Geologic Regions of New York State: A "Virtual" Field Trip Integrating Classroom Activities With a Hallway Display and Internet Web Site

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Introduction

With funding from a small grant obtained from the Oceanside Teacher Center, we made a two week circumnavigation of New York State, photographing geologic features and collecting rock and fossil specimens. The objective of this trip was to assemble a collection of specimens and digital media (photos, Quicktime movies, and Quicktime panoramas) that could be used to construct a large hallway display at Oceanside High School and to provide teachers with supporting materials to use in the classroom. The digital media collected were also used to construct a supporting web site ("Geology of New York State") which we will continue to add to as additional localities are visited and imaged.

Description of the Project

A large hallway display of New York State geology and fossils based on the Generalized Bedrock Geology of New York State map located in the Regents Earth Science Reference Tables was created at Oceanside High School (Figure 1). This display keys actual specimens of rocks and fossils (Figure 2 and Figure 3) to a large background map and geologic time scale using digital images, diagrams, and text, bringing materials studied in the Regents Earth Science curriculum directly into the school. Oceanside students and teachers can now get an up-close view of the rocks and fossils found in various regions of New York State without having to travel to these regions. To supplement the hallway display, earth science teachers are given a package of materials for classroom presentations that interface with the hallway display. These materials include a PowerPoint presentation tour of the geology and fossils of New York on CD along with related overhead transparencies and a specimen kit to be used for classroom demonstrations. In addition, a web site explaining and illustrating the geologic regions of New York being developed at Hofstra University will allow students to view additional images and information directly tied to the materials on display. The completed project will enable teachers to send their students on a "virtual field trip" around the New York State region using the classroom materials, web site, and hallway display. A key objective of this project is to present as a visually coherent whole the ideas expressed in the Earth Science core curriculum standards of New York State and to bring together for the students several seemingly unrelated ideas taught as part of the Regents Earth Science curriculum. Specifically, the display shows that fossils are found in sedimentary strata, which were formed at different times in the history of the Earth, which can be deduced from the geographic pattern of strata revealed in different regions of New York State. Additional information presented in the display relates different rock types to particular environmental conditions that existed in the past, showing how geologists can interpret how the Earth's surface has changed through time.

Image of hallway geology display at Oceanside High School

Figure 1. Rocks and Fossils of New York State hallway display at Oceanside High School.

Image of fossils lining the bottom of the hallway display.

Figure 2. Rock and fossil specimens, labeled and color-coded to relate to the photos and map on the display backdrop.

Image of Silurian age fossils in the display

Figure 3. Silurian-age fossils presented in the display.

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