Introduction

These curriculum units were written by Fellows participating in a seminar entitled “Engineering and Science at Work: Generation of Electricity by Coal Combustion and Nuclear Fission.” The Fellows chose to write curriculum units on the topics noted in the title given for this collection.

Two units (“Coal As a Source of Energy,” by Carolyn Kinder; “Oil and Gas As a Source of Energy,” by Grayce Storey) are largely descriptive in nature and are concerned with the production and use of fossil fuels. They were written primarily for use in a course in earth science in the middle schools. Supplementing them is a unit of mathematical problems (“Mathematics: Problems on Coal and Energy,” by Joyce Bryant), also at the middle-school level.

Two units (“Where, Oh Where Is All the Clean Air,” by Theodore Parker, Sr.; “Atmospheric Changes Due to Industrial and Residential Combustion of Hydrocarbons,” by Susan Burke) are devoted to several important aspects of air pollution due to combustion of fossil fuels. Supplementing them is a unit (“Motivational Techniques and Materials for Teaching High School Science in the City of New Haven,” by Roche Samy) containing several experiments related to the atmosphere and a discussion of the effects of radioactivity on biological organisms. These three units contain information that will be useful in courses at both middle-school and high-school levels.

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