

## Teachable Moments: A Guide for Your Fieldtrip

### Gem and Mineral Hall, Grade 4

*Gallery Description: More than 2,000 gem and mineral specimens are on view in the Gem and Mineral Hall. The hall features one of the largest gold exhibits in the world that includes over 300 pounds of natural gold, along with gold mining artifacts and other memorabilia. The walk-through Hixon Gem Vault houses such spectacular treasures as exquisite star rubies, emeralds, and sapphires.*

#### Science Activities

- Gather students in front of the Rock Cycle display.

Show students the panel for each type of rock and explain the differences between them.

Give students time to study the panels, and ask questions to help them bring in prior knowledge. Then, ask students to explain how a rock transforms from one type to another.

#### Math Activities

- Gather students in front of any display in the hall.

Point out gems or minerals that have parallel and perpendicular lines.

In pairs, have students walk around and take turns picking gems or minerals and describing the parallel and perpendicular lines they observe within them.

#### Language Arts Activities

- Gather students in the back room of the hall.

Pick a gem or mineral and describe it using a simile and a metaphor.

Simile example, "The gem is as blue as the sky."

Metaphor example, "The gem's sides are intersecting highways."

In pairs, have students walk around and take turns picking a gem or mineral and describing it using a simile or metaphor.

*These activities support the following 4<sup>th</sup> Grade California State Standards:*

#### Science

Earth Science: The properties of rocks and minerals reflect the processes that formed them. As a basis for understanding this concept:

- a. Students know how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to their properties and methods of formation (the rock cycle).
- b. Students know how to identify common rock-forming minerals (including quartz, calcite, feldspar, mica, and hornblende) and ore minerals by using a table of diagnostic properties.

**Math**

Measurement and Geometry 3.0: Students demonstrate an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems:

**Language Arts**

Literary Response 3.5: Define figurative language (e.g., simile, metaphor, hyperbole, personification) and identify its use in literary works.