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100 Brain-Friendly Lessons for Unforgettable Teaching and Learning (9-12) *Simon & Schuster Super Crossword Puzzle Dictionary And Reference Book* **Wave Motion as Inquiry** *The Design and Engineering of Curiosity Building Electro-Optical Systems* *Gravity and Gravitation* *Discover Electronics & Wireless World* **Schrödinger's Killer App** **Beginning Unreal Game Development** **Cardiovascular Physiology Concepts** *Handbook of Emerging Communications Technologies* **The Psychology of Entertainment Media** *An Introduction to the Solar System* *Synthesizer Technique* **Radar Array Processing** *Magnetohydrodynamic Modeling of the Solar Corona and Heliosphere* *Pressure and Temperature Sensitive Paints* **Case Studies in Science Education: The case reports** *The Dragon and the Dazzle* **Unity Game Development in 24 Hours, Sams Teach Yourself** **The Turbine Pilot's Flight Manual** **Numerical Analysis or Numerical Method in Symmetry** *Car and Driver Understanding Physiotherapy Research* *The Simple Flute* *Radar Techniques Using Array Antennas* *The Sun, Stars, and Galaxies* **Senior Physics** *Clinical Neuro-Ophthalmology* **Guide to Graphics Software Tools** **Encyclopedia of Espionage, Intelligence, and Security: A-E** *The Complete Idiot's Guide to Improving Your I.Q.* **New Century Senior Physics** **Electronics For Dummies** *The Good Earth* **Moons and Rings** **Making Ghostbusters** **The True Wireless** **How I Accidentally Started the Sixties**

The Turbine Pilot's Flight Manual Jan 13 2021 Extensive animation and clear narration highlight this first-of-its-kind CD-ROM. It shows all major systems of jet and turboprop aircraft and how they work. Ideal for self-instruction, classroom instruction or just the curious at heart.

The Sun, Stars, and Galaxies Jul 07 2020 Most avid sky gazers wait until nightfall to catch a glimpse of the stars that are scattered across the heavens. The fact of the matter is that one needs only to feel the Sun's rays in order to experience the presence of a star. The Sun is an ordinary star, a ball of hot gas much like millions of others in the universe, but as the center of the solar system, it is critical to the survival of all life forms on Earth. This comprehensive volume examines the nature of the Sun and details the properties and types of various stars, as well as the greater galaxies of which they are a part.

Discover Apr 27 2022

Wave Motion as Inquiry Sep 01 2022 This undergraduate textbook on the physics of wave motion in optics and acoustics avoids presenting the topic abstractly in order to emphasize real-world examples. While providing the needed scientific context, Dr. Espinoza also relies on students' own experience to guide their learning. The book's exercises and labs strongly emphasize this inquiry-based approach. A strength of inquiry-based courses is that the students maintain a higher level of engagement when they are studying a topic that they have an internal motivation to know, rather than solely following the directives of a professor. "Wave Motion" takes those threads of engagement and interest and weaves them into a coherent picture of wave phenomena. It demystifies key components of life around us--in music, in technology, and indeed in everything we perceive--even for those without a strong math background, who might otherwise have trouble approaching the subject matter.

Building Electro-Optical Systems Jun 29 2022 Praise for the First Edition "Now a new laboratory bible for optics researchers has joined the list: it is Phil Hobbs's Building Electro-Optical Systems: Making It All Work." —Tony Siegman, *Optics & Photonics News* Building a modern electro-optical instrument may be the most interdisciplinary job in all of engineering. Be it a DVD player or a laboratory one-off, it involves physics, electrical engineering, optical engineering, and computer science interacting in complex ways. This book will help all kinds of technical people sort through the complexity and build electro-optical systems that just work, with maximum insight and minimum trial and error. Written in an engaging and conversational style, this Second Edition has been updated and expanded over the previous edition to reflect technical advances and a great many conversations with working designers. Key features of this new edition include: Expanded coverage of detectors, lasers, photon budgets, signal processing scheme planning, and front ends Coverage of everything from basic theory and measurement principles to design debugging and integration of optical and electronic systems Supplementary material is available on an ftp site, including an additional chapter on thermal Control and Chapter problems highly relevant to real-world design Extensive coverage of high performance optical detection and laser noise cancellation Each chapter is full of useful lore from the author's years of experience building advanced instruments. For more background, an appendix lists 100 good books in all relevant areas, introductory as well as advanced. Building Electro-Optical Systems: Making It All Work, Second Edition is essential reading for researchers, students, and professionals who have systems to build.

Schrödinger's Killer App Feb 23 2022 The race is on to construct the first quantum code breaker, as the winner will hold the key to the entire Internet. From international, multibillion-dollar financial transactions to top-secret government communications, all would be vulnerable to the secret-code-breaking ability of the quantum computer. Written by a renowned quantum physicist closely involved in the U.S. government's development of quantum information science, Schrödinger's Killer App: Race to Build the World's First Quantum Computer presents an inside look at the government's quest to build a quantum computer capable of solving complex mathematical problems and hacking the public-key encryption codes used to secure the Internet. The "killer application" refers to Shor's quantum factoring algorithm, which would unveil the encrypted communications of the entire Internet if a quantum computer could be built to run the algorithm. Schrödinger's notion of quantum entanglement—and his infamous cat—is at the heart of it all. The book develops the concept of entanglement in the historical context of Einstein's 30-year battle with the physics community over the true meaning of quantum theory. It discusses the remedy to the threat posed by the quantum code breaker: quantum cryptography, which is unbreakable even by the quantum computer. The author also covers applications to other important areas, such as quantum physics simulators, synchronized clocks, quantum search engines, quantum sensors, and imaging devices. In addition, he takes readers on a philosophical journey that considers the future ramifications of quantum technologies. Interspersed with amusing and personal anecdotes, this book presents quantum computing and the closely connected foundations of quantum mechanics in an engaging manner accessible to non-specialists. Requiring no formal training in physics or advanced mathematics, it explains difficult topics, including quantum entanglement, Schrödinger's cat, Bell's inequality, and quantum computational complexity, using simple analogies.

Synthesizer Technique Aug 20 2021 inch....this work is likely to become a standart work very quickly and is to be recommended to all schools where recorder studies are undertaken inch. (Oliver James,Contact Magazine) A novel and comprehensive approach to transferring from the C to F instrument. 430 music examples include folk and national songs (some in two parts), country dance tunes and excerpts from the standard treble repertoire of•Bach, Barsanti, Corelli, Handel, Telemann, etc. An outstanding feature of the book has proved to be Brian Bonsor's brilliantly simple but highly effective practice circles and recognition squares designed to give, in only a few minutes, concentrated practice on the more usual leaps to and from each new note and instant recognition of random notes. Quickly emulating the outstanding success of the descant tutors, these books are very popular even with those who normally use tutors other than the Enjoy the Recorder series.

The True Wireless Jul 27 2019 Nikola Tesla was a genius who revolutionized how the world looks at electricity.

Handbook of Emerging Communications Technologies Nov 22 2021 Communication technologies change the way we live our lives-the ways we communicate and share information, the news, and our entertainment. The new millennium promises to bring some of the most volatile activity in the history of communications, as we continue to be bombarded by new standards and technologies. The near frenzy of corporate mergers and acquisitions accelerates

technological development and can provide hints of what is to come. With the rapid appearance of new protocols, standards, and tools, it becomes increasingly difficult -and increasingly important-for communications professionals to remain up-to-date on new and emerging technologies. The Handbook of Emerging Communications Technologies: The Next Decade fills this gap. Until now, information on many of its topics, such as Multiprotocol over ATM, IP Multicasting, and RSVP, existed only as fragmented articles on the Internet or as complex feature specifications. In this landmark volume, 18 leading authorities each tackle one of the cutting edge technologies destined to shape the future. Each chapter Describes a technology and any standards on which it is based Discusses its impact on the communications field Forecasts its future direction Developed primarily for telecommunications specialists network managers, developers, and analysts, the Handbook of Emerging Communications Technologies: The Next Decade, offers the opportunity to acquire a deeper understanding of future technologies necessary to remaining current, and serves as a valuable reference guide for corporate executives, planners, and information managers-anyone seeking general knowledge about where the communications industry is heading.

The Complete Idiot's Guide to Improving Your I.Q. Jan 31 2020 You're no idiot, of course. You've read a few books and can hold your own in a room full of university professors. But when it comes to problem-solving and understanding complex theories and facts, you feel like your brain is going to explode. Don't reach for the aspirin just yet! The Complete Idiot's Guide to Improving Your IQ unlocks the secrets of you brain and teaches you how to whip those sparking synapses into shape.

Beginning Unreal Game Development Jan 25 2022 Get started creating video games using Unreal Engine 4 (UE4) and learning the fundamentals of game development. Through hands-on, step-by-step tutorials, you will learn to design engaging environments and a build solid foundation for more complex games. Discover how to utilize the 3D game design software behind the development of immensely popular games for PC, console, and mobile. Beginning Unreal Game Development steers you through the fundamentals of game development with UE4 to design environments that both engage the player and are aesthetically pleasing. Author David Nixon shows you how to script logic, define behaviors, store data, and create characters. You will learn to create user interfaces, such as menus, load screens, and head-up displays (HUDs), and manipulate audio to add music, sound effects, and dialogue to your game. The book covers level editors, actor types, blueprints, character creation and control, and much more. Throughout the book, you'll put theory into practice and create an actual game using a series of step-by-step tutorials. With a clear, step-by-step approach, Beginning Unreal Game Development builds up your knowledge of Unreal Engine 4 so you can start creating and deploying your own 3D video games in no time. What You Will Learn Learn the fundamentals of game design Understand how to use Unreal Engine 4 Design amazing levels for your characters to play in Script logic to control the behavior of the world you create Who This Book Is For This book is for beginners with no prior game design or programming experience. It is also intended for video game enthusiasts who are brand-new to the world of game development and want to learn how to design a game from scratch using UE4.

Gravity and Gravitation May 29 2022 Gravity and Gravitation is a physics book that is written in a form that is easy to understand for high school and beginning college students, as well as science buffs. It is based on the lessons from the School for Champions educational website. The book explains the principles of gravity and gravitation, shows derivations of important gravity equations, and provides applications of those equations. It also compares the different theories of gravitation, from those of Newton to Einstein to present-day concepts.

Cardiovascular Physiology Concepts Dec 24 2021 Praised for its concise coverage, this highly accessible monograph lays a foundation for understanding the underlying concepts of normal cardiovascular function and offers a welcome alternative to a more mechanistically oriented approach or an encyclopedic physiology text. Clear explanations, ample illustrations and engaging clinical cases and problems provide the perfect guidance for self-directed learning and prepare you to excel in clinical practice.

Making Ghostbusters Aug 27 2019 The script for the movie, Ghostbusters, is accompanied by discussions of its filming, actors, and special effects

An Introduction to the Solar System Sep 20 2021 Updated third edition introduces undergraduates to the Solar System's bodies, the processes upon and within them, and their origins and evolution.

100 Brain-Friendly Lessons for Unforgettable Teaching and Learning (9-12) Nov 03 2022 Use research- and brain-based teaching to engage students and maximize learning Lessons should be memorable and engaging. When they are, student achievement increases, behavior problems decrease, and teaching and learning are fun! In 100 Brain-Friendly Lessons for Unforgettable Teaching and Learning 9-12, best-selling author and renowned educator and consultant Marcia Tate takes her bestselling Worksheets Don't Grow Dendrites one step further by providing teachers with ready-to-use lesson plans that take advantage of the way that students really learn. Readers will find 100 cross-curricular sample lessons from each of the eight major content areas: Earth Science, Life Science, Physical Science, English, Finance, Algebra, Geometry, Social Studies Plans designed around the most frequently taught objectives found in national and international curricula. Lessons educators can immediately replicate in their own classrooms or use to develop their own. 20 brain-compatible, research-based instructional strategies that work for all learners. Five questions that high school teachers should ask and answer when planning brain-compatible lessons and an in-depth explanation of each of the questions. Guidance on building relationships with students that enable them to learn at optimal levels. It is a wonderful time to be a high school teacher! This hands-on resource will show you how to use what we know about educational neuroscience to transform your classroom into a place where success is accessible for all.

The Dragon and the Dazzle Mar 15 2021 Marco Pellitteri examines the growing influence of Japanese pop culture in European contexts in this comprehensive study of manga, anime, and video games. Looking at the period from 1975 to today, Pellitteri discusses Super Mario, Pokémon, kawaii, Sonic, robots and cyborgs, Astro Boy, and Gundam, among other examples of these popular forms. Pellitteri divides this period into two eras ("the dragon" and "the dazzle") to better understand this cultural phenomenon and means by which it achieved worldwide distribution.

Understanding Physiotherapy Research Oct 10 2020 Understanding Physiotherapy Research by Littlewood and May is an introductory level text that aims to be accessible and understandable to all physiotherapists who appreciate the need to integrate research evidence into their practice. The requirement for physiotherapists to engage with evidence-based practice has never been more apparent and the benefits of such an approach are clear. Evidence derived from research is a cornerstone of evidence-based practice, but before such evidence can be incorporated into an evidence-based paradigm, it should be appraised and its trustworthiness and applicability considered. This means that evidence-based physiotherapy practitioners need to be aware of the inherent strengths and limitations of research studies and what these mean for their practice. However, this is not always a straightforward process and it is not uncommon for both novice and experienced physiotherapists to become lost in the language of research. To facilitate the evolution of evidence-based physiotherapy practice, this book aims to bridge the gap by presenting a clinically focused range of methodological discussions in relation to specific research study designs in physiotherapy. The intention of the book is to offer a platform upon which readers can develop their understanding of meaningful critical appraisal and consequently gain confidence when reading published research.

Case Studies in Science Education: The case reports Apr 15 2021

The Simple Flute Sep 08 2020 Drawing from his highly praised French work, Une simple flute, distinguished flutist and teacher Michel Debost has compiled a useful and imaginative introduction to playing the flute. This alphabetically arranged compendium of advice and insight covers essential topics such as breathing, articulation, and tone, but also explores "jawboning," "finger phrasing," "the little devils," and other quirky and vexing aspects of flute playing. Full of practical advice on technique and axioms that lend moral support during tough practice sessions, The Simple Flute will be a welcome addition to any serious or novice flutist's library. In addition, the book includes original exercises such as "Debost's Scale Game," making it an excellent resource for flute teachers. Debost concludes each essay with "In a nutshell" and "Please refer to" boxes that make the book easy to browse, dog-ear, and return to again and again. Offering concise, common-sense solutions for flutists of all levels, this book is an ideal reference guide on flute performance.

Pressure and Temperature Sensitive Paints May 17 2021 Luminescent molecule sensors, called pressure-sensitive paint (PSP) and temperature-sensitive paint (TSP), measure factors essential for understanding the aerodynamic performance and heat transfer characteristics of flight vehicles. They provide a powerful tool for experimental aerodynamicists to obtain a deeper understanding of the rich physical phenomena in complex flows around a flight vehicle. This book helps the reader to understand the physics and chemistry and the capabilities of PSP and TSP. It provides an overview of the wide scope of applications and explains the system requirements for using these sensors. The book also includes an extensive table of properties of PTP and TSP. As such, it is a thorough and up-to-date coverage of the underlying physics and applications of luminescent molecules designed for global pressure and

temperature mapping

Numerical Analysis or Numerical Method in Symmetry Dec 12 2020 This Special Issue focuses mainly on techniques and the relative formalism typical of numerical methods and therefore of numerical analysis, more generally. These fields of study of mathematics represent an important field of investigation both in the field of applied mathematics and even more exquisitely in the pure research of the theory of approximation and the study of polynomial relations as well as in the analysis of the solutions of the differential equations both ordinary and partial derivatives. Therefore, a substantial part of research on the topic of numerical analysis cannot exclude the fundamental role played by approximation theory and some of the tools used to develop this research. In this Special Issue, we want to draw attention to the mathematical methods used in numerical analysis, such as special functions, orthogonal polynomials, and their theoretical tools, such as Lie algebra, to study the concepts and properties of some special and advanced methods, which are useful in the description of solutions of linear and nonlinear differential equations. A further field of investigation is dedicated to the theory and related properties of fractional calculus with its adequate application to numerical methods.

The Psychology of Entertainment Media Oct 22 2021 First Published in 2012. Routledge is an imprint of Taylor & Francis, an informa company.

The Design and Engineering of Curiosity Jul 31 2022 This book describes the most complex machine ever sent to another planet: Curiosity. It is a one-ton robot with two brains, seventeen cameras, six wheels, nuclear power, and a laser beam on its head. No one human understands how all of its systems and instruments work. This essential reference to the Curiosity mission explains the engineering behind every system on the rover, from its rocket-powered jetpack to its radioisotope thermoelectric generator to its fiendishly complex sample handling system. Its lavishly illustrated text explains how all the instruments work -- its cameras, spectrometers, sample-cooking oven, and weather station -- and describes the instruments' abilities and limitations. It tells you how the systems have functioned on Mars, and how scientists and engineers have worked around problems developed on a faraway planet: holey wheels and broken focus lasers. And it explains the grueling mission operations schedule that keeps the rover working day in and day out.

Moons and Rings Sep 28 2019 Discusses the moons and rings associated with various planets in the solar system including Earth's moon, Saturn's rings, and others.

Senior Physics Jun 05 2020 Text for the new Queensland Senior Physics syllabus. Provides examples, questions, investigations and discussion topics. Designed to be gender balanced, with an emphasis on library and internet research. Includes answers, a glossary and an index. An associated internet web page gives on-line worked solutions to questions and additional resource material. The authors are experienced physics teachers and members of the Physics Syllabus Sub-Committee of the Queensland BSSSS.

Clinical Neuro-Ophthalmology May 05 2020 This book covers all relevant techniques of diagnosis as well as interpretations of clinical signs in Clinical Neuro-Ophthalmology. All information is highly structured, highlighting 'definition', 'note' and 'pearl', so that it can also be used by the physician during the patient encounter. The included flow chart posters remind the physician of the most important information. This unique and practical guide offers invaluable and practical advice for physicians treating patients with neuro-ophthalmic problems.

Radar Array Processing Jul 19 2021 Radar Array Processing presents modern techniques and methods for processing radar signals received by an array of antenna elements. With the recent rapid growth of the technology of hardware for digital signal processing, it is now possible to apply this to radar signals and thus to enlist the full power of sophisticated computational algorithms. Topics covered in detail here include: super-resolution methods of array signal processing as applied to radar, adaptive beam forming for radar, and radar imaging. This book will be of interest to researchers and students in the radar community and also in related fields such as sonar, seismology, acoustics and radio astronomy.

Unity Game Development in 24 Hours, Sams Teach Yourself Feb 11 2021 In just 24 sessions of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program and many other sizzling-hot games! You'll learn everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Unity 5 game development tasks. Quizzes and Exercises at the end of each chapter help you test your knowledge. Notes present interesting information related to the discussion. Tips offer advice or show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Learn how to... Create and work with game objects, Unity's fundamental building blocks Work efficiently with Unity's graphical asset pipeline Apply shaders and textures to any 3D object Sculpt stunning game worlds with Unity's terrain and environmental toolsets Script tasks ranging from capturing input to building complex behaviors Quickly create repeatable, reusable game objects with prefabs Implement easy, intuitive game user interfaces Create amazing effects with Unity's particle system Leverage the full power of Unity's Mecanim animation system Integrate ambient 2D/3D audio into your games Use mobile device accelerometers and multi-touch displays Modify a desktop game for mobile platforms Apply the "finishing touches" and deploy your game

Car and Driver Nov 10 2020

Magnetohydrodynamic Modeling of the Solar Corona and Heliosphere Jun 17 2021 The book covers intimately all the topics necessary for the development of a robust magnetohydrodynamic (MHD) code within the framework of the cell-centered finite volume method (FVM) and its applications in space weather study. First, it presents a brief review of existing MHD models in studying solar corona and the heliosphere. Then it introduces the cell-centered FVM in three-dimensional computational domain. Finally, the book presents some applications of FVM to the MHD codes on spherical coordinates in various research fields of space weather, focusing on the development of the 3D Solar-InterPlanetary space-time Conservation Element and Solution Element (SIP-CESE) MHD model and its applications to space weather studies in various aspects. The book is written for senior undergraduates, graduate students, lecturers, engineers and researchers in solar-terrestrial physics, space weather theory, modeling, and prediction, computational fluid dynamics, and MHD simulations. It helps readers to fully understand and implement a robust and versatile MHD code based on the cell-centered FVM.

The Good Earth Oct 29 2019 The authors emphasize three scientific themes: scientific literacy, Earth science and the human experience and the science of global change. They have included numerous examples of human interaction with the Earth that can serve as entry points for students to appreciate the nature of science.

Electronics & Wireless World Mar 27 2022

Guide to Graphics Software Tools Apr 03 2020 The 2nd edition of this integrated guide explains and lists readily available graphics software tools and their applications, while also serving as a shortcut to graphics theory and programming. It grounds readers in fundamental concepts and helps them use visualization, modeling, simulation, and virtual reality to complement and improve their work.

Electronics For Dummies Nov 30 2019 Build your electronics workbench—and begin creating fun electronics projects right away Packed with hundreds of diagrams and photographs, this book provides step-by-step instructions for experiments that show you how electronic components work, advice on choosing and using essential tools, and exciting projects you can build in 30 minutes or less. You'll get charged up as you transform theory into action in chapter after chapter! Circuit basics — learn what voltage is, where current flows (and doesn't flow), and how power is used in a circuit Critical components — discover how resistors, capacitors, inductors, diodes, and transistors control and shape electric current Versatile chips — find out how to use analog and digital integrated circuits to build complex projects with just a few parts Analyze circuits — understand the rules that govern current and voltage and learn how to apply them Safety tips — get a thorough grounding in how to protect yourself—and your electronics—from harm P.S. If you think this book seems familiar, you're probably right. The Dummies team updated the cover and design to give the book a fresh feel, but the content is the same as the previous release of *Electronics For Dummies* (9781119117971). The book you see here shouldn't be considered a new or updated product. But if you're in the mood to learn something new, check out some of our other books. We're always writing about new topics!

Radar Techniques Using Array Antennas Aug 08 2020 Wirth (senior consultant, Research Establishment for Applied Science, Germany) introduces the techniques, procedures, and concepts related to modern radar using active array antennas. Chapters cover signal representation and mathematical tools, statistical signal theory, array antennas, beamforming, sampling and digitization of signals, pulse compression with polyphase codes, detection of targets by a

pulse series, sequential detection, adaptive beamforming for jammer suppression, monopulse direction estimation, superresolution in angle, space-time adaptive processing, synthetic aperture radar with active phased arrays, inverse synthetic aperture radar, experimental phased array systems, the floodlight radar concept, and system and parameter considerations. Annotation copyrighted by Book News, Inc., Portland, OR
Simon & Schuster Super Crossword Puzzle Dictionary And Reference Book Oct 02 2022 Lists more than 200,000 words organized by letter count and synonym, and provides a reference section with lists of awards, important figures, records, and events in a variety of fields

How I Accidentally Started the Sixties Jun 25 2019 Before Timothy Leary, before free love, before the word hippie became a part of the preferred nomenclature, Howard Bloom and his band of explorers were pushing boundaries and minds. Embarking on a great journey that took him from his home in Buffalo, NY, to Washington, to California, to Israel, to New York City, along the way learning much and gaining in experience--some of that experience crushing the morals and mores of the previous generation--and most importantly, he gained insight. Bloom horrified his parents, shocked his teachers, seeking the form of spiritual enlightenment called satori, and finding sex instead. How I Accidentally Started the Sixties is the untold story of the birth of a decade.

Encyclopedia of Espionage, Intelligence, and Security: A-E Mar 03 2020 Encyclopedia of espionage, intelligence and security (GVRL)

New Century Senior Physics Jan 01 2020 New Century Senior Physics meets the global objectives of the 2007 Queensland Senior Physics syllabus in terms of Knowledge and Conceptual Understanding, Scientific Investigation and Evaluating and Concluding. All 10 key concepts of the syllabus have been developed in varied contexts along with an extensive range of mandatory and elective key ideas. Key Features: A contextual approach throughout--each chapter begins with questions, problems or situations that experienced teachers have found to spark students' interest. A familiar format allowing students to quickly find information, whatever the context they may be studying. Teachers can develop contexts of their own choosing without restriction to a narrow set of pre-chosen contexts. An easy to follow progression through focus questions to the underlying key concepts and ideas. Many and varied contextualised questions, problems and puzzles, including traditional closed-response questions as well as open-ended and stimulus-response questions - all essential for understanding. 'Novel Challenge' questions - drawn from unfamiliar situations and designed to develop the higher order thinking (HOT) skills. End-of-chapter review questions - ranging from simpler practice questions requiring straight-forward use of principles and problem-solving (one and two star difficulty) to more challenging extension questions (three stars) requiring HOT skills. A focus on the tentative nature of scientific knowledge where throughout history accidents and serendipity have gone hand-in-hand with scientific investigation. An open, 'chatty' writing style that speaks directly to students but with sufficient depth to cover information they will need for tertiary studies in science and other physics-related areas such as engineering, medical science, computing, human movement etc. Gender-balanced contexts using material drawn from boys' and girls' spheres of experience. Video-coded stimulus ideas for experimental and non-experimental investigations suggested by physics teachers throughout the state. Online Support. Visit the authors' Web Page containing on-line worked solutions to the end-of-chapter extension (challenging, complex, novel) questions and the Novel Challenge text-box questions, suggestions for Extended Experimental Investigations and hints to students who are about to undertake them, as well as a host of other resource material useful in developing a school work program. Go to seniorphysics.com and select the textbook webpage.