outline glacial landforms and sediments and to provide the reader with the tools required to interpret glacial landscapes. It describes how glaciers work and how the processes of glacial erosion and deposition which operate within them are recorded in the glacial landscape. The Second Edition is presented in the same clear and concise format as the First Edition, providing detailed explanations that are not cluttered with unnecessary detail. Additions include a new chapter on Glaciations around the Globe, demonstrating the range of glacial environments present on Earth today and a new chapter on Palaeoglaciology, explaining how glacial landforms and sediments are used in ice-sheet reconstructions. Like the original book, text boxes are used throughout to explain key concepts and to introduce students to case study material from the glacial literature. Newly updated sections on Further Reading are also included at the end of each chapter to point the reader towards key references. The book is illustrated throughout with colour photographs and illustrations.

Geomorphology in the Anthropocene

Various combinations of commercially available technologies could greatly reduce fuel consumption in passenger cars, sport-utility vehicles, minivans, and other light-duty vehicles without compromising vehicle performance or safety. Assessment of Technologies for Improving Light Duty Vehicle Fuel Economy estimates the potential fuel savings and costs to consumers of available technology combinations for three types of engines: spark-ignition gasoline, compression-ignition diesel, and hybrid. According to its estimates, adopting the full combination of improved technologies in medium and large cars and pickup trucks with spark-ignition engines could reduce fuel consumption by 29 percent at an additional cost of $2,200 to the consumer. Replacing spark-ignition engines with diesel engines and components would yield fuel savings of about 37 percent at an added cost of approximately $5,900 per vehicle, and replacing spark-ignition engines with hybrid engines and components would reduce fuel consumption by 43 percent at an increase of $6,000 per vehicle. The book focuses on fuel consumption--the amount of fuel consumed in a given driving distance--because energy savings are directly related to the amount of fuel used. In contrast, fuel economy measures how far a vehicle will travel with a gallon of fuel. Because fuel consumption data indicate money saved on fuel purchases and reductions in carbon dioxide emissions, the book finds that vehicle stickers should provide consumers with fuel consumption data in addition to fuel economy information.

The Sun's Influence on Climate

A new edition of the book that launched Elizabeth Kolbert's career as an environmental writer-updated with three new chapters, making it, yet again, "irreplaceable" (Boston Globe). Elizabeth Kolbert's environmental classic Field

Notes from a Catastrophe first developed out of a groundbreaking, National Magazine Award-winning three-part series in The New Yorker. She expanded it into a still-concise yet richly researched and damning book about climate change: a primer on the greatest challenge facing the world today. But in the years since, the story has continued to develop; the situation has become more dire, even as our understanding grows. Now, Kolbert returns to the defining book of her career. She has added a chapter bringing things up-to-date on the existing text, plus three new chapters--on ocean acidification, the tar sands, and a Danish town that's gone carbon neutral--making it, again, a must-read for our moment.

The Book of 365

The Global Carbon Cycle is a short introduction to this essential geochemical driver of the Earth's climate system, written by one of the world's leading climate-science experts. In this one-of-a-kind primer, David Archer engages readers in clear and simple terms about the many ways the global carbon cycle is woven into our climate system. He begins with a concise overview of the subject, and then looks at the carbon cycle on three different time scales, describing how the cycle interacts with climate in very distinct ways in each. On million-year time scales, feedbacks in the carbon cycle stabilize Earth's climate and oxygen concentrations. Archer explains how on hundred-thousand-year glacial/interglacial time scales, the carbon cycle in the ocean amplifies climate change, and how, on the human time scale of decades, the carbon cycle has been dampening climate change by absorbing fossil-fuel carbon dioxide into the oceans and land biosphere. A central question of the book is whether the carbon cycle could once again act to amplify climate change in centuries to come, for example through melting permafrost peatlands and methane hydrates. The Global Carbon Cycle features a glossary of terms, suggestions for further reading, and explanations of equations, as well as a forward-looking discussion of open questions about the global carbon cycle.

South to the Naktong, North to the Yalu

Soon to be a major motion picture! Now in Paperback: The harrowing adventure-at-sea memoir ("Terrific."-Daniel James Brown) recounting the 2013 search-and-rescue mission for lost Montauk fisherman John Aldridge. 5:14 a.m. I am floating in the middle of the night, and nobody in the world even knows I am missing. Nobody is looking for me. You can't get more alone than that. You can't be more lost. I've got too many people who love me. There's no way I'm dying like this. In the dead of night on July 24, 2013, John Aldridge was thrown off the back of the Anna Mary while his fishing partner, Anthony Sosinski, slept below. As desperate hours ticked by, Sosinski, the families, the local fishing community, and the U.S. Coast Guard in three states mobilized in an unprecedented search effort that culminated in a rare and exhilarating success. A tale of survival, perseverance, and community, A Speck in the Sea tells of one man's struggle to survive as friends and strangers work to bring him home. Aldridge's wrenching first-person account intertwines with the narrative of the massive, constantly evolving rescue operation designed to save him.

Brave New Arctic

The #1 international bestseller on climate change that's been endorsed by policy makers, scientists, writers and energy executives around the world. Tim Flannery's The Weather Makers contributed in bringing the topic of global warming to worldwide prominence. For the first time, a scientist provided an accessible and comprehensive account of the history, current status, and future impact of climate change, writing what has been acclaimed by reviewers everywhere as the definitive book on global warming. With one out of every five living things on this planet committed to extinction by the levels of greenhouse gases that will accumulate in the next few decades, we are reaching a global climatic tipping point. The Weather Makers is both an urgent warning and a call to arms, outlining the history of climate change, how it will unfold over the next century, and what we can do to prevent a cataclysmic future. Originally somewhat of a global warming skeptic, Tim Flannery spent several years researching the topic and offers a connect-the-dots approach for a reading public who has received patchy or misleading information on the subject. Pulling on his expertise as a scientist to discuss climate change from a historical perspective, Flannery also explains how climate change is interconnected across the planet. This edition includes a new afterword by the author. "An authoritative, scientifically accurate book on global warming that sparkles with life, clarity, and intelligence." —The Washington Post

Paleoclimate

Recently voted the greatest fantasy of all time, after The Lord of the Rings and The Hobbit, Gene Wolfe's The Book of the New Sun is an extraordinary epic, set a million years in the future, on an Earth transformed in mysterious and wondrous ways, in a time when our present culture is no longer even a memory. Severian, the central character, is a torturer, exiled from his guild after falling in love with one of his victims, and journeying to the distant city of Thrax, armed with his ancient executioner's sword, Terminus Est. This edition contains the second two volumes of this four volume novel, The Sword of the Lictor and The Citadel of the Autarch.

Paleoclimatology

Archer's Global Warming: Understanding the Forecast 2nd Edition, is the first real text to present the science and policy surrounding climate change at the right level. Accompanying videos, simulations and instructional support makes it easier to build a syllabus to improve and create new material on climate change. Archer's polished writing style makes the text entertaining while the improved pedagogy helps better understand key concepts, ideas and terms. This edition has been revised and reformulated with a new chapter template of short chapter introductions, study questions at the end, and critical thinking puzzlers throughout. Also a new asset for the BCS was created that will give ideas for assignments and topics for essays and other projects. Furthermore, a number of interactive models have been built to help understand the science and systems behind the processes.

The Weather Makers

Will enhance the physical abilities required to perform Spec Ops mission-related

physical tasks, promote long-term cardiovascular health and physical fitness, prevent injuries, accelerate return to duty, and maintain physical readiness under deployed or embarked environments. Includes an overview of physical fitness and addresses: SEAL mission-related physical activities, cardiorespiratory conditioning, running, swimming, strength training, flexibility, calisthenics, load-bearing, training for specific environments, training and sports related injuries, harmful substances that affect training, etc. Illustrated.

The Two-Mile Time Machine

Navy Seal Physical Fitness Guide

'Earth's Climate' summarises the major lessons to be learned from 550 million years of climate changes, as a way of evaluating the climatological impact on and by humans in this century. The book also looks ahead to possible effects during the next several centuries of fossil fuel use.

The White Planet

Ever wondered how many dimples there are on a golf ball; or why the shipping forecast is broadcast on 198 kHz long wave? Find yourself puzzling over what is really going on in the 273 seconds of John Cage’s most famous composition? Then this book of mind-boggling number facts is for you. The Book of 365 offers an entertaining and thought-provoking mini-essay on the world around us for every day of the year, each taking a number between 1 and 365 as its starting point, encompassing science, history, art, literature, medicine, and popular culture, and covering topics as diverse as modern music and meteorites, archaeology and chilli sauce, un-birthdays and radio valve technology. On the way, uncover: At 5, the pentaradial symmetry of starfish and roses At 34, how the US flag got its stars and stripes At 99, the mysteries of the 99 ice-cream At 239, where Sherlock Holmes really lived And, in honour of the leap year, at the end of the book there is a bonus 366th essay!

Global Warming

In the 1990s Richard B. Alley and his colleagues made headlines with the discovery that the last ice age came to an abrupt end over a period of only three years. In The Two-Mile Time Machine, Alley tells the fascinating history of global climate changes as revealed by reading the annual rings of ice from cores drilled in Greenland. He explains that humans have experienced an unusually temperate climate compared to the wild fluctuations that characterized most of prehistory. He warns that our comfortable environment could come to an end in a matter of years and tells us what we need to know in order to understand and perhaps overcome climate changes in the future. In a new preface, the author weighs in on whether our understanding of global climate change has altered in the years since the book was first published, what the latest research tells us, and what he is working on next.

The Two-Mile Time Machine

A gripping journey through the icy regions of our changing planet From the Arctic Ocean and ice sheets of Greenland, to the glaciers of the Andes and Himalayas, to the great frozen desert of Antarctica, The White Planet takes readers on a spellbinding scientific journey through the shrinking world of ice and snow to tell the story of the expeditions and discoveries that have transformed our understanding of global climate. Written by three internationally renowned scientists at the center of many breakthroughs in ice core and climate science, this book provides an unparalleled firsthand account of how the "white planet" affects global climate—and how, in turn, global warming is changing the frozen world. Jean Jouzel, Claude Lorius, and Dominique Raynaud chronicle the daunting scientific, technical, and human hurdles that they and other scientists have had to overcome in order to unravel the mysteries of past and present climate change, as revealed by the cryosphere--the dynamic frozen regions of our planet. Scientifically impeccable, up-to-date, and accessible, The White Planet brings cutting-edge climate research to general readers through a vivid narrative. This is an essential book for anyone who wants to understand the inextricable link between climate and our planet's icy regions.

The Dead Zone

Climate change is a major topic of concern today, scientifically, socially, and politically. It will undoubtedly continue to be so for the foreseeable future, as predicted changes in global temperatures, rainfall, and sea level take place, and as human society adapts to these changes. In this remarkable new work, Jan Zalasiewicz and Mark Williams demonstrate how the Earth's climate has continuously altered over its 4.5 billion-year history. The story can be read from clues preserved in the Earth's strata - the evidence is abundant, though always incomplete, and also often baffling, puzzling, infuriating, tantalizing, seemingly contradictory. Geologists, though, are becoming ever more ingenious at interrogating this evidence, and the story of the Earth's climate is now being reconstructed in ever-greater detail - maybe even providing us with clues to the future of contemporary climate change. The history is dramatic and often abrupt. Changes in global and regional climate range from bitterly cold to sweltering hot, from arid to humid, and they have impacted hugely upon the planet's evolving animal and plant communities, and upon its physical landscapes of the Earth. And yet, through all of this, the Earth has remained consistently habitable for life for over three billion years - in stark contrast to its planetary neighbours. Not too hot, not too cold; not too dry, not too wet, it is aptly known as 'the Goldilocks planet'.

Landscape

Did the Earth once undergo a super ice age, one that froze the entire planet? A global adventure story and a fascinating account of scientist Paul Hoffman's quest to prove his maverick 'Snowball Earth' theory, this is science writing at its most gripping. In SNOWBALL EARTH, Gabrielle Walker takes us on a thrilling natural history expedition in search of supporting evidence for the audacious theory which argues that the Earth experienced a climatic cataclysm 600 million years ago that

froze the entire planet from the poles to the equator. Because the global snowball happened so long ago the ice has now long gone - but it left its traces in rocks around the world and in order to see the evidence, Walker visited such places as Australia, Namibia, South Africa and Death Valley, USA. Part adventure story and part travel book, it's a tale of the ultimate human endeavour to understand our origins.

Snowball Earth

A 2008 Newbery Honor Book In this Newbery Honor-winning novel, Gary D. Schmidt offers an unforgettable antihero. The Wednesday Wars is a wonderfully witty and compelling story about a teenage boy’s mishaps and adventures over the course of the 1967–68 school year in Long Island, New York. Meet Holling Hoodhood, a seventh-grader at Camillo Junior High, who must spend Wednesday afternoons with his teacher, Mrs. Baker, while the rest of the class has religious instruction. Mrs. Baker doesn’t like Holling—he’s sure of it. Why else would she make him read the plays of William Shakespeare outside class? But everyone has bigger things to worry about, like Vietnam. His father wants Holling and his sister to be on their best behavior: the success of his business depends on it. But how can Holling stay out of trouble when he has so much to contend with? A bully demanding cream puffs; angry rats; and a baseball hero signing autographs the very same night Holling has to appear in a play in yellow tights! As fate sneaks up on him again and again, Holling finds Motivation—the Big M—in the most unexpected places and musters up the courage to embrace his destiny, in spite of himself.

CPO Focus on Physical Science

In this age of instant communication and biotechnology, on this ever-smaller planet, what kinds of problems have we created for ourselves? How do we tackle them in a world where the accustomed methods used by nation-states may be reaching their natural limits?In High Noon, J. F. Rischard challenges us to take a new approach to the twenty most important and urgent global problems of the twenty-first century. Rischard finds their common thread: we don't have an effective way of dealing with the problems that our increasingly crowded, interconnected world creates. Our difficulties belong to the future, but our means of solving them belong to the past.Rischard proposes new vehicles for global problem-solving that are startling and persuasive. With its clear-eyed urgency and refreshing specificity, High Noon is an agenda-setting book that everyone who cares about the future must read.

Glacial Geology

Long at the margins of global affairs and at the edge of our mental map of the world, the Arctic has found its way to the center of the issues which will challenge and define our world in the twenty-first century: energy security and the struggle for natural resources, climate change and its uncertain speed and consequences, the return of great power competition, the remaking of global trade patterns… In The Future History of the Arctic, geopolitics expert Charles Emmerson weaves

together the history of the region with reportage and reflection, revealing a vast and complex area of the globe, loaded with opportunity and rich in challenges. He defines the forces which have shaped the Arctic's history and introduces the players in politics, business, science and society who are struggling to mold its future. The Arctic is coming of age. This engrossing book tells the story of how that is happening and how it might happen—through the stories of those who live there, those who study it, and those who will determine its destiny.

A First Course in Atmospheric Radiation

In recent years, scientists have begun to focus on the idea that healthy, functioning ecosystems provide essential services to human populations, ranging from water purification to food and medicine to climate regulation. Lacking a healthy environment, these services would have to be provided through mechanical means, at a tremendous economic and social cost.Nature and the Marketplace examines the controversial proposition that markets should be designed to capture the value of those services. Written by an economist with a background in business, it evaluates the real prospects for various of nature's marketable services to "turn profits" at levels that exceed the profits expected from alternative, ecologically destructive, business activities. The author: describes the infrastructure that natural systems provide, how we depend on it, and how we are affecting it explains the market mechanism and how it can lead to more efficient resource use looks at key economic activities -- such as ecotourism, bioprospecting, and carbon sequestration -- where market forces can provide incentives for conservation examines policy options other than the market, such as pollution credits and mitigation banking considers the issue of sustainability and equity between generations .Nature and the Marketplace presents an accessible introduction to the concept of ecosystem services and the economics of the environment. It offers a clear assessment of how market approaches can be used to protect the environment, and illustrates that with a number of cases in which the value of ecosystems has actually been captured by markets.The book offers a straightforward business economic analysis of conservation issues, eschewing romantic notions about ecosystem preservation in favor of real-world economic solutions. It will be an eye-opening work for professionals, students, and scholars in conservation biology, ecology, environmental economics, environmental policy, and related fields.

A Speck in the Sea

The Global Carbon Cycle

An textbook for advanced undergraduate and graduate atmospheric science and meteorology students. Although this book addresses a technically and mathematically demanding subject, the writing style is designed to be engaging and accessible for students requiring a basic foundation in atmospheric physics.

Nature and the Marketplace

The Earth's climate system depends entirely on the Sun for its energy. Solar radiation warms the atmosphere and is fundamental to atmospheric composition, while the distribution of solar heating across the planet produces global wind patterns and contributes to the formation of clouds, storms, and rainfall. The Sun's Influence on Climate provides an unparalleled introduction to this vitally important relationship. This accessible primer covers the basic properties of the Earth's climate system, the structure and behavior of the Sun, and the absorption of solar radiation in the atmosphere. It explains how solar activity varies and how these variations affect the Earth's environment, from long-term paleoclimate effects to century timescales in the context of human-induced climate change, and from signals of the 11-year sunspot cycle to the impacts of solar emissions on space weather in our planet's upper atmosphere. Written by two of the leading authorities on the subject, The Sun's Influence on Climate is an essential primer for students and nonspecialists alike.

The Goldilocks Planet

Raymond S. Bradley provides his readers with a comprehensive and up-to-date review of all of the important methods used in paleoclimatic reconstruction, dating and paleoclimate modeling. Two comprehensive chapters on dating methods provide the foundation for all paleoclimatic studies and are followed by up-to-date coverage of ice core research, continental geological and biological records, pollen analysis, radiocarbon dating, tree rings and historical records. New methods using alkenones in marine sediments and coral studies are also described. Paleoclimatology, Second Edition, is an essential textbook for advanced undergraduate and postgraduate students studying climatology, paleoclimatology and paleooceanography worldwide, as well as a valuable reference for lecturers and researchers, appealing to archaeologists and scientists interested in environmental change. * Contains two up-to-date chapters on dating methods * Consists of the latest coverage of ice core research, marine sediment and coral studies, continental geological and biological records, pollen analysis, tree rings, and historical records * Describes the newest methods using alkenones in marine sediments and long continental pollen records * Addresses all important methods used in paleoclimatic reconstruction * Includes an extensive chapter on the use of models in paleoclimatology * Extensive and up-to-date bibliography * Illustrated with numerous comprehensive figure captions