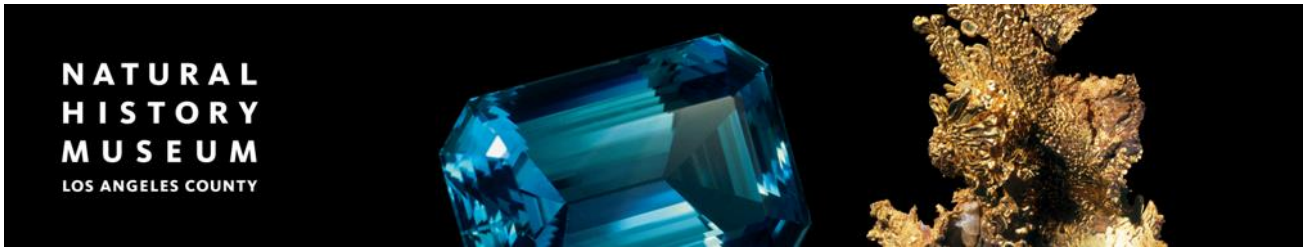


California's Geologic Regions

4th Grade

Duration
Visit: 15-20 minutes

Post-Visit: 30-60 minutes

Location
Gem & Mineral Hall

Supplies
- Worksheet
- Pencil
- Clipboard (optional)
- Materials for poster

Standards
History-Social Science 4.1.3.4.5

ELA Grades 3-5:

Organization and Focus

Vocabulary
Mineral

Region

Desert

Mountain

Coastal

Valley

Student Work

Concept

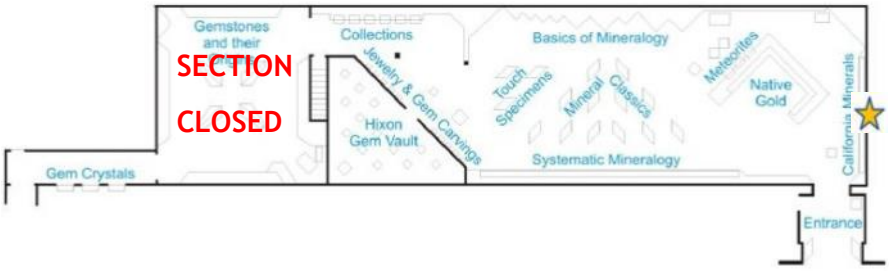
- California has four major geologic regions defined by different kinds of mineral deposits.

Objectives

- Students will identify a mineral from each of the four regions of California: Desert, Mountain (Sierra Nevada), Coastal and Valley (Great Valley).
- Students will identify the State Mineral and label what region in California it comes from.
- Students will create an informative poster about one mineral representing a California region that includes a descriptive paragraph and a drawing of the mineral.

Outline

1. During a visit to the Natural History Museum ask students collect data about California regions using the included worksheet.
2. Back in the classroom, share student answers and discuss their observations from the Museum trip.
3. Using the information collected, as well as individual research, have students create a poster depicting one of the four California regions and a representative mineral that includes a descriptive paragraph and drawing of a mineral from that region.



Museum Visit

Hand out the worksheet and direct students to answer the questions in the Museum, using the California Minerals section of the exhibit. Under each box, the students should write the name of the mineral, where it is found in California, and a number of adjectives to describe it. Additionally, have students find the California state mineral, Benitoite (in the first glass case on the right as you enter the exhibit, 2nd row from the top).

Post-Visit

After the museum visit, lead students in a discussion in class about the minerals they found, challenge them to compare and contrast the minerals and identify regional differences if possible.

Students can then break into small groups to discuss the geographic characteristics of a region and make inferences in connection with the minerals they discovered. For example, the state mineral Benitiote is a smooth mineral with 2 colors from the Coastal region in San Benito. What parts of that kind of environment may have contributed to the formation of the mineral? Have students list some ideas, for example: Did the winds from the ocean shape the mineral? Did the mineral get it's color from sand or sandstone close to the ocean?

The student will then choose one of the minerals they observed in the museum to do further investigation on, using the questions above as a jumping off point for exploration and research. In answering these questions and doing their research, students should be sure to define the characteristics of the geographic region the mineral comes from.

In addition, ask students to create a drawing of one of the minerals they discovered in the medium of the teacher's choosing; pastels, paints, or colored pencils and write a descriptive paragraph using their handout to write about the mineral telling the shape, color and texture of the mineral.

The students can continue reaching this standard by looking more closely at the geographical features that define a region. Students will list the physical differences of each region. Then on a map of California, have the students label the 4 different regions and the student can name a mineral from each region.

California's Geologic Regions

1. Find a mineral from each of California's Regions listed below

a. **Write the name of one mineral below it's region**
b. **Draw the mineral in the box**
c. **List adjectives describing the mineral below your drawing**

Desert

_____

_____

_____

_____

_____

Mountain (Sierra Nevada)

_____

_____

_____

_____

_____

Coastal

_____

_____

_____

_____

_____

Valley (Great Valley)

_____

_____

_____

_____

_____

2. Find the California State Mineral, record its name, where it was found, and draw a picture of it in the box.

Name: _____

Location found: _____

Drawing:

3. Below, write some similarities and differences you have observed among these minerals: