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# TEACHING TOOLS by Mark A. Gonzalez



## **Rocks and Landforms GeoTrunk Now Available**

After eleven months of meetings, discussions, writing, testing, ordering, retesting, and rewriting, the second GeoTrunk has been assembled. The new GeoTrunk was funded by the North Dakota Geological Society (not to be confused with the North Dakota Geological Survey) and was assembled through the efforts of Ann Fritz (ND Dept. of Health), Randy Burke, Lorraine Manz, and Mark Gonzalez (NDGS), and Shelly Vecchia (Gateway to Science).

The GeoTrunk provides the materials required to conduct an inquiry-based curriculum developed by the American Geological Institute (AGI). This trunk uses the "Rocks and Landforms" module of AGI's *Investigating Earth Systems* curriculum.

The "Rocks and Landforms" module has eight inquiry-based exercises, which provide middle school students with a hands-on approach to learning science. The curriculum deemphasizes vocabulary and instead exposes students to the fundamentals of the scientific method, guiding them through a set of exercises where they must develop their own hypotheses, conduct their own experiments, gather their own data, and evaluate their data and the results of their study. The processes of doing science are emphasized as these develop the problem-solving skills of students.

The "Rocks and Landforms" GeoTrunk contains the following materials:

- 36 hand specimens (12 igneous, 12 metamorphic, and 12 sedimentary rocks) illustrating the properties of common rocks and the fundamentals of the Rock Cycle,
- Nine topographic maps from across North Dakota illustrating common landforms created by geologic forces, such as wind, water, and glacial ice,
- A variety of rocks and minerals to illustrate the processes of chemical and mechanical weathering,
- Stream tables for the study of stream erosion, coastal erosion, stream deposition, delta formation, glacial erosion, and glacial deposition,
- Geologic map of North Dakota to provide students with a greater understanding of the geologic makeup of their state,
- 24 student copies of the "Rocks and Landforms" module,
- One Teacher's Manual for "Rocks and Landforms,"
- Detailed instructions on the set up of individual experiments.

Mathison's Quick Print in Bismarck laminated the geologic and topographic maps at a greatly reduced cost, and It's About Time publishers donated 5 student handbooks and one teacher's manual.

The GeoTrunk is available through the Gateway to Science center in Bismarck. Teachers must complete a training program before they can reserve and use the materials in their classrooms. To schedule a training session or to check out the GeoTrunk, contact:

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Gateway to Science  
2700 State Street, Suite 17  
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## **Surfing Safari**

I am indebted to Clarence Bina, ND Department of Public Instruction, for alerting me to the web site featured in this issue's "Surfing Safari." The Eisenhower National Clearinghouse (ENC) has constructed a comprehensive web site that is loaded with valuable information for educators and their administrators. The ENC's web site (<http://www.enc.org/>) contains in-depth sections on professional development, curriculum resources, general educational topics, and links to related web pages. For example, the section on professional development provides information on funding sources, tips for grant writing, web sites with grant descriptions, and studies on education research. The section devoted to curriculum resources includes detailed lesson plans, laboratory activities, reference sources, free materials, and professional resources for math, science, and

interdisciplinary classes. The general education topics cover a host of contemporary issues from assessment, ways to involve family and community in education, strategies for implementation of technology in the science classroom, and valuable guidelines on how to implement inquiry-based curricula. The section on Web Links contains literally thousands of web links.

One of my favorite features is the “digital dozen,” a list updated monthly of twelve outstanding and innovative web sites in science and mathematics education. Another excellent feature is the internal search engine which allows an instructor to search by topic, select the appropriate grade level (K-5, 6-8, 9-12), and select the type of resource (e.g., web sites, activities, standards-based curriculum, professional development, etc.). As a test of the search engine, I initiated a search for curriculum and lab activities on earthquakes that I might use for a fifth grade class. Instantly a list of 30 examples appeared for my perusal. I repeated the test by searching for lab activities in other topics (e.g., volcanoes, glaciers, streams) with remarkable results.

Although I was pleased with the materials and information I found on this Eisenhower National Clearinghouse site, I must caution potential visitors to this site that the amount of information is a bit overwhelming! Leave lots of time to explore, and use the buddy system—make sure someone knows when you are exploring and is instructed to physically disengage you from your web browser when the halls are dark and you are the last one remaining at school.