



## 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](http://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:

### The Environment and the Earth's Surface



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Find it: [eTextbook Website](#)

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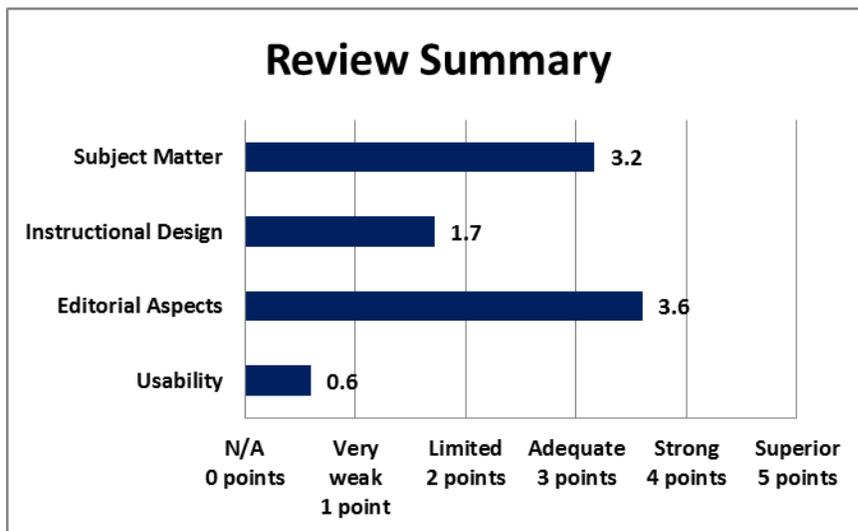
Professor

Format

Reviewed:

[Online](#)

A small fee may be associated with various formats.



Date Reviewed:

December 2015

### California OER Council eTextbook Evaluation Rubric

CA Course ID: [GEOL 100](#)

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: 19 out of 30

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

- I believe I was asked to review this on-line textbook with an eye toward its suitability for a general text for a survey course in Physical Geology.
- I note that a typical university Physical Geology course will cover a broad range of introductory material including: plate tectonics; geologic time; minerals/earth materials; igneous, sedimentary and metamorphic rocks; mountain building and deformation of the Earth's surface; basic geophysics (earthquakes, earth structure); landforms/geomorphology; weathering/erosion; surface water (liquid and frozen); the ocean and the atmosphere; and Earth resources (economic minerals/petroleum etc.). The breadth of material covered in Physical Geology necessitates that only 1-2 lectures are spent on any given topic and these lectures are the broadest type of overview.
- This textbook is a VERY complete textbook focused exclusively on those processes directly relevant to the Earth's surface (like the upper few meters of the surface). Referencing my list of topics from a typical Physical Geology survey course, this book covers surface water (liquid and frozen), weathering/erosion, landforms/geomorphology.
- Again, in a survey course these topics would be covered in 4-6 lectures. This text covers some aspects of other important topics such as mineralogy and sedimentary rocks but almost exclusively focused on processes relevant to the formation of soil. This focus on soil formation in fact omits those aspects of mineralogy and sedimentary rocks that would normally be emphasized in a survey course.
- There is no treatment of plate tectonics or geologic time in this textbook and even the Chapter 2 (Introduction Geology) omits most material not directly relevant to the top 2 meters of the Earth's surface.
- Again, this book could be used a reference for students in a physical geology survey who want to read about surface processes topics in much more depth. However, I don't think I would be brave enough to assign this textbook to an introductory class. The first chapter alone ("Introduction") is a quantitative introduction to the basic physics needed to understand earth processes at a pretty sophisticated level. This first chapter should be an appendix – any student with no background in geology/earth sciences would be intimidated by this treatment (maybe not at MIT where this textbook is used). In fact, I think this textbook could be profitably used in a graduate class on the Earth's surface environment. It is far too advanced and narrow for a survey Physical Geology class, however it could be a useful reference book and of course would be an excellent text for a course specifically on the Earth's surface.

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: 12 out of 35

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

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		

Total Points: 18 out of 25

Please provide comments on any editorial aspect of this textbook:

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: 3 out of 25

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

- I just wasn't able to assess many of these things.

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: 5 out of 10

## Overall Comments

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

- This is a great textbook for a course specifically on the Earth's surface. But very limited in use for a survey course in Physical Geology. It is also quite advanced and could easily be used in a graduate course.

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

- I think the goals of this text and the goals of an introductory survey course in physical geology are just totally different.

We invite you to add your feedback on the textbook or the review to the [textbook site in MERLOT](#)  
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For questions or more information, contact the [CA Open Educational Resources Council](#).



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