INCORPORATING FIELD EXPERIENCES

“The Real Classroom Is Outside—Get into It!”

This has been one of my favorite guidelines since I started learning and teaching about 50 years ago. I still enjoy exploring new venues and bringing others to places I have seen.

Museums and Nature Centers

You don’t have to amass everything by yourself. Like libraries, museums serve as common learning centers where excellent examples are displayed for students and the general public. Discover what’s available in museums near you and utilize their resources in your teaching.

I will use examples from the American Museum of Natural History in New York City, where I am an Adjunct Instructor. Museums across the country—such as the Smithsonian Institution museums in Washington, D.C., the Field Museum in Chicago, the Franklin Institute in Philadelphia, and many others—provide similar resources and support for students, teachers, families, and visitors from everywhere.

There are several ways you can take advantage of museums. One is a scheduled field trip for your classes. It’s very helpful to find out the institution’s suggestions, guidelines, reservation and lunch policies, and estimated expenses. (https://www.amnh.org/plan-your-visit/school-or-camp-field-trips) Often, bus transportation is one of the largest expenses, so you should ascertain your District rules, and sources of support (such as the PTA and local grants.)

Museums have staff educators who offer custom programs and/or have created guides for using the displays. One example is https://www.amnh.org/exhibitions/permanent-exhibitions/rose-center-for-earth-and-space/david-s.-and-ruth-l.-gottesman-hall-of-planet-earth/promos/hall-of-planet-earth-for-educators. You should use these combined with scouting visits to decide what you want your students to focus on during their visit. Both permanent and temporary exhibits can provide memorable learning experiences.

Another approach, especially if full-group trips are impractical, involves creating problem sets for students to complete during a visit. This helps them focus on aspects of exhibits most pertinent to your curriculum. These can be used during class or individual (family) visits, depending on your school’s situation.

Nature centers can serve similar purposes, and often have a focus on the local environment. They may be easier to visit than a museum, depending on your situation. Find out if there is a nature center near you that may be useful for enhancing student interest and experiences. You may also find that some welcome student volunteers.

Depending on your local environment, your community, County, and State Park and Recreation Departments may have facilities that can use helpful in your curriculum.

Field trips, Outcrops, and Landscape Features

Opportunities for teachers to join field trips are available through various professional organizations in most States. Many Sections of the NAGT (National Association of Geoscience Teachers,
https://nagt.org/nagt/sections/index.html offer such programs. So do State Earth Science Teacher Associations. For example, NYESTA (New York Earth Science Teacher Association, http://nyesta.org/) runs trips in various locations each summer.

You may have some locations near you that can be used to teach your students about their local geology. Here is one example of folding in an outcrop on a highway in northern NJ.

(credit: http://www.rci.rutgers.edu/~schlisch/structureslides/slides.html)

Your campus may have a stream on or near it that can be used to teach about hydrogeology. Look around at what’s available to you in new ways as you seek to bring your students to “The Real Classroom.”

Check also with local mineral and fossil collecting clubs. Members may be glad to work you’re your students.

Caverns, Quarries, Mines

You may also find experiences for your students and yourself at local geoscience operations. Wherever caves and caverns forms, there are private and public operations that provide safe tours. Examples include Mammoth Cave National Park, KY (https://www.nps.gov/maca/index.htm), Howe Caverns, NY (http://howecaverns.com/), and many others.

Some commercial quarries provide school visits through open houses or special arrangements, though many are age-limited for insurance reasons. One of the best quarry tours was provided at Frazier Quarry in the Shenandoah Valley of Virginia (http://www.frazierquarry.com/).

Similarly, some operating and now-closed mining operations provide educational experiences. Insurance regulations may preclude visits by younger children to active mines. But some have been converted into tourist attractions that are worth several hours travel. Two examples of these are in northwestern New Jersey, an area famous for the fluorescent minerals discovered among the zinc and iron ore deposits. These are on display in museums and private collections around the world. You can learn about the 19th-20th century mining operations and collect your own fluorescent samples at the Franklin Mineral Museum (https://franklinmineralmuseum.com/) and the nearby Sterling Hill Mining Museum (http://sterlinghillminingmuseum.org/).

Summer Field Experiences

Another excellent way to increase your knowledge and excitement about Earth Science teaching is to participate in summer experiences designed for teachers and others interested in the geosciences. One example are the GSA (Geological Society of America) GeoTeachers Field Camps (http://geosociety.org/GSA/GeoTeachers/field/camp.aspx.) GSA Education plans to run programs each summer in various locations across the country.

The popularity of this type of educational enhancement is global, so you could participate in a
wide range of packaged tours around the world. One example is GeoCamp Iceland (http://www.geocamp.is/).