





# **NEW!** Alcatraz Island—"The Rock"—In Paper

No one ever escaped from this isolated prison island off the coast of San Francisco; that's a pretty good record, considering it was confining Confederate soldiers way back during the Civil War!

You can build this paper model of the 12 structures on the island in about 6 hours, with the lazer-scored, black-and-tan-colored cardboard; resin "island" base; and illustrated instructions. About 9½" x 3½" x 1½" tall when complete. Glue is included. You'll need a hobby knife (page 53). For ages 13 and up. Sorry, Birdman and other prisoners not included.

40550 - Alcatraz Paper Model Kit.....\$12.99

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**ABILITY  
LEVEL 2**



Alcatraz  
Island

## **Lonely Island: Hidden Alcatraz Lesson Plans**

**TITLE:** Living on Alcatraz

**GRADE LEVELS:** 4 Through 12

**SUBJECT AREA(S):** Science, Social Studies/History, Language Arts, Visual Arts

**OVERVIEW:** Over the years, many people have lived on Alcatraz, from members of the American-Indian Movement (AIM) to Lighthouse keepers and their families to prisoners and guards. Prison guards lived in housing with their families, and their children attended school, played and did everything all children do, except that they did it on an island in the middle of the San Francisco Bay. Prisoners had no freedom, and they spent their years isolated and alone. One wrote of the dispiriting effect of hearing laughter from San Francisco carried on the late-night breezes.

The geography of “the Rock” (“alcatraz” is the Spanish word for “strange bird,” not rock) lends it certain qualities, isolation being chief among them. Everyone comments on the ever-present element of fear, maybe because of its position in the cold, forbidding, dangerous and very deep bay, or because of the fact that some of the worst criminals in the early part of the twentieth century were incarcerated there. There are no native plants or animals. Families planted yards and gardens and tried to make the island home. Even the tide pools were made by hand. The only animals inhabiting the island are birds; in fact, Alcatraz is an important bird rookery, and the second largest flock of western gulls in the world calls it home.

### **LEARNING OBJECTIVES:**

- Students will learn how the formation and shape of the bay made Alcatraz strategically important in the defense of San Francisco and the Bay Area.
- Students will understand the purpose of a lighthouse and why the Alcatraz lighthouse is so important to Alcatraz’s history.
- Students will learn the history of the prison.
- Students will try to empathize with people forced to live on Alcatraz, including both prisoners and people who had to live there for other reasons (e.g., children of guards, etc.).
- Students will write first-person narratives or descriptions of daily life on Alcatraz.

**CALIFORNIA STATE  
STANDARDS:**

Grade 4      **Language Arts** (All Language Arts entries are from **Representative Content Standards and Instructional Connections for the Language Arts.**)

Writing:

2.1 Write narratives that relate ideas, observations or recollections of an event or experience; provide a context; use sensory details; and provide insight.

Listening and Speaking: 2.1 Make narrative presentations that relate ideas, observations or recollections about events and provide a context and insight.

**Science**

Earth Sciences

5. Waves, wind, water, and ice shape and reshape Earth's land surface. As a basis for understanding this concept:  
a. Students know some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.

**Social Studies/History**

4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.

4.1.5 Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

**Visual Arts**

5.3 Construct diagrams, maps, graphs, timelines, and illustrations to communicate or tell a story about a historical event.

Grade 5      **Visual Arts**

2.1 Use one-point perspective to create the illusion of space.

2.6 Use perspective in an original work of art to create a real or imaginary scene.

Grade 6      **Language Arts**

Writing:

1.2 Create multiple-paragraph expository compositions. Engage the reader, state a clear purpose, develop the topic, and conclude with a detailed summary.

**CALIFORNIA STATE  
STANDARDS  
(continued):**

- Grade 6 **Visual Arts**  
(continued)
- 2.1 Use various observational drawing skills to depict a variety of subject matter.
  - 2.2 Apply the rules of two-point perspective in creating a thematic work of art.
  - 2.3 Create a drawing, using varying tones, shades, and intensities.
  - 2.6 Use technology to create original works of art.

- Grade 7 **Language Arts**  
Writing:
- 1.6 Create documents by using word-processing skills and publishing programs. Develop simple databases and spreadsheets to manage information and prepare reports.

- Visual Arts**
- 2.5 Create an original work of art, using film, photography, computer graphics, or video.

- Grades 9-12 **Visual Arts**
- 5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

- Grades 9-10 **Language Arts**  
Reading:
- 2.3 Generate relevant questions about reading on issues that can be researched.
- Writing:
- 1.3 Use clear research questions and suitable research methods to elicit and present evidence from primary and secondary sources.
  - 2.3 Write expository compositions, including analytical essays and research reports.
- Technology
- 1.8 Design and publish documents by using advanced publishing software and graphic programs.

**TIME: Two to three class periods**

**MATERIALS  
AND TEACHER**

- PREP:**
- Video, **Lonely Island: Hidden Alcatraz**
  - Web site, [www.kqed.org/alcatraz](http://www.kqed.org/alcatraz)
  - Map of San Francisco Bay
  - Chart paper, markers, colored pencils, crayons, drawing pencils
  - Colored construction paper
  - Computer attached to a television or overhead projector
  - Screen

### **PRE-VIEWING ACTIVITIES:**

On a piece of chart paper, set up three columns, headed "K," "W" and "L" (for what students **KNOW**, what they **WANT** to know, and what they **LEARNED** in the "K" column.

1. Ask students what they know about the San Francisco Bay: How was it formed? What is found there? What do they know about its history? Write responses on the KWL sheet. Set aside for later.
2. On a large map of San Francisco Bay, draw a triangle from Alcatraz to Fort Point to Lime Point on the Marin Headlands and back again to Alcatraz. Ask why this is called the "Ring of Fire." Why would people need to protect the entrance to the bay? What might happen? Has California ever been in danger? When? Write responses on the KWL sheet.
3. Why is there a lighthouse on Alcatraz? What does a lighthouse do? What do students know about lighthouses? What do they want to know about lighthouses? What do they want to know about this lighthouse in particular? Write responses on the KWL sheet.

### **FOCUS FOR VIEWING:**

- Ask students to imagine themselves living on Alcatraz, surrounded by the icy bay and with the cold San Francisco fog blowing across the island. While visiting the **Lonely Island: Hidden Alcatraz** Web site and watching the video, have students take notes on who has lived on Alcatraz and why they were there. Listen for information about how they spent their time. Also write down the major events or uses of the island.

### **VIEWING ACTIVITIES:**

- Ask students to take notes from the Web site and video in the form of a list of names, with a description after each name.
- Remind students to put their lists into a time frame.

### **POST-VIEWING ACTIVITIES:**

#### **Activity 1**

1. Have students work in groups to research answers to their questions on the KWL chart.  
One group will research the San Francisco Bay formation, one group will research the lighthouse and one group the history of the prison.
2. Students will present their findings to the class.

#### **Activity 2**

1. Ask students to read one item from their lists. Write student responses on chart paper in the "L" column. Try to get one item from each student; if there are duplicates, place a check by the first mention of the item to validate the second student's note-taking skills.
2. Have students write either a poem or a short story, including illustrations, about the experience of being a prisoner on Alcatraz. Ask them to imagine being a prisoner in his cell late at night. It's dark, and the only light is from the moon, the stars and a glittering of light from San Francisco. Ask what they might be thinking and feeling

(anger? fear? isolation? loneliness? regret?). Then ask them to think about how people might express these feelings in written form. How might these feelings affect what you see, think, hear, smell, want and so forth?

3. Have students present their pieces to the class.
4. Mount the completed pieces on colored construction paper around the room.

### **EXTENSIONS:**

- Have students do one or more of the following:
- Make a model lighthouse.
- Visit or access the Web site of the Bay Model Association in Sausalito for an in-depth view of what the bay looks like, what life it supports and its future.
- Make a map of the bay (relief or flat).
- Research the building of the Golden Gate Bridge (many photos are available).
- Research how fresh water gets to the bay (Sierra Nevada).
- Access Web sites for environmental groups that are trying to protect the bay from pollution. Write a paper on their points of view.
- Research what happens when fresh water meets ocean water.
- Create a design for use of the island: "Should the structures be remodeled/renovated or torn down for new buildings?"
- Create a plan or protection policy for Alcatraz.
- Find books or movies about lighthouses or with lighthouse references.
- Ask students to write an essay on one of the following:
  - What would a day in your life be like if you lived on Alcatraz (not as a prisoner)? How would it be different from your life now?
  - What would it be like to be a prisoner there?
  - Imagine you are a child visiting his or her father in prison. How would you feel and act? How would you get to Alcatraz?
  - Does being in prison make a person better?
  - Devise an escape attempt from Alcatraz, as if you were a prisoner.
  - Write a first-person narrative about a day in the life of a lighthouse worker on Alcatraz during one of the time frames discussed on the Web site.
  - Write a research paper on lighthouses across the country (or world). (PBS has an excellent video on lighthouses.)

**The following Web sites are accessible for research by teacher or students:**

- **Reservation Controversies**  
<http://memory.loc.gov/ammem/ndlpedu/lessons/97/reservation/resourc2.html>  
This site, part of the Library of Congress American Memory Collection, has links to almost everything related to Native-American studies, including a link to treaties made and broken, Native-American authors (their bios and synopses of their works), and current issues.
- Printable travel guide: <http://www.nps.gov/alca/pphtml/print.html>
- National Park Service geology lesson plans:  
<http://www2.nature.nps.gov/grd/edu/>
- **Alcatraz Island: Memoirs of a Rock Doc:** <http://www.alcatrazdoc.com/>  
A physician on Alcatraz Island between 1937 and 1938 reveals excerpts from his secret journal.
- Alcatraz Island Q: <http://alcatraz.san-francisco.ca.us/>
- Links, history, mailing list, trivia, and a photo gallery.
- **The Rock in the Age of the Public Enemies:**  
<http://www.alsirat.com/alcatraz.html>
- **AlcatrazHistory.com:** <http://www.alcatrazhistory.com/>  
Features narratives and photos that chronicle life in the maximum-security penitentiary.
- American Indian Occupation of Alcatraz Island with photos from the 1969-71 occupation: <http://www.csulb.edu/~gcampus/libarts/am-indian/alcatraz/>
- Battle of Alcatraz: <http://www.alcatrazhistory.com/battle1.htm>
- **Islands of Infamy**  
[http://www.thinkquest.org/library/lib/site\\_sum\\_outside.html?tname=21109&url=21109/](http://www.thinkquest.org/library/lib/site_sum_outside.html?tname=21109&url=21109/)  
A tour of island prisons -- mainly Alcatraz, U.S.A., and Robben Island, South Africa.
- There are 358 Web sites on everything from flora and fauna to memoirs:  
<http://www.cr.nps.gov:8765/query.html?rq=0&col=nps&qt=alcatraz&ht=0&qp=&qq=&qc=&pw=100%25&ws=0&qm=0&st=1&nh=10&lk=1&rf=0&rq=0&si=1>
- Books available on Native American history: <http://www.csulb.edu/projects/ais/>

## Mapping The Rock

Perhaps one of the most gratifying applications of photogrammetric mapping is preservation of historical locations. We at HJW GeoSpatial (HJW), Inc. recently had the opportunity to participate in such a project when Architectural Resources Group (ARG), an historic preservation and planning architectural firm, contracted us to map the infamous Alcatraz Island.

Registered as a National Park Service Landmark, Alcatraz, commonly known as “The Rock,” has a rich and intriguing past that draws thousands of tourists every year. This heavy traffic, along with the natural consequence of time and weather have taken their toll on the island’s structures – a few of which date back to the 1860s when Alcatraz supported the most important military fort west of the Mississippi. ARG is undertaking a number of stabilization and restoration projects on the island, which require accurate photogrammetry.

The aerial acquisition for the project was pretty straightforward. At approximately 1500 feet by 700, feet Alcatraz (figure 1) is shaped like a stereomodel, a 3D rectangular model formed by the intersection of rays of a pair of overlapping photographs. Consequently, only one model was needed to create the map of Alcatraz. This means that the photographer theoretically only had to take two aerial photographs to get the job done. ARG’s mapping specifications called for 1 inch equals 40 feet, with two-foot contours. To accomplish this, we acquired photography at 1,500 feet above the island, using a 152-millimeter lens on an aerial camera, resulting in a photo scale of 1:3,000.

In contrast to the ease of photographic acquisition, compilation on this project presented a number of challenges. The technical hurdles that we faced were directly related to the island’s historical significance. Were Alcatraz in its original state – totally barren of soil, vegetation and water – it would have been a fairly easy task to compile its features: an oval rock that sloped down to the ocean. An important object of this project, though, was to detail the structures that had been added over the years. This included the ruins of its past as a military fort, military prison and, finally, a high-profile federal penitentiary.

Because many of the island’s historic buildings had been destroyed during the “Indians of All Tribes” occupation of Alcatraz from 1969 to 1971, our task was to interpret the edges of crumbling infrastructure elements. The topography of the island, which consists of more than 100 feet of relief, irregular cliff faces and a tree-covered hillside, complicated the process. The only way that these challenges could be met was through meticulous technical attention. Buildings are simple enough to identify, but the structures on Alcatraz were in various stages of ruin. Imagine the difference between driving along an unfamiliar winding road on a clear sunny day versus driving that same road during a blizzard. Our compilers had to scrutinize the aerial photography to determine what to identify as buildings and what to show as debris. Additionally, they had to illustrate the various elevations of that wreckage, while contending with dense foliage that often obscured their line of vision (figure 2).

Marlowe Molstad, senior stereo compiler, said that after examining the current photography of Alcatraz for so long, he became curious about what the island looked like in the past. He found his answer in HJW's image library, Pacific Aerial Surveys (PAS). Founded by Clyde Sunderland, a nationally recognized pioneer of aerial photography, PAS contains more than 500,000 of the San Francisco Bay Area, dating back to the 1920s. Mr. Molstad discovered an aerial photo dated 9/8/49, which showed Alcatraz in its full utility (figure 3). Cemented areas were intact. The "Big House," staff living quarters, pier and even the water tower were clearly visible. "Despite the wear and tear of its turbulent past, it was good to see that more of the original construction than we originally guessed survives," Mr. Molstad said.

Other than general information that ARG is working on seismic stabilization of the cellblocks and future maintenance projects, HJW is not privy to the details of how ARG plans to use the new mapping data. Nevertheless, as members of the Bay Area community, we feel a certain amount of pride in being able to contribute to preservation of "The Rock."

Peter Ashley and Shel de Zabala, HJW GeoSpatial, Inc.