



Activities for the Changing Earth System



IN A NUTSHELL

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Cost: \$10.00

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science

The twenty activities in this book address a number of environmental issues and topics, and investigate them under the framework of Earth Systems Education. This framework recognizes seven Earth Science Understandings (ESUs) about the earth and looks at the interaction of five subsystems (atmosphere, biosphere, cryosphere, hydrosphere and lithosphere) as a means for the scientific study of global environmental issues. The topics addressed include endangered species, deforestation, climate change, and biodiversity. Each activity includes objectives, description of materials needed, an explanation of the procedure (including discussion questions), questions for extended study, teacher background, references, and the relevant ESU for the lesson. The text includes student study sheets and reference fact sheets, and is illustrated with maps, black-and-white photographs, charts, and drawings. Activities are sorted for middle and high school students and include games, quizzes, simulations, and discussions.

Grade Level
6-12

Length
291 pages

Date Published
1993

THE BOTTOM
LINE

"Strong earth-science, chemistry, physics-centered instruction. Effective use of the scientific process."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Clearly cites references. Reflects a variety of settings (urban, rural, suburban). Developed and reviewed by teachers and scientists.	Many sources are dated. Does not always appear to present varied viewpoints. Presents limited cultural diversity and little attention to economics.
	Depth	Lessons involve math, biology, chemistry and physics. Concepts presented in appropriate context and in terms of local and global scales.	
	Emphasis on Skills Building	Develops critical thinking skills and application of skills to issues.	Development and application of skills are more evident in extension exercises than in lessons.
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Approach involves opportunities for cooperative learning. Includes both qualitative and quantitative evaluations. Makes connections to learners' lives.	Some lessons are rather long and would require more than one session.
	Usability	Material is very teacher-oriented. Provides helpful background information and objectives for each lesson. Individual lessons can be adapted to an existing curriculum.	Layout and format make use difficult. Use of acronyms is distracting.

"Includes some very innovative activities."

"Many lessons start out soundly, but then fall short by making assumptions and feeding them to the students."