

## Project BESSER: Backyard Earth and Space Science Educational Resources

Several studies have revealed that a majority of teachers take positions within a short distance of where they grew up. With this in mind, this project is an attempt to have you recognize Earth and space science-related educational resources “in your own back yard” and consider how you might make use of them as a teacher. To this end, the project comprises four parts, which are described below. **You are to prepare a short paper (approx. 6-10 pages)** that addresses each of the parts described.

### PART I: Introduction

This part comprises a brief introduction which describes your home town and its surrounding area. You may include whatever information you feel is pertinent, but you should be sure to include the following:

- 1) The name of your hometown and the county in which it is located
- 2) A topographic map of your hometown and the surrounding area with a brief discussion of processes affecting the landscape
- 3) The location of the points of highest and lowest elevation within 10 miles of your hometown
- 4) A listing of major bodies of water (lakes, rivers, large creeks, oceans, etc.) that are within 10 miles of your hometown
- 5) The names of all public school districts and any parochial/private schools that are within 30 miles of your hometown. (*If you live in an urban area, reduce the radius to between 2 and 10 miles.*) For larger districts, be sure to indicate the number middle/junior high and high schools in the district.

### PART II: Earth and Space Science Education Resources

No matter where you live, there are educational resources suitable for addressing many of the Earth Science Standards in the Physical Setting: Earth Science Core Curriculum. Some areas have public educational facilities such as museums, discovery centers, planetaria or observatories. However, even if your hometown area does not have any facilities such as these, there are undoubtedly many natural features that can serve as “outdoor laboratories.” For example, perhaps there is a state or other public park nearby in which there are waterfalls or interesting landforms (e.g., glacial features). Perhaps there are beaches, rivers or small streams that could be visited on a class field trip. Natural outcrops of rock, exposures of rock in road cuts on low-traffic roads, active or inactive rock quarries or sand and gravel mines may provide excellent opportunities to collect rocks, minerals or fossils. There may be many locations where processes such as weathering, erosion, deposition, or natural hazards, such as earthquakes or landslides may be observed and/or measured.

Your mission is to identify and describe ***at least two resources*** for earth science and space science education in your hometown area (in the broad sense above – a 30 mile radius) and describe these resources (name, location, distance from nearest school, type of resource, etc.). Be sure to identify two ***different*** types of resources (i.e., not two museums). For public resources, such as museums, etc., you should include brochures or other relevant printed material. For natural features, such as parks, cliffs, waterfalls, beaches, etc., you should include photographs. For all resources, you should include contact information for whoever must be contacted before visiting/using the site. Your description of each resource should include the geologic, astronomic, meteorologic or oceanographic significance of the site (e.g., what it is, how it formed, why it is a good example of X, etc.).

### PART III: Utilization of Earth and Space Science Education Resources

Once you have identified at least two Earth education resources, the next logical step is to give some thought as to how these resources might be used for student activities or as a source of materials that could be used with students. Some locations may be ideally suited as destinations for class field trips. Of course, you must keep in mind that a location that is suitable as a field trip site for ninth graders might not be appropriate for sixth graders. Some locations may not be suitable for class visits (for example, there might be safety concerns), but they may be good places to collect minerals or rocks for classroom use, or to take photographs or slides that might be used in the classroom. Think about how you might utilize these two resources in support of the Earth Science Core Curriculum.

***For each location, describe how you would use the Earth education resource*** at that site. Describe the types of activities you might do there or the types activities you might do with materials collected from the site. For each activity or material that you describe, indicate which Key Ideas and Specific Understandings will be addressed from the Core Curriculum. You do not need to prepare a full lesson plan or unit plan, but you should be specific in describing the type of lesson or series of lessons you might build using each resource.

### PART IV: Conclusions, References, Supporting Materials and Critical Reflection

The final section of your report should offer some conclusions about the Earth and Space Science education resources that are available in your hometown area. You should list any published resources that you used (Cite sources using APA format.) and you should append any published materials that you would like to include in the report. Finally, be sure to include a personal statement that represents a critical reflection on this activity and its potential usefulness for when you are teaching.

### PART V: Poster

You should also prepare a poster that includes information on your hometown and brief summaries (with illustrations) of the two educational resources that you’ve described in your report. These posters will be on display in the classroom and we will have an informal “poster session” so that you may ask and answer questions from your classmates.

**Projects and Posters are due April 10.**