nology programs, which expose students to the current topics and experimental techniques in the field. **Biotechnology: A Comprehensive Curriculum Guide for a One Semester Course at the High School (Grades 11-12) or Community College Level** is a book designed to assist teachers with the creation of such a course.

According to the author, this guide is "targeted at teachers interested in either starting a specific elective course in biotechnology or those who wish to expand their biotechnology curriculum within the scope of the biology class they already teach." It is explicit, yet very short and easy to read. The guide starts with what appears to be a commercial for a variety of different vendors' products, explaining the hardware (pipettes, thermocyclers, incubators, etc.) and the consumables (agarose gels, buffers, DNA markers) that one would need to begin or enhance a biotechnology class. From here, the guide breaks down the curriculum into specific sections.

Throughout the guide, the author provides a plethora of hard copy and electronic resources that can be used to introduce or enhance the various topics in the course. Starting with a discussion of the basics of DNA and RNA, each successive section builds on basic knowledge and skills that students develop through the previous exercises. The main guts of the course fall under the categories of genetic engineering, transformation, and transgenics; molecular markers and DNA profiling; and stem cells, cloning, gene therapy and genetic disease testing. For each category, the guide provides detailed exercises, references, and activities that can be used to cover the content. The final section of the guide, Pharmocogenomics, discusses some practical applications of the field of biotechnology. Students investigate the impact of genetically modified foods and the use of DNA sequencing in the development of new vaccines.

This is a great little book that really covers a lot of material in very little space. It is appropriate for the grade levels it targets and would really be an asset to any teacher looking to develop or enhance a course in biotechnology.

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HUMAN ANATOMY

Skin: A Natural History by Nina G. Jablonksi 2006. University of California Press. (ISBN 9780520242814). 266 pp. Hardback. $24.95 (Also available in paperback)

Did you know mosquito bites itch because as female mosquitoes are sucking blood, they inject an "irritating solution" that keeps the blood from coagulating? Have you heard about the microchips embedded under the skin of revelers who frequent nightclubs in Spain that are used pre-paid debit accounts so they don't have to carry wallets anymore? Are you aware of the extremely important role skin and sweat play in shaping the theory of human evolution? Nina Jablonski writes in great detail about these and other topics related to our body's fascinating protective sheath: skin.

The author's academic interest in skin color led her to write this informative yet approachable book titled **Skin: a Natural History** because as she was researching topics related to skin, she realized no broad spectrum skin book had yet been published. The book is extremely well-organized into 11 chapters, each with its own focus on one aspect of the amazing organ. Throughout the book, links are continuously drawn between chapters, that both inspire the reader to read on and remind the reader of important points previously made. The former chapters focus on the history and evolution of skin whereas the latter chapters focus on modern aspects of skin.

While Jablonski expertly covered topics related to the history and evolution of skin in the beginning of the book, the final chapters seem to offer too brief an overview of topics, which left me wanting more information. With that said, however, Jablonski offers us a comprehensive, clear and fascinating read with footnotes that refer the reader to a 25+ page appendix full of additional details or references. She also includes a useful glossary as well as diagrams, photos, and a few color plates as well.

In her chapter on "Skin and Sun", she clearly shows the pros and cons of ultraviolet radiation and its relationship with skin. "UVR has a good side that isn't often taken into account. Its ability to transform molecules in the skin into the precursors of vitamin D has been of paramount importance to all vertebrate organisms living on land, including people. The real trick in evolution has been to figure out a way to control the amount of UVR entering the skin, and that is the skin's dark secret" (page 64). Jablonski goes on to write a chapter titled "Skin's Dark Secret" where she clearly explains the role of melanin in regulating the amount of UVR that penetrates different skin tones.

Jablonski's command of the subject matter is inherent throughout the book. Her explanation of humans as "naked and sweaty" (and therefore evolved) is a compelling argument for skin's central role in human evolution. She does an excellent job of making the material approachable and interesting to the lay reader. At the beginning of Chapter 5, she clearly shows her ability to inform and educate. While discussing the role of melanin, she is concurrently teaching (or reminding) her readers about basic scientific concepts. "Melanin is the name given to a family of complex polymeric pigments that exist in many forms. (A polymer is a chemical compound composed of multiple repeating units)" (page 65).

Skin: A Natural History may be useful to educators in a variety of ways. First, it is a very readable comprehensive guide to one of the body's most fascinating organs. Second, it is an approachable reference book for high school students or above. Third, it offers concise explanations on a variety of topics associated with skin (passages that could simply be read aloud in class) such as information about scabs (page 123-124), shingles (page 136), or burns (page 129). Much of this information is condensed into chapter 9, titled "Wear and Tear", which is full of vignettes about how our skin responds to a variety of different diseases, hazards, and environmental conditions.

Whether the author is hashing out the differences between us and our "primate and mammalian relatives" in the earlier part of the book or detailing many of the cultural forces that inspires humans to change their skin in the later chapters, Jablonski engages the reader with her clear, informed style that makes **Skin** a very readable book.

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