

# BUILDING BRIDGES



## Unit Profile

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**Subject** – Earth Science

**Grade Level** – 6th

**Time Required** – Seven class periods of 50 minutes each. One four-hour field trip.

**General Description** – Building Bridges creates a partnership between a class and a nearby State Park. Park rangers visit the class, the class visits the park, and teachers collaborate with rangers to teach earth science. The students produce two multimedia presentations that are delivered via videoconference to another classroom at a distant location. That other classroom will be working with rangers located near them. During the videoconferences, the students will teach each other about "their" state park and about themselves. The Digital California Project network is used for the videoconference.

## Standards

Science – Focus on Earth Science

- Shaping Earth's Surface
  - 2. Topography is reshaped by the weathering of rock and soil and by the transportation and deposition of sediment. As a basis for understanding this concept:
    - a. Students know water running downhill is the dominant process in shaping the landscape, including California's landscape.
    - b. Students know rivers and streams are dynamic systems that erode, transport sediment, change course, and flood their banks in natural and recurring patterns.
- Ecology (Life Science)
  - 5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:
    - b. Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.
    - c. Students know populations of organisms can be categorized by the functions they serve in an ecosystem. Students know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.

## Lessons

The presentations by the park rangers, both in the classroom and in the park, will reinforce the sixth grade academic content standards for science normally taught by the teachers. The rangers and teachers have a great deal of freedom in determining exactly what material to present. However, it is important that both classes receive similar information so that their presentations to each other will be comparable.

### *Lesson One*

**Objective:** The students become familiar with the program and the importance of state parks. By the end of the lesson, students will be able to begin preparing their first PowerPoint presentation.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** This is the ranger's first visit to classroom. The rangers will introduce themselves and the program. They will describe the state park system in general and the local state park specifically.

The rangers and teachers will explain and demonstrate the use of digital cameras and PowerPoint presentations. They will also describe the structure of a presentation (Introduction, Body, Conclusion) and the work needed to accomplish the first video conference presentation. The ranger will provide the students with digital images of the park that can be used for the students' first presentation.

### *Lesson Two*

**Objective:** The purpose of lessons two and three is for the students to produce their first videoconference presentation. The presentation will include information concerning their location within the state, the area surrounding their school, and their park

Students can present narratives, photos, videos, artwork, poems, slides, information, and photos from books, or hand-held objects. Any materials or actions that would give their "sister classroom" a feel for what their life and park is like would be appropriate.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** The teacher and rangers will guide the students through acquiring digital images and other materials for the presentation as well as writing the narrative for their presentation.

### *Lesson Three*

**Objective:** Same as lesson two.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** Preparation for the presentation is completed during this lesson.

**Objective:** The students will present their PowerPoint presentation and watch the presentation from their "sister school." The students will also communicate by asking and answering questions between the classrooms.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

### *Lesson Four*

**Objective:** The students will present their PowerPoint presentation and watch the presentation from their "sister school." The students will also communicate by asking and answering questions between the classrooms.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** Park and school technicians will aid the ranger and teacher in completing the videoconference.

### *Lesson Five*

**Objective:** This is the field trip to the park. The rangers will guide the students through the park while addressing the sixth grade academic content standards that are enumerated above. This will give the students first hand experience in observing processes that have shaped the park's topography and principles concerning ecosystems in the park.

Students will become familiar with the value of state parks and collect information for their next videoconference presentation.

**Materials:** Digital camera.

**Procedure:** The ranger will guide the students around the park and will focus on topography, weathering processes, and ecosystems in the park.

### *Lesson Six*

**Objective:** The students will begin to prepare the second presentation. This presentation will explain how the sixth grade academic content standards that are enumerated above relate to the park.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** The ranger and teacher will present information and help the students begin the second presentation.

### *Lesson Seven*

**Objective:** The students will finish preparing the second presentation and will practice the presentation.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** The teacher and ranger will guide the students through the completion of the PowerPoint presentation and help them practice presenting it.

### *Lesson Eight*

**Objective:** The students will present their PowerPoint presentation and watch the presentation from their "sister school." The students will also communicate by asking and answering questions between the classrooms.

**Materials:** Digital camera. LCD projector. Laptop computer. Screen. Microsoft PowerPoint.

**Procedure:** Park and school technicians will aid the ranger and teacher in completing the videoconference.