

OVERVIEW OF THE TEXAS MINING AND RECLAMATION

ASSOCIATION'S EDUCATION PROJECT¹

by

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Abstract. The Texas Mining and Reclamation Association (TMRA) sponsors "Resources and the Environment," a teacher workshop held at a lignite mine each summer. Over a period of five years more than two hundred science teachers have participated in the 4-day workshop, and through them approximately 50,000 middle school students have been exposed to the curriculum. The workshop was developed with a grant from Phillips Petroleum Foundation, provided to the Center for Engineering Geosciences at Texas A&M University. The funding enabled the development of a program consisting of a science education curriculum addressing the earth-science concepts associated with lignite production and reclamation activities. The workshop is currently being instructed by Jim Luppens, Phillips Coal Company, and two assisting earth science specialists. The workshop includes classroom instruction, presentations by guest speakers, hands-on activities, and a tour of a lignite mine. The workshop ends with a mock public hearing involving role-playing. Roles include mining personnel, regulatory agencies, local townspeople, and adjacent landowners. The curriculum is provided as a resource for teachers and includes 55 teaching units; each comprised of student story, teacher outline, and classroom/lab activities. The objective of the curriculum is to provide middle school students with an opportunity to learn about earth science and apply that knowledge to a real situation. The unifying theme of the workshop is geology and the development of lignite coal resources; from the planning stages of a mine to final reclamation. The curriculum includes the materials and data that will permit students to perform many of the basic steps involved in the evaluation, planning, design and closure of a lignite mine. Many of the teaching units cross traditional academic boundaries, allowing teachers in various disciplines (mathematics, social studies, English, history, chemistry, and physical sciences) to incorporate aspects of the curriculum into their own classrooms.

Additional Key Word: earth science education

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