



Faculty Review of Open eTextbooks

The [California Open Educational Resources Council](http://www.cool4ed.org) has designed and implemented a faculty review process of the free and open etextbooks showcased within the California Open Online Library for Education (www.cool4ed.org). Faculty from the California Community Colleges, the California State University, and the University of California were invited to review the selected free and open etextbooks using a rubric. Faculty received a stipend for their efforts and funding was provided by the State of California, the William and Flora Hewlett Foundation, and the Bill and Melinda Gates Foundation.

Textbook Name:

Biology



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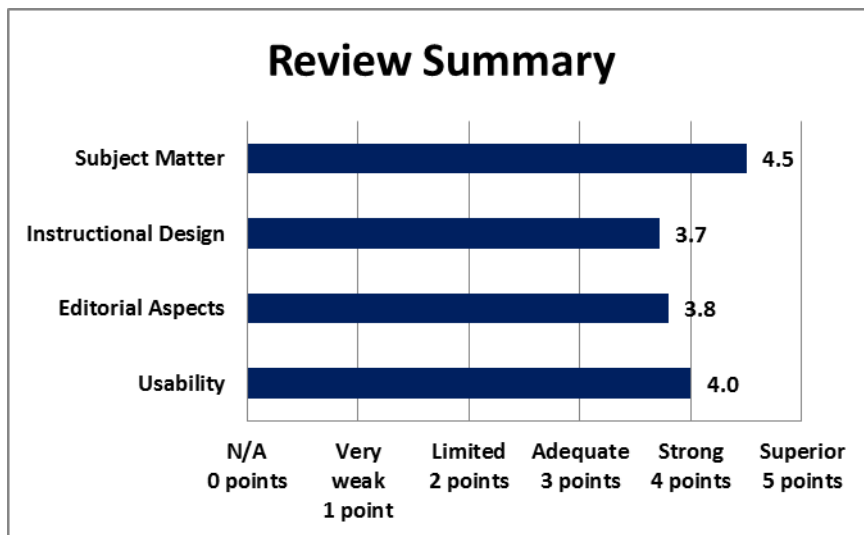
Professor

Format

Reviewed:

[Online](#)

A small fee may be associated with various formats.



Date Reviewed:

August 2015

California OER Council eTextbook Evaluation Rubric

CA Course ID: no C-ID

Subject Matter (30 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the content accurate, error-free, and unbiased?						X
Does the text adequately cover the designated course with a sufficient degree of depth and scope?						X
Does the textbook use sufficient and relevant examples to present its subject matter?					X	
Does the textbook use a clear, consistent terminology to present its subject matter?					X	

Does the textbook reflect current knowledge of the subject matter?						X
Does the textbook present its subject matter in a culturally sensitive manner? (e.g. Is the textbook free of offensive and insensitive examples? Does it include examples that are inclusive of a variety of races, ethnicities, and backgrounds?)					X	

Total Points: 27 out of 30

Please provide comments on any aspect of the subject matter of this textbook:

- The textbook provides a couple of similar definitions of evolution: "species change over time." The section describes well Darwin's mechanism for evolution: natural selection. A later section is devoted to "endosymbiosis . . . where one cell engulfs another such that the engulfed cell survives and both cells benefit. . . According to Margulis and D. Sagan: 'Life did not take over the globe by combat, but by networking' (i.e., cooperation)." I recommend that the discussion of evolution clearly include the mechanism of endosymbiosis, and not be limited to natural selection.
- The textbook provides excellent diagrams linked to clear definitions. There are many small sections that focus on very limited topics. Each topic is explored in depth with an emphasis on stating current scientific conclusions. In general, applications are limited because of the focus on "pure" science. I didn't find a glossary.

Instructional Design (35 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Does the textbook present its subject materials at appropriate reading levels for undergrad use?					X	
Does the textbook reflect a consideration of different learning styles? (e.g. visual, textual?)				X		
Does the textbook present explicit learning outcomes aligned with the course and curriculum?					X	
Is a coherent organization of the textbook evident to the reader/student?					X	
Does the textbook reflect best practices in the instruction of the designated course?					X	
Does the textbook contain sufficient effective ancillary materials? (e.g. test banks, individual and/or group activities or exercises, pedagogical apparatus, etc.)					X	
Is the textbook searchable?				X		

Total Points: 26 out of 35

Please provide comments on any aspect of the instructional design of this textbook:

- Most of the chapters are filled with lists of definitions.
- At the end of the book, the authors seem to write more freely on topics of conservation and biodiversity.
- The textbook presents clear data supporting the need for humans to change their behavior and to provide habitat restoration.
- The authors are cautious to provide correct definitions, e.g., "biotechnology -- use of living organisms in industry, agriculture, mechanical, and other technological applications." In a later section the textbook reports the rapid growth of biotechnology since the discovery of DNA, but fails to admit that a common current use of the term biotechnology is the "field of recombinant DNA and genetic engineering."

Editorial Aspects (25 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the language of the textbook free of grammatical, spelling, usage, and typographical errors?						X
Is the textbook written in a clear, engaging style?					X	
Does the textbook adhere to effective principles of design? (e.g. are pages laid out and organized to be clear and visually engaging and effective? Are colors, font, and typography consistent and unified?)					X	
Does the textbook include conventional editorial features? (e.g. a table of contents, glossary, citations and further references)			X			
How effective are multimedia elements of the textbook? (e.g. graphics, animations, audio)					X	

Please provide comments on any editorial aspect of this textbook.

- The textbook provides great details on chemical cycles and pathways. But it lacks expanding very interesting and important topics, e.g., (1) vaccinations are barely mentioned; (2) AIDS is the greatest health problem of the World but lacks a description of its causes, symptoms, latent period, etc. In general, the book seems to avoid health topics.
- The discussion about biodiversity says much about the Lake Victoria cichlids, but never describes or explains any cichlid.

Usability (25 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the textbook compatible with standard and commonly available hardware/software in college/university campus student computer labs?					X	
Is the textbook accessible in a variety of different electronic formats? (e.g. .txt, .pdf, .epub, etc.)					X	
Can the textbook be printed easily?					X	
Does the user interface implicitly inform the reader how to interact with and navigate the textbook?					X	
How easily can the textbook be annotated by students and instructors?					X	

Total Points: 20 out of 25

Please provide comments on any aspect of access concerning this textbook.

- The book has an interesting format that helps an educated reader to find various topics. However, a beginning student may have difficulty in linking topics. For example, the "Life Cycles of Sexually Reproducing Organisms" is located far from the sections on the anatomy of the human sexual organs. The textbook lacks statements that could guide the reader to related sections that are located at a distance.

Overall Ratings	Not at all (0 pts)	Very Weak (1 pt)	Limited (2 pts)	Adequate (3 pts)	Strong (4 pts)	Superior (5 pts)
What is your overall impression of the textbook?					X	
How willing would you be to adopt this book?	Not at all (0 pts)	Strong reservations (1 pt)	Limited willingness (2 pts)	Willing (3 pts)	Strongly willing (4 pts)	Enthusiastically willing (5 pts)
					X	

Total Points: 8 out of 10

Overall Comments

If you were to recommend this textbook to colleagues, what merits of the textbook would you highlight?

- This book provides in-depth well illustrated descriptions of the basic great concepts of biology. For example, both evolution and pseudoscience are well explained. There are no wasted words or unnecessary examples.
- The book begins with a careful analysis of the processes of modern science and concludes with an excellent description of why humans need to change their behaviors toward the environment.
- The book includes enough basic chemistry to support well an understanding of biochemical cycles and other chemical relationships.

What areas of this textbook require improvement in order for it to be used in your courses?

- My students ask many questions and seek explanations relating the basic concepts of biology to health problems, e.g., cancer. This book is carefully a biology book that attempts to leave health topics, e.g., the variety of vaccinations, the variety of sexually transmitted diseases, etc. to a health course, probably in another department. My students would prefer a book that makes the concepts of biology obviously relevant to their health and personal concerns.

We invite you to add your feedback on the textbook or the review to [the textbook site in MERLOT](#)
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