

Writing Across the Curriculum
Geosciences Bibliography
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There are relatively few available resources specifically aimed at geosciences; most of those focus on geology itself, rather than other related areas, such as atmospheric science. In this bibliography I have included some materials from other science publication that have general application to science classes.

In this bibliography, all annotations marked with a single asterisk appeared in the ERIC database, available online from the Golda Meir Library website at:

<http://www.uwm.edu/Library/Info/db.html>; those marked with a double asterisk appeared in the Academic FullText database; those with a triple asterisk came from the WAC subject bibliographies published by the Georgia State University WAC program at: <http://WWW.GSU.EDU/~wwwwac/>.

Black, N. (1994). Creative writing in historical geology as an alternative to the standard geologic report. *Journal of Geological Education*, 42 (2), 129-33. ERIC EJ549689.

Abstract: Describes an instructional approach that provides students the opportunity to experiment with the format of their final writing assignment. Poetry, prose, artwork, and short stories have all been made acceptable substitutes for the standard format.*

Brillhart, L.L., & Debs, M.B. (1981). Teaching writing--a scientist's responsibility. *Journal of College Science Teaching*, 303- 304.

Describes techniques faculty can use to teach writing in science courses, using lab reports. Discusses steps in writing a lab report, how much information should be given by teacher, and how to simplify grading.

Clemons, J. (1991). Classroom strategies for introductory geology. *Journal of Geological Education*, 39 (3), 202-3. ERIC EJ452081.

Abstract: The author describes her use of writing assignments, small-group discussions, note-taking strategies (learning logs), and professional simulations in an introductory geology course. The learning log process consists of note taking on one side of a divided page. After taking notes, students review the notes and record their questions, reactions, and observations on the right side of the page.*

Coles, K. (1991). Journal assignments in an introductory-geology course help the student and teacher. *Journal of Geological Education*, 39 (3), 187-89. ERIC EJ452077.

Abstract: Describes advantages and details of use of journal writing in introductory geology course. Entries include minimum of three one-page entries per week and count for 25 percent of course grade. Most students start with restatement of ideas presented in class; by end of the course, they are drawing original conclusions and applying ideas in new situations.*

Davis, L., & Brady, E. (1994). Library research: The first step in geoscience writing. *Journal of Geological Education*, 42 (5), 417-20.

Abstract: Features a library resource exercise developed to introduce students to library usage and available geological literature. Students' lack of basic background for proper use of library resources; Development of the exercise; Exercise assignment as a method of teaching.**

Davis, L. (1991). Student abstract writing as a tool for writing across the curriculum in large introductory-geology courses. *Journal of Geological Education*, 39 (3), 178-80. ERIC EJ452074.

Abstract: Describes assignments in abstract writing as well-suited way to integrate writing into curriculum of large introductory geology courses. When students write abstracts on either assigned outside readings or special sections in their textbooks, they develop a concise writing style and polish their writing skills and also increase their understanding of subject matter. Presents advice on evaluation of assignments.*

Halsor, S. (1991). Enhanced student learning through writing in a Physical-geology class. *Journal of Geological Education*, 39 (3), 181-84. ERIC EJ452075.

Abstract: Authors describe a "writing intensive" physical geology course utilizing both formal and informal writing assignments. The formal assignment consists of a summary paper on four geological articles. A writing tutor provides feedback on drafts of the summaries. The informal writing assignment requires students to keep a journal related to laboratory activities.*

Hodgson, H. (1978). Technical report writing in the geosciences in american colleges and universities: an evaluation and recommendations. *Journal of Geological Education*, 26 (5), 189-93. ERIC EJ195123.

Abstract: Suggests a program for improving technical writing skills of college students. Includes remedial courses for deficient students and English composition and technical writing courses for

geosciences majors. Recommends a cooperative effort between English and geoscience departments.*

Mirsky, A. (1991). Writing assignments as a continuum in geoscience. *Journal of Geological Education*, 39 (3), 232-36. ERIC EJ452090.

Abstract: This paper reviews attempts to introduce writing skills to undergraduate geoscience students, reports on the status of technical writing in geoscience curriculum, and describes a fully integrated approach to writing across the geosciences curriculum, based on a required sophomore-level technical writing course. The technical writing course leads into a continuum of writing assignments in all subsequent geoscience-content courses.*

—. (1977). Teaching reporting skills in geoscience to undergraduates. *Journal of Geological Education*, 25 (5), 157-163. ERIC EJ176264.

Abstract: Describes a course presented to increase the effective reporting and writing skills of geology students.*

Moore, R. (1993). Does writing about science improve learning about science? *Journal of College Science Teaching* 12, 212-217.

Moore conducted an experiment while teaching four sections of an introduction to biology course. Students were required to do varying amounts of guided or unguided writing in the four sections. His results showed that providing guided writing instruction in the science class resulted in significantly improved grades on exams and coursework. He argues for the need to go beyond merely writing about science and teach how to use the writing to learn the scientific concepts.

Moran, C., & Mullin, W. (1991). Dialogue across the two cultures. *Writer's Craft, Teacher's Art: Teaching What We Know*. Ed. Mimi Schwartz. Portsmouth, NH: Boynton/Cook, 69-78.

Written as a dialogue between an English professor and a physics professor about writing and teaching writing in their disciplines. They agree on the need to know and care about your subject, on the importance of some sort of research/prewriting or writing to learn, and on the benefits of collaborative writing.

Schneiderman, J. (1991). Learning geology by writing about the history of geology. *Journal of Geological Education*, 39 (3), 185-87. ERIC EJ452076. Abstract:

Author describes her first-year seminar in history of geology where students are given writing assignments asking them to summarize, describe, explain, be convincing to reader. Students review their written work through frequent revision, peer review, collaborative writing

assignments. Assignments require students to examine scientific principles of past time and incite students to explore current notions of how Earth works.*

Tinker, J. (1986). Technical writing in hydrogeology. *Journal of Geological Education*, 34 (1), 25-27. ERIC EJ336488.

Abstract: A project for Writing Across the Curriculum at the University of Wisconsin-Eau Claire is described as a method to relate the process of writing to the process of learning hydrology. The project focuses on an actual groundwater contamination case and is designed to improve the technical writing skills of students.*

Yelderman, J., & Hayward, O. (1991). Geology through communication at baylor university. *Journal of Geological Education*, 39 (3), 240-42. ERIC EJ452092.

Abstract: Based on their experiences the authors contend that increased emphasis on communication skills in the geologic curriculum results in the graduation of better geologists. The authors describe writing assignments, including first-year one-page papers, upper-level assignments, memos, oral presentations, projects, field notebooks, and senior thesis.*