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"Animal Behavior: Concepts, Methods, and Applications, takes a conceptual approach that highlights the process of science and the real-world applications of animal behavior research"--

This text presents all the branches of modern animal physiology with a strong emphasis on integration among physiological disciplines, ecology, and evolutionary biology.

This text provides an introduction to the important physics underpinning current technologies, highlighting key concepts in areas that include linear and rotational motion, energy, work, power, heat, temperature, fluids, waves, and magnetism. This revision reflects the latest technology advances, from smart phones to the Internet of Things, and all kinds of sensors. The author also provides more modern worked examples with useful appendices and laboratories for hands-on practice. There are also two brand new chapters covering sensors as well as electric fields and electromagnetic radiation as applied to current technologies.

NEW YORK TIMES BESTSELLER • Bill Bryson, bestselling author of *A Short History of Nearly Everything*, takes us on a head-to-toe tour of the marvel that is the human body—with a new afterword for this edition. Bill Bryson once again proves himself to be an incomparable companion as he guides us through the human body—how it functions, its remarkable ability to heal itself, and (unfortunately) the ways it can fail. Full of extraordinary facts (your body made a million red blood cells since you started reading this) and irresistible Brysonesque anecdotes, *The Body* will lead you to a deeper understanding of the miracle that is life in general and you in particular. As Bill Bryson writes, “We pass our existence within this wobble of flesh and yet take it almost entirely for granted.” *The Body* will cure that indifference with generous doses of wondrous, compulsively readable facts and information. As addictive as it is comprehensive, this is Bryson at his very best, a must-read owner’s manual for every body.

by Berdell R. Funke. Students can master key concepts and earn a better grade with the help of the clear, concise writing and creative and thought-provoking exercises found in this study guide. Revised for the Eighth Edition, the study guide includes concise explanations of key concepts, definitions of important terms, art labeling exercises, critical thinking problems, and a variety of self-test questions with answers.

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging. Christopher Moyes and Patricia Schulte present animal physiology in a current, balanced, and accessible way that emphasizes the integration of physiological systems, an overarching evolutionary theme, and thorough coverage of the cellular and molecular basis of animal physiology. *Principles of Animal Physiology* comes with a comprehensive supplements package for students and instructors that includes a new Media Manager CD-ROM, a new Print and Computerized Test Bank, and a powerful Companion Website. The InterActive Physiology® 10-System Suite CD-ROM and PhysioEx™ V7.0 laboratory simulations can be packaged with the text at a discounted price.

Seidel's Guide to Physical Examination 9th Edition offers a uniquely interprofessional, patient-centered, lifespan approach to physical examination and health assessment. This new edition features an increased focus on patient safety, clinical reasoning, and evidence-based practice, along with an emphasis on the development of good communication skills and effective hands-on examination techniques. Each core chapter is organized into four sections – Anatomy and Physiology, Review of Related History, Examination and Findings, and Abnormalities – with lifespan content integrated into each area. Written by an author team comprised of advance practice nurses and physicians with specialties in the care of adults, older adults, and children, this one-of-a-kind textbook addresses health assessment and physical examination for a wide variety of disciplines. UNIQUE! Interprofessional, interdisciplinary approach, written by two advanced practice nurses and three physicians, with expertise in both pediatric and adult-geriatric health. UPDATED! Infectious outbreak content addresses the growing problem of global infectious disease outbreaks such as Zika and Ebola and the need for infection precautions. UNIQUE! Cross-references to Dains et al: *Advanced Health Assessment & Clinical Diagnosis in Primary Care* help you take "the next step" in your clinical reasoning abilities and provides a more seamless user experience. UNIQUE! Compassionate, patient-centered approach emphasizes developing good communication skills, use of effective hands-on examination techniques, and reliance on clinical reasoning and clinical decision-making. Integrated lifespan content includes separate sections in each chapter on Infants and Children, Adolescents, Pregnant Women, and Older Adults. NEW! Emphasis on clinical reasoning provides insights and clinical expertise to help you develop clinical judgment skills. NEW! Enhanced emphasis on patient safety and healthcare quality, particularly as it relates to sports participation. NEW! Content on documentation has been updated with a stronger focus on electronic charting (EHR/EMR). NEW! Enhanced social inclusiveness and patient-centeredness incorporates LGBTQ patients and providers, with special emphasis on cultural competency, history-taking, and special considerations for examination of the breasts, female and male genitalia, reproductive health, thyroid, and anus/rectum/prostate. NEW! Telemedicine, virtual consults, and video interpreters content added to the Growth, Measurement, and Nutrition chapter. NEW! Improved readability with a clear, straightforward, and easy-to-understand writing style. NEW! Updated drawing, and photographs enhance visual appeal and clarify anatomical content and exam techniques.

"Comprehensive, contemporary, and engaging, *Animal Physiology* provides evolutionary and ecological context to help students make connections across all levels of physiological scale"--

A detailed account of the biology and ecology of vascular wetland plants and their applications in wetland plant science, *Wetland Plants: Biology and Ecology* presents a synthesis of wetland plant studies and reviews from biology, physiology, evolution, genetics, community and population ecology, environmental science, and engineering. It provides a thorough discussion of the range of wetland plants adaptations to conditions such as life in water or saturated soils, high salt or high sulfur, as well as low light and low carbon dioxide levels. The authors include the latest research on the development of plant communities in newly restored or created wetlands and on the use of wetland plants as indicators of ecological integrity and of wetland boundaries. Over 140 figures, including over 70 original photographs, allow you to visualize the concepts, 40 tables give you easy access to definitions and data, and international examples provide you with a broad base of information. The growing consensus in wetlands literature and research suggests that methods are needed to assess the ecological health or integrity of wetlands, to set goals for wetland restoration, and to track the status and trends of wetlands. Wetland plants are emerging as important indicators, and becoming an important part of this research. *Wetland Plants: Biology and Ecology* contains up-to-date information on this increasingly important area in wetlands technology.

Principles of Animal Physiology, by Chris Moyes and Trish Schulte, is designed to provide second- and third-year, undergraduate university students enrolled in animal physiology courses with an approach

that balances its presentation of comparative physiology with mechanistic topics. The book delivers the fundamentals of animal physiology, while providing an integrative learning experience, drawing on ideas from chemistry, physics, mathematics, molecular biology and cell biology for its conceptual underpinnings.

This volume offers a comprehensive history of the Mount Desert Island Biological Laboratory (MDIBL), one of the major marine laboratories in the United States and a leader in using marine organisms to study fundamental physiological concepts. Beginning with its founding as the Harpswell Laboratory of Tufts University in 1898, David H. Evans follows its evolution from a teaching facility to a research center for distinguished renal and epithelial physiologists. He also describes how it became the site of major advances in cytokinesis, regeneration, cardiac and vascular physiology, hepatic physiology, endocrinology and toxicology, as well as studies of the comparative physiology of marine organisms. Fundamental physiological concepts in the context of the discoveries made at the MDIBL are explained and the social and administrative history of this renowned facility is described.

A study of comparative physiology that explains the ways in which specific bodily systems function in different species

This book develops the mathematical tools essential for students in the life sciences to describe interacting systems and predict their behavior. From predator-prey populations in an ecosystem, to hormone regulation within the body, the natural world abounds in dynamical systems that affect us profoundly. Complex feedback relations and counter-intuitive responses are common in nature; this book develops the quantitative skills needed to explore these interactions. Differential equations are the natural mathematical tool for quantifying change, and are the driving force throughout this book. The use of Euler's method makes nonlinear examples tractable and accessible to a broad spectrum of early-stage undergraduates, thus providing a practical alternative to the procedural approach of a traditional Calculus curriculum. Tools are developed within numerous, relevant examples, with an emphasis on the construction, evaluation, and interpretation of mathematical models throughout. Encountering these concepts in context, students learn not only quantitative techniques, but how to bridge between biological and mathematical ways of thinking. Examples range broadly, exploring the dynamics of neurons and the immune system, through to population dynamics and the Google PageRank algorithm. Each scenario relies only on an interest in the natural world; no biological expertise is assumed of student or instructor. Building on a single prerequisite of Precalculus, the book suits a two-quarter sequence for first or second year undergraduates, and meets the mathematical requirements of medical school entry. The later material provides opportunities for more advanced students in both mathematics and life sciences to revisit theoretical knowledge in a rich, real-world framework. In all cases, the focus is clear: how does the math help us understand the science?

Freshwater Ecology, Second Edition, is a broad, up-to-date treatment of everything from the basic chemical and physical properties of water to advanced unifying concepts of the community ecology and ecosystem relationships as found in continental waters. With 40% new and expanded coverage, this text covers applied and basic aspects of limnology, now with more emphasis on wetlands and reservoirs than in the previous edition. It features 80 new and updated figures, including a section of color plates, and 500 new and updated references. The authors take a synthetic approach to ecological problems, teaching students how to handle the challenges faced by contemporary aquatic scientists. This text is designed for undergraduate students taking courses in Freshwater Ecology and Limnology; and introductory graduate students taking courses in Freshwater Ecology and Limnology. Expanded revision of Dodds' successful text. New boxed sections provide more advanced material within the introductory, modular format of the first edition. Basic scientific concepts and environmental applications featured throughout. Added coverage of climate change, ecosystem function, hypertrophic habitats and secondary production. Expanded coverage of physical limnology, groundwater and wetland habitats. Expanded coverage of the toxic effects of pharmaceuticals and endocrine disruptors as freshwater pollutants More on aquatic invertebrates, with more images and pictures of a broader range of organisms Expanded coverage of the functional roles of filterer feeding, scraping, and shredding organisms, and a new section on omnivores. Expanded appendix on standard statistical techniques. Supporting website with figures and tables - <http://www.elsevierdirect.com/companion.jsp?ISBN=9780123747242>

Elephants are possibly the most well-known members of the animal kingdom. The enormous size, unusual anatomy, and longevity of elephants have fascinated humans for millenia. Biology, Medicine, and Surgery of Elephants serves as a comprehensive text on elephant medicine and surgery. Based on the expertise of 36 scientists and clinical veterinarians, this volume covers biology, husbandry, veterinary medicine and surgery of the elephant as known today. Written by the foremost experts in the field Comprehensively covers both Asian and African elephants Complete with taxonomy, behavioral, geographical and systemic information Well-illustrated and organized for easy reference

This new edition of Evolution features a new coauthor: Mark Kirkpatrick (The University of Texas at Austin) offers additional expertise in evolutionary genetics and genomics, the fastest-developing area of evolutionary biology. Directed toward an undergraduate audience, the text emphasizes the interplay between theory and empirical tests of hypotheses, thus acquainting students with the process of science.

This stand-alone, comprehensive, fully- illustrated atlas of descriptive embryology features over 250 detailed, accurate, and fully labeled illustrations (photomicrographs, line drawings, and orientation drawings). Broad in coverage, it considers many different organisms, and features comparative embryology (i.e., gametogenesis in rat, human, cat, grasshopper, locust; development of Ascaris, sea urchin, starfish, frog, chick, and pig; and the human uterus and placenta). *Features exceptionally high-quality illustrations - photomicrographs, line drawings, and orientation drawings . *Streamlines the organization by grouping together chapters that focus on related areas. *Updates and revises terminology for all illustrations throughout. *Provides a revised glossary. *Offers comprehensive coverage of a large variety of organisms. Features about 250 high-quality photomicrographic illustrations - clearly and accurately labeled. *Includes about 50 valuable line-drawings from classical textbooks - many of which are now out of print. *Contains orientation drawings for transverse sections. *Provides a combined Glossary, Synopsis of Development, and Index.

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging.

Campbell BIOLOGY is the best-selling introductory biology text in Canada. The text is written for university biology majors and is unparalleled in its accuracy, depth of explanation, and art program, as well as its overall effectiveness as a teaching and learning tool. The second Canadian edition maintains the integrity of the Campbell franchise and will benefit students by highlighting Canadian contributions to biological science research. It does so by presenting Canadian examples of flora and fauna alongside global example investigating Canadian-specific biological issues, such as specific invasive species and providing Canadian data on biological issues. Note: You are purchasing a standalone product; MasteringBiology does not come packaged with this content. Students, if interested in purchasing this title with MasteringBiology, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for more information. If you would like to purchase both the physical text and MasteringBiology, search for: 0134589947 / 9780134589947 Campbell Biology, Second Canadian Edition Plus MasteringBiology with Pearson eText -- Access Card Package Package consists of: 0134189116 / 9780134189116 Campbell Biology, Second Canadian Edition 0134561708 / 9780134561707 MasteringBiology with Pearson eText -- Standalone Access Card -- for Campbell Biology, Second Canadian Edition

Brain and Behavior addresses the central aims of cognitive neuroscience, examining the brain not only by its components but also by its functions. Emphasizing the dynamically changing nature of the brain, the text highlights the principles, discoveries, and remaining mysteries of modern cognitive neuroscience to give students a firm grounding in this fascinating subject.

Atlas of Comparative Vertebrate Histology looks at the histology of a wide range of vertebrates, representative of all the major classes and families, with examples ranging from amphioxus to primates. The authors focus their microscope on commonly seen vertebrates as well as 'non-standard' species, such as lamprey, hagfish, dogfish, skate, rock bass, cod, river catfish, toad, amphiuma, leopard and bull frog, garter and brown snake, Coturnix quail and cowbird. The study of comparative histology in the vertebrates helps students and researchers alike understand how various groups have addressed similar problems, opening doors to interesting research possibilities. Not all vertebrates follow the mammalian model of tissue and organ structure. When dealing with unique species, we see some structures taken beyond their 'normal' function. Comparative histology allows us to understand the structural responses underlying the physiology unique to each vertebrate group. Presents the histology of a wide range of vertebrates, representative of all the major classes and families, with examples ranging from amphioxus to primates Includes an image gallery with over 500 flat images and 50+ virtual microscopy slides

Contains electronic content features cross linking between text, tables and the image gallery

COLLEGE PHYSICS: REASONING AND RELATIONSHIPS motivates student understanding by emphasizing the relationship between major physics principles, and how to apply the reasoning of physics to real-world examples. Such examples come naturally from the life sciences, and this text ensures that students develop a strong understanding of how the concepts relate to each other and to the real world.

COLLEGE PHYSICS: REASONING AND RELATIONSHIPS motivates student learning with its use of these original applications drawn from the life sciences and familiar everyday scenarios, and prepares students for the rigors of the course with a consistent five-step problem-solving approach. Available with this Second Edition, the new Enhanced WebAssign program features ALL the quantitative end-of-chapter problems and a rich collection of Reasoning and Relationships tutorials, personally adapted for WebAssign by Nick Giordano. This provides exceptional continuity for your students whether they choose to study with the printed text or by completing online homework. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This classic animal physiology text focuses on comparative examples that illustrate the general principles of physiology at all levels of organisation—from molecular mechanisms to regulated physiological systems to whole organisms in their environment. This textbook is an authoritative and complete guide to the field of animal physiology which uses a threefold approach to teaching. The Comparative Approach emphasises basic mechanisms but allows patterns of physiological function in different species to demonstrate how evolution creates diversity. This approach encourages students to appreciate the underlying principles that govern physiological systems. The Experimental Emphasis helps students to understand the process of scientific discovery and shows how our knowledge of physiology continually increases and finally the Integrative Approach presents information about specific physiological systems at all levels of organisation, from molecular interactions to interactions between an organism and its environment.n included.

Detailed and concise dissection directions, updated valuable information and extraordinary illustrations make The Dissection of Vertebrates, 3rd Edition the new ideal manual for students in comparative vertebrate anatomy, as well as a superb reference for vertebrate and functional morphology, vertebrate paleontology, and advanced level vertebrate courses, such as in mammalogy, ornithology, ichthyology, and herpetology. This newly revised edition of the most comprehensive manual available continues to offer today's more visually oriented student with a manual combining pedagogically effective text with high-quality, accurate and attractive visual references. This new edition features updated and expanded phylogenetic coverage, revisions to the illustrations and text of the lamprey, shark, perch, mudpuppy, frog, cat, pigeon, and reptile skull chapters, and new sections on amphioxus or lancelet (Branchiostoma, Cephalochordata), a sea squirt (Ciona, Urochordata), shark musculature, a gravid shark, shark embryo, cat musculature, and the sheep heart. Using the same systematic approach within a systemic framework as the first two editions, The Dissection of Vertebrates, 3rd Edition covers several animals commonly used in providing an anatomical transition sequence. Nine animals are covered: amphioxus, sea squirt, lamprey, shark, perch, mudpuppy, frog, cat, and pigeon, plus five reptile skulls, two mammal skulls, and the sheep heart. Winner of a 2020 Textbook Excellence Award (College) (Texty) from the Textbook and Academic Authors Association Seven detailed vertebrate dissections, providing a systemic approach Includes carefully developed directions for dissection Original, high-quality award-winning illustrations Clear and sharp photographs Expanded and updated features on phylogenetic coverage New sections on: amphioxus (Cephalochordata); sea squirt (Urochordata); shark musculature; gravid shark; shark embryo; cat musculature; sheep heart

This brief, paperback version of the best-selling Earth Science by Lutgens and Tarbuck is designed for introductory courses in Earth science. The text's highly visual, non-technical survey emphasizes broad, up-to-date coverage of basic topics and principles in geology, oceanography, meteorology, and astronomy. A flexible design lends itself to the diversity of Earth science courses in both content and approach. As in previous editions, the main focus is to foster student understanding of basic Earth science principles. Used by over 1.5 million science students, the Mastering platform is the most effective and widely used online tutorial, homework, and assessment system for the sciences. This is the product access code card for MasteringX and does not include the actual bound book. Package contains:

MasteringGeology standalone access card

This book discusses biochemical adaptation to environments from freezing polar oceans to boiling hot springs, and under hydrostatic pressures up to 1,000 times that at sea level. Originally published in 1984. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

PhysioEx™ 9.0: Laboratory Simulations in Physiology with 9.1 Update is an easy-to-use laboratory simulation software and lab manual that consists of 12 exercises containing 63 physiology lab activities that

can be used to supplement or substitute wet labs. PhysioEx allows you to repeat labs as often as you like, perform experiments without harming live animals, and conduct experiments that are difficult to perform in a wet lab environment because of time, cost, or safety concerns. PhysioEx 9.1 features input data variability that allows you to change variables and test out various hypotheses for the experiments. 9.1 retains the popular new improvements introduced in 9.0 including onscreen step-by-step instructions and “Stop & Think” and “Predict” questions that help you think about the connection between the experiments and the physiological concepts they demonstrate.

Precision Livestock Farming (PLF) technology is a reality. PLF is a combination of developing animal sensing (sensors) tools and decision-making process at the farm level. It also has the potential to support animal feed suppliers, human-food retailers and other players along the supply chain to make better choices. The current challenge for PLF is the integration of the technology in the majority of the farms and not only to the pioneering farms. This book consist of full-length peer-reviewed papers combined with 'questions and answers' sections. It is the result of a joint session hosted by the European Association of Animal Production and brings together research focusing on real-time interpretation of the combination of sensor development, industry, animal genetics, animal nutrition, and animal health. Unique of this 'cross-disciplinary' approach is that 'animal-focused' scientists, engineers, companies as well as farmers' organizations have interacted and combined their strengths and views. 'Precision Livestock Farming Applications - Making sense of sensors to support farm management' provides an update on the state of the art of PLF in interaction with the other scientific and applicative expertise. It is of interest for researchers, students, professionals, farmers, and livestock industry concerned with livestock production management.

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