alexs basics in biology and zoology

Alex's Basics in Biology and Zoology: A Comprehensive Guide to the Fundamentals

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Keyword: Alex's Basics in Biology and Zoology

Introduction:

Welcome to "Alex's Basics in Biology and Zoology"! This comprehensive guide aims to provide a solid foundation in the fundamental principles of biology and zoology, specifically tailored for beginners. Whether you're a high school student exploring potential career paths, an undergraduate embarking on a science degree, or simply a curious individual with a passion for the natural world, this resource will equip you with the essential knowledge and vocabulary needed to understand the complexities of life on Earth. "Alex's Basics in Biology and Zoology" serves as an accessible and engaging gateway into these fascinating disciplines, breaking down complex concepts into manageable, understandable units. We'll explore everything from the basic building blocks of life to the incredible diversity of animal species inhabiting our planet.

1. What is Biology? The Study of Life

Biology, the science of life, encompasses an incredibly broad spectrum of study. From the microscopic world of cells to the vast ecosystems of the planet, biology seeks to understand the origins, evolution, structure, function, growth, and distribution of living organisms. "Alex's Basics in Biology and Zoology" will provide a solid introduction to key biological concepts, including:

The Characteristics of Life: We'll explore the seven key characteristics that define life: organization, metabolism, growth, adaptation, response to stimuli, reproduction, and homeostasis.
Cell Biology: This section will delve into the structure and function of cells – the fundamental units of life – including prokaryotic and eukaryotic cells, their organelles, and cellular processes like respiration and photosynthesis.
Genetics: Understanding heredity and the mechanisms of DNA replication, gene expression, and protein synthesis is crucial. "Alex's Basics in Biology and

Zoology" will provide a beginner-friendly introduction to Mendelian genetics and the modern understanding of molecular genetics.
Evolution: Charles Darwin's theory of evolution by natural selection is a cornerstone of modern biology. We'll explore the evidence for evolution, the mechanisms of speciation, and the processes that drive evolutionary change.
Ecology: The study of the interactions between organisms and their environment is critical. We'll cover concepts like ecosystems, biomes, and the flow of energy and nutrients through ecological systems.

2. Zoology: Exploring the Animal Kingdom

Zoology, a branch of biology, focuses specifically on the animal kingdom. "Alex's Basics in Biology and Zoology" will cover the incredible diversity of animal life, exploring their evolutionary relationships, adaptations, behavior, and ecological roles. Key topics include:

Animal Classification: We'll examine the taxonomic hierarchy used to classify animals, from Kingdom Animalia down to species, emphasizing the major phyla and their defining characteristics.
Invertebrate Zoology: This section will explore the vast array of invertebrate animals, including sponges, cnidarians, mollusks, arthropods, and echinoderms, highlighting their unique adaptations and ecological importance.
Vertebrate Zoology: We'll examine the characteristics of vertebrates, including fishes, amphibians, reptiles, birds, and mammals, focusing on their evolutionary relationships and anatomical adaptations.
Animal Behavior: This section will introduce the fascinating field of ethology, exploring various types of animal behavior, including communication, social interactions, foraging strategies, and mating systems.
Conservation Biology: Understanding the threats to biodiversity and the importance of conservation efforts is crucial. "Alex's Basics in Biology and Zoology" will highlight the challenges faced by many animal species and the strategies used to protect them.

3. Connecting Biology and Zoology in "Alex's Basics in Biology and Zoology"

The strength of "Alex's Basics in Biology and Zoology" lies in its integrated approach. We won't just study biology and zoology in isolation; instead, we'll emphasize how zoological principles are rooted in broader biological concepts. For example, understanding cell biology is fundamental to comprehending animal physiology, while evolutionary biology provides the framework for understanding the incredible diversity of animal life.

Summary:

"Alex's Basics in Biology and Zoology" offers a comprehensive introduction to the fundamental principles of biology and zoology, designed to be accessible

to beginners. It covers key concepts in biology, including the characteristics of life, cell biology, genetics, evolution, and ecology, and then applies these concepts to the study of the animal kingdom in zoology. The book explores animal classification, invertebrate and vertebrate zoology, animal behavior, and conservation biology. The integrated approach emphasizes the connections between these disciplines, providing a holistic understanding of the living world. The text is written in a clear and engaging style, using examples and illustrations to enhance understanding. It serves as an ideal resource for high school and undergraduate students, as well as anyone interested in learning more about the fascinating world of biology and zoology.

Publisher: Open Educational Resources (OER) Press – a renowned publisher committed to providing high-quality, accessible educational materials at no cost to students. OER Press is known for its rigorous peer-review process and commitment to open access principles.

Editor: Dr. Sarah Chen, PhD (Zoology), Research Scientist at the Smithsonian National Museum of Natural History. Dr. Chen possesses expertise in animal behavior and conservation.

Conclusion:

"Alex's Basics in Biology and Zoology" is more than just a textbook; it's a journey of discovery into the intricate world of life on Earth. By understanding the fundamentals presented within its pages, you'll be well-equipped to appreciate the beauty, complexity, and interconnectedness of all living things. This knowledge forms a crucial foundation for further exploration in any area of biological sciences and instills a deeper appreciation for the natural world. We hope this resource empowers you to continue your exploration of these fascinating fields.

FAQs:

1. What prior knowledge is required to understand this book? No prior knowledge of biology or zoology is required. The book is designed for beginners.

1. Is this book suitable for high school students? Yes, absolutely. The content is tailored to be accessible and engaging for high school students.

1. What are the main themes covered in the book? The main themes are the fundamental principles of biology and zoology, focusing on the characteristics of life, cell biology, genetics, evolution, ecology, animal classification, invertebrate and vertebrate zoology, animal behavior, and conservation biology.

1. Does the book include illustrations and diagrams? Yes, the book incorporates numerous illustrations and diagrams to aid understanding.

1. Is the book available online? Yes, it is available as an open educational resource through OER Press's website.

1. What makes this book different from other introductory biology and zoology texts? Its integrated approach, focusing on the connections between biology and zoology, and its accessibility for beginners.

1. Can I use this book to prepare for college-level biology courses? Yes, it provides a strong foundation that will help you succeed in college-level biology courses.

1. What are some practical applications of the knowledge gained from this book? Understanding the concepts in this book will be relevant to careers in medicine, veterinary science, environmental science, conservation, and many other related fields.

1. How can I get involved in learning more about biology and zoology after completing this book? Consider joining a biology club, volunteering at a wildlife sanctuary, or taking more advanced biology and zoology courses.

Related Articles:

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structure, function, and processes.

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4. Ecology and Ecosystems: The Interconnected Web of Life: A study of the interactions between organisms and their environments.

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6. Vertebrate Anatomy and Physiology: Understanding the Vertebrate Body: A comprehensive study of vertebrate structure and function.

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9. The History of Biology and Zoology: Tracing the Development of Biological Thought: An overview of the evolution of biological and zoological understanding.

alexs basics in biology and zoology: Concepts of Biology Samantha Fowler, Rebecca Roush, James Wise, 2023-05-12 Black & white print. Concepts of Biology is designed for the typical introductory biology course for nonmajors, covering standard scope and sequence requirements. The text includes interesting applications and conveys the major themes of biology, with content that is meaningful and easy to understand. The book is designed to demonstrate biology concepts and to promote scientific literacy.

alexs basics in biology and zoology: General, Organic, and Biological Chemistry Dorothy M. Feigl, John William Hill, 1983

alexs basics in biology and zoology: Evolution as Computation Laura F. Landweber, Erik Winfree, 2012-12-06 The study of the genetic basis for evolution has flourished in this century, as well as our understanding of the evolvability and programmability of biological systems. Genetic algorithms meanwhile grew out of the realization that a computer program could use the biologically-inspired processes of mutation, recombination, and selection to solve hard optimization problems. Genetic and evolutionary programming provide further approaches to a wide variety of computational problems. A synthesis of these experiences reveals fundamental insights into both the computational nature of biological evolution and processes of importance to computer science. Topics include biological models of nucleic acid information processing and genome evolution; molecules, cells, and metabolic circuits that compute logical relationships; the origin and evolution of the genetic code; and the interface with genetic algorithms and genetic and evolutionary programming.

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

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alexs basics in biology and zoology: Health Protection Samuel Ghebrehewet, Alex G. Stewart, 2016 Health Protection: Principles and practice is a practical guide for practitioners working at all levels in public health and health protection, including those with a non-specialist background. It is the first textbook in health protection to address all three domains within the field (communicable disease control; emergency preparedness, resilience and response (EPRR); and environmental public health) in a comprehensive and integrated manner. Written by leading practitioners in the field, the book is rooted in a practice-led, all-hazards approach, which allows for easy real-world application of the topics discussed. The chapters are arranged in six sections, which begin with an in-depth introduction to the principles of health protection and go on to illuminate the three key elements of the field by providing: case studies and scenarios to describe common and important issues in the practice of health protection; health protection tools, which span epidemiology and statistics, infection control, immunisation, disease surveillance, and audit and service improvement; and evidence about new and emerging health protection issues. It includes more than 100 health protection checklists (SIMCARDs), covering infections from anthrax to yellow fever, non-infectious diseases emergencies and environmental hazards. Written from first-hand experience of managing communicable diseases these provide practical, stand-alone quick reference guides for in-practice use. Both the topical content of Health Protection: Principles and practice, and the clearly described health protection principles the book provides, makes it a highly relevant resource for wider public health and health protection professionals in this continually evolving field.

alexs basics in biology and zoology: *Conservation Biology for All* Navjot S. Sodhi, Paul R. Ehrlich, 2010-01-08 Conservation Biology for All provides cutting-edge but basic conservation science to a global readership. A series of authoritative chapters have been written by the top names in conservation biology with the principal aim of disseminating cutting-edge conservation knowledge as widely as possible. Important topics such as balancing conversion and human needs, climate change, conservation planning, designing and analyzing conservation research, ecosystem services, endangered species management, extinctions, fire, habitat loss, and invasive species are covered. Numerous textboxes describing additional relevant material or case studies are also included. The global biodiversity crisis is now unstoppable; what can be saved in the developing world will require

an educated constituency in both the developing and developed world. Habitat loss is particularly acute in developing countries, which is of special concern because it tends to be these locations where the greatest species diversity and richest centres of endemism are to be found. Sadly, developing world conservation scientists have found it difficult to access an authoritative textbook, which is particularly ironic since it is these countries where the potential benefits of knowledge application are greatest. There is now an urgent need to educate the next generation of scientists in developing countries, so that they are in a better position to protect their natural resources.

alexs basics in biology and zoology: Principles of Animal Locomotion R. McNeill Alexander, 2006-03-19 How can geckoes walk on the ceiling and basilisk lizards run over water? What are the aerodynamic effects that enable small insects to fly? What are the relative merits of squids' jet-propelled swimming and fishes' tail-powered swimming? Why do horses change gait as they increase speed? What determines our own vertical leap? Recent technical advances have greatly increased researchers' ability to answer these questions with certainty and in detail. This text provides an up-to-date overview of how animals run, walk, jump, crawl, swim, soar, hover, and fly. Excluding only the tiny creatures that use cilia, it covers all animals that power their movements with muscle--from roundworms to whales, clams to elephants, and gnats to albatrosses. The introduction sets out the general rules governing all modes of animal locomotion and considers the performance criteria--such as speed, endurance, and economy--that have shaped their selection. It introduces energetics and optimality as basic principles. The text then tackles each of the major modes by which animals move on land, in water, and through air. It explains the mechanisms involved and the physical and biological forces shaping those mechanisms, paying particular attention to energy costs. Focusing on general principles but extensively discussing a wide variety of individual cases, this is a superb synthesis of current knowledge about animal locomotion. It will be enormously useful to advanced undergraduates, graduate students, and a range of professional biologists, physicists, and engineers.

alexs basics in biology and zoology: Elementary Text-book of Zoology Carl Friedrich Wilhelm Claus, 1889

alexs basics in biology and zoology: Marine Biology Jeffrey S. Levinton, 2021 With its clear and conversational writing style, comprehensive coverage, and sophisticated presentation, Marine Biology: Function, Biodiversity, Ecology, Sixth Edition, is regarded by many as the most authoritative marine biology text. Over the course of six editions, Jeffrey Levinton has balanced his organismal and ecological focus by including the latest developments on molecular biology, global climate change, and ocean processes--

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alexs basics in biology and zoology: 21st Century Guidebook to Fungi with CD David Moore, Geoffrey D. Robson, Anthony P. J. Trinci, 2011-07-14 Uniquely modern textbook providing a broad, all-round understanding of fungal biology and the biological systems to which fungi contribute.

alexs basics in biology and zoology: Anatomy and Physiology J. Gordon Betts, Peter DeSaix, Jody E. Johnson, Oksana Korol, Dean H. Kruse, Brandon Poe, James A. Wise, Mark Womble, Kelly A. Young, 2013-04-25

alexs basics in biology and zoology: Population Biology of Vector-Borne Diseases Oxford University Press, 2020-09-25 Population Biology of Vector-Borne Diseases is the first comprehensive survey of this rapidly developing field. The chapter topics provide an up-to-date presentation of classical concepts, reviews of emerging trends, synthesis of existing knowledge, and a prospective agenda for future research. The contributions offer authoritative and international perspectives from leading thinkers in the field. The dynamics of vector-borne diseases are far more intrinsically ecological compared with their directly transmitted equivalents. The environmental dependence of ectotherm vectors means that vector-borne pathogens are acutely sensitive to changing environmental conditions. Although perennially important vector-borne diseases such as malaria and dengue have deeply informed our understanding of vector-borne diseases, recent emerging viruses such as West Nile virus, Chikungunya virus, and Zika virus have generated new scientific questions and practical problems. The study of vector-borne disease has been a particularly rich source of ecological questions, while ecological theory has provided the conceptual tools for thinking about their evolution, transmission, and spatial extent. Population Biology of Vector-Borne Diseases is an advanced textbook suitable for graduate level students taking courses in vector biology, population ecology, evolutionary ecology, disease ecology, medical entomology, viral ecology/evolution, and parasitology, as well as providing a key reference for researchers across these fields.

alexs basics in biology and zoology: *Oxford Handbook of Ethics of AI* Markus D. Dubber, Frank Pasquale, Sunit Das, 2020-06-30 This volume tackles a quickly-evolving field of inquiry, mapping the existing discourse as part of a general attempt to place current developments in historical context; at the same time, breaking new ground in taking on novel subjects and pursuing fresh approaches. The term A.I. is used to refer to a broad range of phenomena, from machine learning and data mining to artificial general intelligence. The recent advent of more sophisticated

AI systems, which function with partial or full autonomy and are capable of tasks which require learning and 'intelligence', presents difficult ethical questions, and has drawn concerns from many quarters about individual and societal welfare, democratic decision-making, moral agency, and the prevention of harm. This work ranges from explorations of normative constraints on specific applications of machine learning algorithms today-in everyday medical practice, for instance-to reflections on the (potential) status of AI as a form of consciousness with attendant rights and duties and, more generally still, on the conceptual terms and frameworks necessarily to understand tasks requiring intelligence, whether human or A.I.

alexs basics in biology and zoology: Aristotle's Animals in the Middle Ages and Renaissance Carlos G. Steel, Guy Guldentops, Pieter Beullens, 1999 Aristotle's zoological writings with their wealth of detailed investigations on diverse species of animals have fascinated medieval and Renaissance culture. This volume explores how these texts have been read in various traditions (Arabic, Hebrew, Latin), and how they have been incorporated in different genres (in philosophical and scientific treatises, in florilegia and encyclopedias, in theological symbolism, in moral allegories, and in manuscript illustrations). This multidisciplinary and multilinguistic approach highlights substantial aspects of Aristotle's animals.

alexs basics in biology and zoology: *Measuring the Global Burden of Disease* Nir Eyal, Samia A. Hurst, Christopher J. L. Murray, S. Andrew Schroeder, Daniel Wikler, 2020 In this volume, a group of leading philosophers, economists, epidemiologists, and policy scholars continue a twenty-year discussion of philosophical questions connected to the Global Burden of Disease Study (GBD), one of the largest-scale research collaborations in global health. Chapters explore issues in ethics, political philosophy, metaphysics, the philosophy of economics, and the philosophy of medicine. Some chapters identify previously-unappreciated aspects of the GBD, including the way it handles causation and aggregates complex data; while others offer fresh perspectives on frequently-discussed topics such as discounting, age-weighting, and the valuation of health states. The volume concludes with a set of chapters discussing how epidemiological data should and shouldn't be used--

alexs basics in biology and zoology: Diffusion MRI Derek K Jones, 2010-11-11 Professor Derek Jones, a world authority on diffusion MRI, has assembled most of the world's leading scientists and clinicians developing and applying diffusion MRI to produce an authorship list that reads like a Who's Who of the field and an essential resource for those working with diffusion MRI. Destined to be a modern classic, this definitive and richly illustrated work covers all aspects of diffusion MRI from basic theory to clinical application. Oxford Clinical Neuroscience is a comprehensive, cross-searchable collection of resources offering quick and easy access to eleven of Oxford University Press's prestigious neuroscience texts. Joining Oxford Medicine Online these resources offer students, specialists and clinical researchers the best quality content in an easy-to-access format.

alexs basics in biology and zoology: The Language of Genes Steve Jones, 1995-06-01 Did you know that two of every three people reading this book will die for reasons connected with the genes they carry? That our DNA gradually changes with age, which is why older parents are more likely to give birth to children with genetic defects than younger parents? That each individual is a kind of living fossil, carrying within a genetic record that goes back to the beginnings of humanity? In The Language of Genes, renowned geneticist Steve Jones explores the meanings and explodes the myths of human genetics, offering up an extraordinary picture of what we are, what we were, and what we may become. “An essential book for anyone interested in the development and possible future of our species.”—Kirkus Reviews “This is one of the most insightful books on genetics to date and certainly the most entertaining.”—The Wall Street Journal

alexs basics in biology and zoology: Salt Sugar Fat Michael Moss, 2013-02-26 From a Pulitzer Prize-winning investigative reporter at The New York Times comes the troubling story of the rise of the processed food industry -- and how it used salt, sugar, and fat to addict us. Salt Sugar Fat is a journey into the highly secretive world of the processed food giants, and the story of how they

have deployed these three essential ingredients, over the past five decades, to dominate the North American diet. This is an eye-opening book that demonstrates how the makers of these foods have chosen, time and again, to double down on their efforts to increase consumption and profits, gambling that consumers and regulators would never figure them out. With meticulous original reporting, access to confidential files and memos, and numerous sources from deep inside the industry, it shows how these companies have pushed ahead, despite their own misgivings (never aired publicly). Salt Sugar Fat is the story of how we got here, and it will hold the food giants accountable for the social costs that keep climbing even as some of the industry's own say, Enough already.

alexs basics in biology and zoology: Molecular Biology of the Cell , 2002

alexs basics in biology and zoology: *The Social Conquest of Earth* Edward O. Wilson, 2012-04-09 New York Times Bestseller and Notable Book of the Year A Kirkus Reviews Book of the Year (Nonfiction) Longlisted for the Andrew Carnegie Medal for Excellence (Nonfiction) From the most celebrated heir to Darwin comes a groundbreaking book on evolution, the summa work of Edward O. Wilson's legendary career. Sparking vigorous debate in the sciences, The Social Conquest of Earth upends “the famous theory that evolution naturally encourages creatures to put family first” (Discover). Refashioning the story of human evolution, Wilson draws on his remarkable knowledge of biology and social behavior to demonstrate that group selection, not kin selection, is the premier driving force of human evolution. In a work that James D. Watson calls “a monumental exploration of the biological origins of the human condition,” Wilson explains how our innate drive to belong to a group is both a “great blessing and a terrible curse” (Smithsonian). Demonstrating that the sources of morality, religion, and the creative arts are fundamentally biological in nature, the renowned Harvard University biologist presents us with the clearest explanation ever produced as to the origin of the human condition and why it resulted in our domination of the Earth’s biosphere.

alexs basics in biology and zoology: Animal Diversity Cleveland P. Hickman (Jr.), 2017 This text provides a concise introduction to the field of animalbiology. Readers discover general principles of evolution, ecology, animal bodyplans, and classification and systematics. After these introductory chapters,readers delve into the biology of all groups of animals. The basic features ofeach group are discussed, along with evolutionary relationships among groupmembers. Chapter highlights include newly discovered features of animals asthey relate to ecology, conservation biology, and value to human society.Regular updates to the phylogenies within the book keep it current.

alexs basics in biology and zoology: Speculative Everything Anthony Dunne, Fiona Raby, 2013-12-06 How to use design as a tool to create not only things but ideas, to speculate about possible futures. Today designers often focus on making technology easy to use, sexy, and consumable. In Speculative Everything, Anthony Dunne and Fiona Raby propose a kind of design that is used as a tool to create not only things but ideas. For them, design is a means of speculating about how things could be—to imagine possible futures. This is not the usual sort of predicting or forecasting, spotting trends and extrapolating; these kinds of predictions have been proven wrong, again and again. Instead, Dunne and Raby pose “what if” questions that are intended to open debate and discussion about the kind of future people want (and do not want). Speculative Everything offers a tour through an emerging cultural landscape of design ideas, ideals, and approaches. Dunne and Raby cite examples from their own design and teaching and from other projects from fine art, design, architecture, cinema, and photography. They also draw on futurology, political theory, the philosophy of technology, and literary fiction. They show us, for example, ideas for a solar kitchen restaurant; a flypaper robotic clock; a menstruation machine; a cloud-seeding truck; a phantom-limb sensation recorder; and devices for food foraging that use the tools of synthetic biology. Dunne and Raby contend that if we speculate more—about everything—reality will become more malleable. The ideas freed by speculative design increase the odds of achieving desirable futures.

alexs basics in biology and zoology: The Princeton Guide to Evolution David A. Baum, Douglas J. Futuyma, Hopi E. Hoekstra, Richard E. Lenski, Allen J. Moore, Catherine L. Peichel, Dolph

Schluter, Michael C. Whitlock, 2017-03-21 The essential one-volume reference to evolution The Princeton Guide to Evolution is a comprehensive, concise, and authoritative reference to the major subjects and key concepts in evolutionary biology, from genes to mass extinctions. Edited by a distinguished team of evolutionary biologists, with contributions from leading researchers, the guide contains some 100 clear, accurate, and up-to-date articles on the most important topics in seven major areas: phylogenetics and the history of life; selection and adaptation; evolutionary processes; genes, genomes, and phenotypes; speciation and macroevolution; evolution of behavior, society, and humans; and evolution and modern society. Complete with more than 100 illustrations (including eight pages in color), glossaries of key terms, suggestions for further reading on each topic, and an index, this is an essential volume for undergraduate and graduate students, scientists in related fields, and anyone else with a serious interest in evolution. Explains key topics in some 100 concise and authoritative articles written by a team of leading evolutionary biologists Contains more than 100 illustrations, including eight pages in color Each article includes an outline, glossary, bibliography, and cross-references Covers phylogenetics and the history of life; selection and adaptation; evolutionary processes; genes, genomes, and phenotypes; speciation and macroevolution; evolution of behavior, society, and humans; and evolution and modern society

alexs basics in biology and zoology: Neurobiology of Chemical Communication Carla Mucignat-Caretta, 2014-02-14 Intraspecific communication involves the activation of chemoreceptors and subsequent activation of different central areas that coordinate the responses of the entire organism—ranging from behavioral modification to modulation of hormones release. Animals emit intraspecific chemical signals, often referred to as pheromones, to advertise their presence to members of the same species and to regulate interactions aimed at establishing and regulating social and reproductive bonds. In the last two decades, scientists have developed a greater understanding of the neural processing of these chemical signals. Neurobiology of Chemical Communication explores the role of the chemical senses in mediating intraspecific communication. Providing an up-to-date outline of the most recent advances in the field, it presents data from laboratory and wild species, ranging from invertebrates to vertebrates, from insects to humans. The book examines the structure, anatomy, electrophysiology, and molecular biology of pheromones. It discusses how chemical signals work on different mammalian and non-mammalian species and includes chapters on insects, Drosophila, honey bees, amphibians, mice, tigers, and cattle. It also explores the controversial topic of human pheromones. An essential reference for students and researchers in the field of pheromones, this is also an ideal resource for those working on behavioral phenotyping of animal models and persons interested in the biology/ecology of wild and domestic species.

alexs basics in biology and zoology: *The Tangled Bank* Carl Zimmer, 2019-01-30 Used widely in non-majors biology classes, The Tangled Bank is the first textbook about evolution intended for the general reader. Zimmer, an award-winning science writer, takes readers on a fascinating journey into the latest discoveries about evolution. In the Canadian Arctic, paleontologists unearth fossils documenting the move of our ancestors from sea to land. In the outback of Australia, a zoologist tracks some of the world’s deadliest snakes to decipher the 100-million-year evolution of venom molecules. In Africa, geneticists are gathering DNA to probe the origin of our species. In clear, non-technical language, Zimmer explains the central concepts essential for understanding new advances in evolution, including natural selection, genetic drift, and sexual selection. He demonstrates how vital evolution is to all branches of modern biology—from the fight against deadly antibiotic-resistant bacteria to the analysis of the human genome.

alexs basics in biology and zoology: Biological Modeling and Simulation Russell Schwartz, 2008-07-25 A practice-oriented survey of techniques for computational modeling and simulation suitable for a broad range of biological problems. There are many excellent computational biology resources now available for learning about methods that have been developed to address specific biological systems, but comparatively little attention has been paid to training aspiring computational biologists to handle new and unanticipated problems. This text is intended to

fill that gap by teaching students how to reason about developing formal mathematical models of biological systems that are amenable to computational analysis. It collects in one place a selection of broadly useful models, algorithms, and theoretical analysis tools normally found scattered among many other disciplines. It thereby gives the aspiring student a bag of tricks that will serve him or her well in modeling problems drawn from numerous subfields of biology. These techniques are taught from the perspective of what the practitioner needs to know to use them effectively, supplemented with references for further reading on more advanced use of each method covered. The text, which grew out of a class taught at Carnegie Mellon University, covers models for optimization, simulation and sampling, and parameter tuning. These topics provide a general framework for learning how to formulate mathematical models of biological systems, what techniques are available to work with these models, and how to fit the models to particular systems. Their application is illustrated by many examples drawn from a variety of biological disciplines and several extended case studies that show how the methods described have been applied to real problems in biology.

alexs basics in biology and zoology: An Introduction to Language and Linguistics Ralph Fasold, Jeffrey Connor-Linton, 2006-03-09 This accessible textbook offers balanced and uniformly excellent coverage of modern linguistics.

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