

## Science Focus 3 Second Edition

Business Intelligence: The Savvy Managers Guide, Second Edition, discusses the objectives and practices for designing and deploying a business intelligence (BI) program. It looks at the basics of a BI program, from the value of information and the mechanics of planning for success to data model infrastructure, data preparation, data analysis, integration, knowledge discovery, and the actual use of discovered knowledge. Organized into 21 chapters, this book begins with an overview of the kind of knowledge that can be exposed and exploited through the use of BI. It then proceeds with a discussion of information use in the context of how value is created within an organization, how BI can improve the ways of doing business, and organizational preparedness for exploiting the results of a BI program. It also looks at some of the critical factors to be taken into account in the planning and execution of a successful BI program. In addition, the reader is introduced to considerations for developing the BI roadmap, the platforms for analysis such as data warehouses, and the concepts of business metadata. Other chapters focus on data preparation and data discovery, the business rules approach, and data mining techniques and predictive analytics. Finally, emerging technologies such as text analytics and sentiment analysis are considered. This book will be valuable to data management and BI professionals, including senior and middle-level managers, Chief Information Officers and Chief Data Officers, senior business executives and business staff members, database or software engineers, and business analysts. Guides managers through developing, administering, or simply understanding business intelligence technology Keeps pace with the changes in best practices, tools, methods and processes used to transform an organization's data into actionable knowledge Contains a handy, quick-reference to technologies and terminology

Provides both rich theory and powerful applications Figures are accompanied by code required to produce them Full color figures

Forecasting is required in many situations. Stocking an inventory may require forecasts of demand months in advance. Telecommunication routing requires traffic forecasts a few minutes ahead. Whatever the circumstances or time horizons involved, forecasting is an important aid in effective and efficient planning. This textbook provides a comprehensive introduction to forecasting methods and presents enough information about each method for readers to use them sensibly.

Richly illustrated and comprehensive in scope, Obstetric Imaging, 2nd Edition, provides up-to-date, authoritative guidelines for more than 200 obstetric conditions and procedures, keeping you at the forefront of this fast-changing field. This highly regarded reference covers the extensive and ongoing advances in maternal and fetal imaging in a concise, newly streamlined format for quicker access to common and uncommon findings. Detailed, expert guidance, accompanied by superb, high-quality images, helps you make the most of new technologies and advances in obstetric imaging. Features more than 1,350 high-quality images, including 400 in color. Helps you select the best imaging approaches and effectively interpret your findings with a highly templated, bulleted, at-a-glance organization. Reflects all the latest developments in the field, including genetics, open fetal surgery, fetal echocardiography, Zika virus, and 3D imaging, so you can provide the safest and most responsive care to both mother and fetus. Includes new chapters on Limbs and Bones Overview; Open Fetal Surgery; Biophysical Profile; Ultrasound Physics; Elastography; Doppler; MRI; Echogenic Bowel; Pregnancy of Unknown Location (PUL), Failed Pregnancy and Ectopic Pregnancy, Cesarean Scar Pregnancy; Cytomegalovirus (CMG), Rubella, Toxoplasmosis, Herpes, Varicella; and Congenital Syphilis; plus a new chapter on Zika Virus written by imaging experts from the "hot zone." Keeps you up to date with the latest developments in multimodality imaging and optimizing diagnostic accuracy from ultrasound, 3D ultrasound, Doppler, MRI, elastography, image-guided interventions, and much more.

Studying a subject in a foreign or second language can create many difficulties. Anyone studying biological science in English who feels his command of the language to be inadequate will find this book an invaluable aid. It is the result of a great deal of research into the problems of understanding the English language as it is used to communicate scientific facts and ideas.

13.4 Tools for the forensic classification of the built environment microbiome

"Sleep is one of the most important but least understood aspects of our life, wellness, and longevity ... An explosion of scientific discoveries in the last twenty years has shed new light on this fundamental aspect of our lives. Now ... neuroscientist and sleep expert Matthew Walker gives us a new understanding of the vital importance of sleep and dreaming"--Amazon.com.

Focus is a rich, varied and clearly structured upper secondary course that provides motivating content and a reliable exam preparation path. Its methodology is built around the concept of 3Ms – Motivation, Memory and Meaning that underpin the benefits of the course for learners and signal its pedagogical effectiveness to teachers.

The cutting-edge science that is taking the measure of the universe The Little Book of Cosmology provides a breathtaking look at our universe on the grandest scales imaginable. Written by one of the world's leading experimental cosmologists, this short but deeply insightful book describes what scientists are revealing through precise measurements of the faint thermal afterglow of the big bang—known as the cosmic microwave background, or CMB—and how their findings are transforming our view of the cosmos. Blending the latest findings in cosmology with essential concepts from physics, Lyman Page first helps readers to grasp the sheer enormity of the universe, explaining how to understand the history of its formation and evolution in space and time. Then he sheds light on how spatial variations in the CMB formed, how they reveal the age, size, and geometry of the universe, and how they offer a blueprint for the formation of cosmic structure. Not only does Page explain current observations and measurements, he describes how they can be woven together into a unified picture to form the Standard Model of Cosmology. Yet much remains unknown, and this incisive book also describes the search for ever deeper knowledge at the field's frontiers—from quests to understand the nature of neutrinos and dark energy to investigations into the physics of the very early universe.

This book describes the structure-property-composition relationships for silicate glasses and melts of industrial and geological interest. From Antiquity to the 20th century, an introductory chapter presents this subject in a historical perspective. Basic concepts are then discussed in three chapters where attention is paid to the glass transition and its various consequences on melt and glass properties, to the structural and physical differences between amorphous and crystalline silicates, and to the mutual relationships between local order, energetics and physical properties. With pure SiO<sub>2</sub> as a starting point, compositions of increasing chemical complexity are successively dealt with in a dozen chapters. The effects of network-modifying cations on structure and properties are first exemplified by alkali and alkaline earth elements. The specific influence of aluminum, iron, titanium, and phosphorus are then reviewed. With water, volatiles in the system COHS, noble gases, and halogens, the effects of volatile components are also described. The last chapter explains how the results obtained on simpler melts can be applied to chemically complex systems. In each chapter, physical and chemical properties are described first and followed by a review of glass and melt structure. When possible, pressure effects are also considered. \*From SiO<sub>2</sub> to complex silicate compositions, the physical and chemical properties of melts and

glasses of geological and industrial interest \*Structural characterization of melts and glasses, from ambient to high pressure and temperature \*From basic concepts to an advanced level, a consistent description of the structure-property-composition relationships in glasses and melts

Learn how to program by diving into the R language, and then use your newfound skills to solve practical data science problems. With this book, you'll learn how to load data, assemble and disassemble data objects, navigate R's environment system, write your own functions, and use all of R's programming tools. RStudio Master Instructor Garrett Golemund not only teaches you how to program, but also shows you how to get more from R than just visualizing and modeling data. You'll gain valuable programming skills and support your work as a data scientist at the same time. Work hands-on with three practical data analysis projects based on casino games Store, retrieve, and change data values in your computer's memory Write programs and simulations that outperform those written by typical R users Use R programming tools such as if else statements, for loops, and S3 classes Learn how to write lightning-fast vectorized R code Take advantage of R's package system and debugging tools Practice and apply R programming concepts as you learn them

\*\* GUARDIAN SCIENCE BOOK OF THE YEAR 2017 \*\* 'Popular science at its best' Mail on Sunday 'Eminently accessible and enjoyable' Observer With every breath, you literally inhale the history of the world. On the ides of March, 44 BC, Julius Caesar died of stab wounds in the Roman Senate, but the story of his last breath is still unfolding. In fact, you're probably inhaling some of it now. Of the sextillions of molecules entering or leaving your lungs at this moment, some might also bear traces of Cleopatra's perfumes, German mustard gas, particles exhaled by dinosaurs or emitted by atomic bombs, even remnants of stardust from the universe's creation. In Caesar's Last Breath, New York Times bestselling author Sam Kean takes us on a journey through the periodic table, around the globe and across time to tell the epic story of the air we breathe.

Providing readers with a solid basis in dynamical systems theory, as well as explicit procedures for application of general mathematical results to particular problems, the focus here is on efficient numerical implementations of the developed techniques. The book is designed for advanced undergraduates or graduates in applied mathematics, as well as for Ph.D. students and researchers in physics, biology, engineering, and economics who use dynamical systems as model tools in their studies. A moderate mathematical background is assumed, and, whenever possible, only elementary mathematical tools are used. This new edition preserves the structure of the first while updating the context to incorporate recent theoretical developments, in particular new and improved numerical methods for bifurcation analysis. Immunopotentiators in Modern Vaccines provides an in-depth insight and overview of a number of most promising immunopotentiators in modern vaccines. In contrast to existing books on the subject it provides recent data on the critical mechanisms governing the activity of vaccine adjuvants and delivery systems. Knowledge of immunological pathways and scenarios of the cells and molecules involved is described and depicted in comprehensive illustrations. Contributions from leading international authorities in the field Well-illustrated, informative figures present the interactions between immunopotentiators and the host immune system Each chapter lists advantages and potential hurdles for achieving a practical application for the specific immunopentiator

The Update to the Strategic Plan (USP) is a supplement to the Ten-Year Strategic Plan of the U.S. Global Change Research Program (USGCRP) completed in 2012. The Strategic Plan sets out a research program guiding thirteen federal agencies in accord with the Global Change Research Act of 1990. This report reviews whether USGCRP's efforts to achieve its goals and objectives, as documented in the USP, are adequate and responsive to the Nation's needs, whether the priorities for continued or increased emphasis are appropriate, and if the written document communicates effectively, all within a context of the history and trajectory of the Program.

An ethologist shows man to be a gene machine whose world is one of savage competition and deceit

'I read this eagerly because I am desperate for tips on how to sleep better. It is based around the revolutionary idea that when it comes to sleep what matters is not the hours you spend in bed but the quality of the sleep you are getting - your sleep efficiency. This book was full of surprises!' -- Jeremy VineGroundbreaking sleep science from the bestselling author of The 5:2 Fast Diet and The Fast 800A good night's sleep is essential for a healthy brain and body. So why do so many of us struggle to sleep well?In Fast Asleep, Dr Michael Mosley explains what happens when we sleep, what triggers common sleep problems and why standard advice rarely works.Prone to insomnia, he has taken part in numerous sleep experiments and tested every remedy going. The result is a radical, four-week programme, based on the latest science, designed to help you re-establish a healthy sleep pattern in record time.With plenty of surprising recommendations - including tips for teenagers, people working night shifts and those prone to jet lag - plus recipes which will boost your deep sleep by improving your gut microbiome, Fast Asleep provides the tools you need to sleep better, reduce stress and feel happier.

The field of education has experienced extraordinary technological, societal, and institutional change in recent years, making it one of the most fascinating yet complex fields of study in social science. Unequaled in its combination of authoritative scholarship and comprehensive coverage, International Encyclopedia of Education, Third Edition succeeds two highly successful previous editions (1985, 1994) in aiming to encapsulate research in this vibrant field for the twenty-first century reader. Under development for five years, this work encompasses over 1,000 articles across 24 individual areas of coverage, and is expected to become the dominant resource in the field. Education is a multidisciplinary and international field drawing on a wide range of social sciences and humanities disciplines, and this new edition comprehensively matches this diversity. The diverse background and multidisciplinary subject coverage of the Editorial Board ensure a balanced and objective academic framework, with 1,500 contributors representing over 100 countries, capturing a complete portrait of this evolving field. A totally new work, revamped with a wholly new editorial board, structure and brand-new list of meta-sections and articles Developed by an international panel of editors and authors drawn from senior academia Web-enhanced with supplementary multimedia audio and video files, hotlinked to relevant references and sources for further study Incorporates ca. 1,350 articles, with timely coverage of such topics as technology and learning, demography and social change, globalization, and adult learning, to name a few Offers two content delivery options - print and online - the latter of which provides anytime, anywhere access for multiple users and superior search functionality via ScienceDirect, as well as multimedia content, including audio and video files

Fully revised and updated, the second edition of the International Encyclopedia of the Social and Behavioral Sciences, first published in 2001, offers a source of social and behavioral sciences reference material that is broader and deeper than any other. Available in both print and online editions, it comprises over 3,900 articles, commissioned by 71 Section Editors, and includes 90,000 bibliographic references as well as comprehensive name and subject indexes. Provides authoritative, foundational, interdisciplinary knowledge across the wide range of behavioral and social sciences fields Discusses history, current trends and future directions Topics are cross-referenced with related topics and each article highlights further reading

Science Focus 3Homework Book

Cities and Nature illustrates how the city is part of the environment, and how it is subject to environmental constraints and opportunities. The city has been treated in geographical writings as only a social phenomena, and at the same time, environmental scientists have tended to ignore the urban. This book reconnects the science and social science through the examination of the urban. It critiques the dominant academic discourse which ignores the environmental base of urban life and living, and discusses the urban natural environment and how this is subjected to social influences. The book is organized

around three central themes: urban environment in historical context issues in urban-nature relations realigning urban-nature relations. Ideas such as pollution as a physical environmental fact, often created or impacted by economic, cultural and political changes are discussed, as well as viewing pollution as a social act: consuming patterns of everyday activities - driving, showering, shopping, eating - and how this has an environmental impact. The authors reintroduce a social science perspective in examining urban nature, the city and its physical environment. *Cities and Nature* clearly illustrates the physical and social elements of the urban environment and shows how these are important to examining the city. It includes further reading and boxed case studies on Bangladesh, Paris, Delhi, Rome, Cubatao, Thailand, Los Angeles, Chicago, New Orleans and Toronto. This book would be an asset to students and researchers in environmental studies, urban studies and planning.

Bill Bryson describes himself as a reluctant traveller, but even when he stays safely at home he can't contain his curiosity about the world around him. *A Short History of Nearly Everything* is his quest to understand everything that has happened from the Big Bang to the rise of civilization - how we got from there, being nothing at all, to here, being us. Bill Bryson's challenge is to take subjects that normally bore the pants off most of us, like geology, chemistry and particle physics, and see if there isn't some way to render them comprehensible to people who have never thought they could be interested in science. The ultimate eye-opening journey through time and space, *A Short History of Nearly Everything* is the biggest-selling popular science book of the 21st century, and reveals the world in a way most of us have never seen it before.

The Science Focus Second Edition is the complete science package for the teaching of the New South Wales Stage 4 and 5 Science Syllabus. The Science Focus Second Edition package retains the identified strengths of the highly successful First Edition and includes a number of new and exciting features, improvements and components. The innovative Teacher Edition with CD allows a teacher to approach the teaching and learning of Science with confidence as it includes pages from the student book with wrap around teacher notes including answers, hints, strategies and teaching and assessment advice.

When a dissertation crosses my desk, I usually want to grab it by its metaphorical lapels and give it a good shake. "You know something!" I would say if it could hear me. "Now tell it to us in language we can understand!" Since its publication in 2005, *From Dissertation to Book* has helped thousands of young academic authors get their books beyond the thesis committee and into the hands of interested publishers and general readers. Now revised and updated to reflect the evolution of scholarly publishing, this edition includes a new chapter arguing that the future of academic writing is in the hands of young scholars who must create work that meets the broader expectations of readers rather than the narrow requirements of academic committees. At the heart of *From Dissertation to Book* is the idea that revising the dissertation is fundamentally a process of shifting its focus from the concerns of a narrow audience—a committee or advisors—to those of a broader scholarly audience that wants writing to be both informative and engaging. William Germano offers clear guidance on how to do this, with advice on such topics as rethinking the table of contents, taming runaway footnotes, shaping chapter length, and confronting the limitations of jargon, alongside helpful timetables for light or heavy revision. Germano draws on his years of experience in both academia and publishing to show writers how to turn a dissertation into a book that an audience will actually enjoy, whether reading on a page or a screen. Germano also acknowledges that not all dissertations can or even should become books and explores other, often overlooked, options, such as turning them into journal articles or chapters in an edited work. With clear directions, engaging examples, and an eye for the idiosyncrasies of academic writing, *From Dissertation to Book* reveals to recent PhDs the secrets of careful and thoughtful revision—a skill that will be truly invaluable as they add "author" to their curriculum vitae.

A brand-new book from the UK and Ireland's best-loved comedian, Dara O Briain! So you think everyday life is boring?! WHAT?! Hoo-ee, are you wrong! No, seriously. There's so much EXTRAORDINARY science going on right from the minute you wake up to when you go to sleep. Actually, while you're asleep, too. Science is a non-stop EVERYWHERE, everything adventure with some incredibly cool stuff going on, too. You've got your incredible brain, which has worked out how to read these words and make playing a video game feel as EXCITING as real life; you've got aeroplanes that can somehow get from the ground into the sky with all those people AND their luggage on board; you've got electricity and artificial intelligence and GPS and buses coming in threes (that's science too) and LOADS more. In *Secret Science*, Dara O Briain takes you on a journey from the comfort of your favourite chair to the incredible science behind your everyday life and on into the future!

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The International Encyclopedia of Human Geography provides an authoritative and comprehensive source of information on the discipline of human geography and its constituent, and related, subject areas. The encyclopedia includes over 1,000 detailed entries on philosophy and theory, key concepts, methods and practices, biographies of notable geographers, and geographical thought and praxis in different parts of the world. This groundbreaking project covers every field of human geography and the discipline's relationships to other disciplines, and is global in scope, involving an international set of contributors. Given its broad, inclusive scope and unique online accessibility, it is anticipated that the International Encyclopedia of Human Geography will become the major reference work for the discipline over the coming decades. The Encyclopedia will be available in both limited edition print and online via ScienceDirect - featuring extensive browsing, searching, and internal cross-referencing between articles in the work, plus dynamic linking to journal articles and abstract databases, making navigation flexible and easy. For more information, pricing options and availability visit

[http://info.sciencedirect.com/content/books/ref\\_works/coming/](http://info.sciencedirect.com/content/books/ref_works/coming/) Available online on ScienceDirect and in limited edition print format Broad, interdisciplinary coverage across human geography: Philosophy, Methods, People, Social/Cultural, Political, Economic, Development, Health, Cartography, Urban, Historical, Regional Comprehensive and unique - the

first of its kind in human geography

With at least 40% new or updated content since the last edition, Clinical Decision Support, 2nd Edition explores the crucial new motivating factors poised to accelerate Clinical Decision Support (CDS) adoption. This book is mostly focused on the US perspective because of initiatives driving EHR adoption, the articulation of 'meaningful use', and new policy attention in process including the Office of the National Coordinator for Health Information Technology (ONC) and the Center for Medicare and Medicaid Services (CMS). A few chapters focus on the broader international perspective. Clinical Decision Support, 2nd Edition explores the technology, sources of knowledge, evolution of successful forms of CDS, and organizational and policy perspectives surrounding CDS. Exploring a roadmap for CDS, with all its efficacy benefits including reduced errors, improved quality, and cost savings, as well as the still substantial roadblocks needed to be overcome by policy-makers, clinicians, and clinical informatics experts, the field is poised anew on the brink of broad adoption. Clinical Decision Support, 2nd Edition provides an updated and pragmatic view of the methodological processes and implementation considerations. This book also considers advanced technologies and architectures, standards, and cooperative activities needed on a societal basis for truly large-scale adoption. At least 40% updated, and seven new chapters since the previous edition, with the new and revised content focused on new opportunities and challenges for clinical decision support at point of care, given changes in science, technology, regulatory policy, and healthcare finance Informs healthcare leaders and planners, health IT system developers, healthcare IT organization leaders and staff, clinical informatics professionals and researchers, and clinicians with an interest in the role of technology in shaping healthcare of the future

This title has been endorsed by Cambridge Assessment International Education Master the essential scientific concepts that underpin the new Cambridge Primary Science curriculum framework (0097), with specifically sign-posted tasks, activities and investigations rooted in the mastery approach. - Get learners thinking scientifically, with engaging activities designed to show Science in Context; including topics on how science is used in the home and the impact it has on our environment. - Focus on key concepts and principles with starter activities at the beginning of each unit, allowing teachers to establish current knowledge and plan future lessons. - Extend student's knowledge with 'Challenge yourself!' activities to push problem-solving further.

A highly entertaining, myth-busting read for anyone with even a passing interest in science. Hot on the heels of the fascinating compendium Everything You Know About London Is Wrong, this next book in the series, written by author Matt Brown in his trademark humorous style, debunks the scientific myths we all take for granted. Does nothing travel faster than the speed of light? Well, in certain circumstances, a winded tortoise can go faster. Are there actually seven colours in a rainbow? Think again. And our author merrily explains why our hair and nails don't keep growing after we die and why chemicals in our diet might not be the toxic threats we are led to believe. Covering everything from pseudoscience to phenomena of physics, scandals of space and scientific misquotes, Everything You Know About Science is Wrong shatters a range of illusions we have accepted unquestioningly since childhood and demystifies this most puzzling of subjects.

In highlighting the unique features of focus groups, Cyr explains how they can help social science researchers effectively answer certain research questions.

The opportunity that tissue engineering provides for medicine is extraordinary. In the United States alone, over half-a-trillion dollars are spent each year to care for patients who suffer from tissue loss or dysfunction. Although numerous books and reviews have been written on tissue engineering, none has been as comprehensive in its defining of the field. Principles of Tissue Engineering combines in one volume the prerequisites for a general understanding of tissue growth and development, the tools and theoretical information needed to design tissues and organs, as well as a presentation of applications of tissue engineering to diseases affecting specific organ systems. The first edition of the book, published in 1997, is the definite reference in the field. Since that time, however, the discipline has grown tremendously, and few experts would have been able to predict the explosion in our knowledge of gene expression, cell growth and differentiation, the variety of stem cells, new polymers and materials that are now available, or even the successful introduction of the first tissue-engineered products into the marketplace. There was a need for a new edition, and this need has been met with a product that defines and captures the sense of excitement, understanding and anticipation that has followed from the evolution of this fascinating and important field. Key Features \* Provides vast, detailed analysis of research on all of the major systems of the human body, e.g., skin, muscle, cardiovascular, hematopoietic, and nerves \* Essential to anyone working in the field \* Educates and directs both the novice and advanced researcher \* Provides vast, detailed analysis of research with all of the major systems of the human body, e.g. skin, muscle, cardiovascular, hematopoietic, and nerves \* Has new chapters written by leaders in the latest areas of research, such as fetal tissue engineering and the universal cell \* Considered the definitive reference in the field \* List of contributors reads like a "who's who" of tissue engineering, and includes Robert Langer, Joseph Vacanti, Charles Vacanti, Robert Nerem, A. Hari Reddi, Gail Naughton, George Whitesides, Doug Lauffenburger, and Eugene Bell, among others

This third edition of Essentials of Pain Medicine offers an accessible and concise, yet complete, overview of today's theory and practice of pain medicine and regional anesthesia. From a review of basic considerations through local anesthetics and nerve block techniques, this book provides the reader with an excellent tool for exam review or practice of Pain Management. Organized in a concise, practical quick-reference format. All chapters are brief and easy to read quickly. Offers specific strategies for the evaluation and management of a full range of pain syndromes, including cancer pain. Features over 230 diagrams, illustrations, summary charts and tables that clarify the information and make it easy to apply. Discusses the latest drugs and therapeutic approaches, such as acupuncture. Presents the management of pain for every setting where it is practiced, including the emergency room, the critical care unit, and the pain clinic. Includes new topics such as: imaging in pain medicine, radiation safety, issues associated with the use of narcotics, intraarticular and intraperitoneal use of opioids, pain management in the emergency room and in the intensive care unit, pain management issues during pregnancy, geriatric pain, and hospice care and end-of-life issues. New chapters on interventional procedures include discography, intradiscal electrothermal coagulation (IDET), vertebroplasty, and piriformis injections. Truncal blocks and neuraxial blocks and anticoagulants are added to the section on nerve blocks.

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