

Understanding Key Concepts

- The prevailing winds in California blow from which direction?
 - from the north
 - from the south
 - from the east
 - from the west
- Which of the following mountains is the highest point in California?
 - Mt. Shasta
 - Lassen Peak
 - Mt. Whitney
 - Telescope Peak
- Where does the warm air of a Maritime Tropical Pacific air mass originate?
 - Alaska
 - Hawaii
 - Mexico
 - Japan
- Which of the following tectonic plates did NOT play a major role in shaping the geology of California?
 - the North American plate
 - the Cocos plate
 - the Pacific plate
 - the Juan de Fuca plate
- Which of the following types of rock is the oldest rock found in California?
 - gneiss
 - limestone
 - granite
 - sandstone
- The rotation of which of the following regions caused the southern California coastline to become irregular?
 - the region of the future Peninsular Ranges
 - the region of the future Coast Ranges
 - the region of the future Sierra Nevada
 - the region of the future Western Transverse Ranges
- Which of the following energy resources provides the largest percentage of all of the energy used in California?
 - oil and natural gas
 - hydroelectric
 - geothermal
 - solar

- Which of the following energy resources is the most plentiful renewable energy resource in California?
 - geothermal
 - hydroelectric
 - solar
 - wind
- Which of the following statements about earthquakes in California is false?
 - California experiences more than 30 earthquakes each day.
 - Most earthquakes in California are too small to feel.
 - Earthquakes of magnitude 4.5 and greater are uncommon in California.
 - Many earthquakes in California happen at tectonic plate boundaries.
- Movement along the San Andreas fault occurs at the boundary between which two tectonic plates?
 - the Juan de Fuca plate and the Pacific plate
 - the Juan de Fuca plate and the North American plate
 - the Pacific plate and the North American plate
 - the Pacific plate and the Cocos plate

Short Answer

- Describe the major influence of the California Current on California.
- Describe California's geologic location.
- Explain why southern California receives less rainfall than northern California.
- List two factors that determine California's climate zones.
- Briefly describe how the San Andreas fault formed.
- Explain how Mount Shasta and Lassen Peak are related to subduction.
- Where are most aquifers in California located?

18. Explain why few localities in California are suitable for building wind farms.
19. Describe the relationship between tectonic plate boundaries and the locations of earthquakes in California.
20. Explain why parts of California are prone to landslides.

Critical Thinking

21. **Making Comparisons** Compare the way in which a Maritime Polar Pacific air mass produces rainfall in California with the way in which a Maritime Tropical Pacific air mass produces rainfall in California.
22. **Analyzing Relationships** Explain the relationship between glaciation and the landforms seen in the Sierra Nevada.
23. **Analyzing Ideas** Explain why oil and natural gas are considered nonrenewable resources.
24. **Making Inferences** Describe two effects that global warming may have on the California coastline.

Concept Mapping

25. Use the following terms to construct a concept map: *energy resource, hydroelectric, solar-electric generating plant, oil and natural gas, solar, steam, renewable resource, wind, dam, nonrenewable resource, oil and natural gas field, geothermal, and wind farm.*

Math Skills

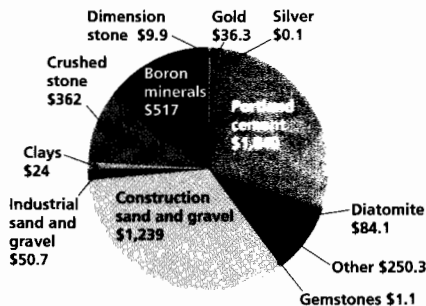
26. **Making Calculations** The southern part of the San Andreas fault was created about 5 million years ago. A distance of 220 km now separates rocks that were initially next to one another on opposite sides of the fault. On average, how many centimeters per year has the San Andreas fault moved over the last 5 million years?

Writing Skills

27. **Writing from Research** Research the struggle over water rights that was fought between the City of Los Angeles and the farmers and ranchers who lived in the Owens Valley during the early 20th century. Write a paragraph that summarizes the impact of the "California Water Wars" on the Owens Valley. Write another paragraph that summarizes how water from the Owens Valley transformed Los Angeles.

Interpreting Graphics

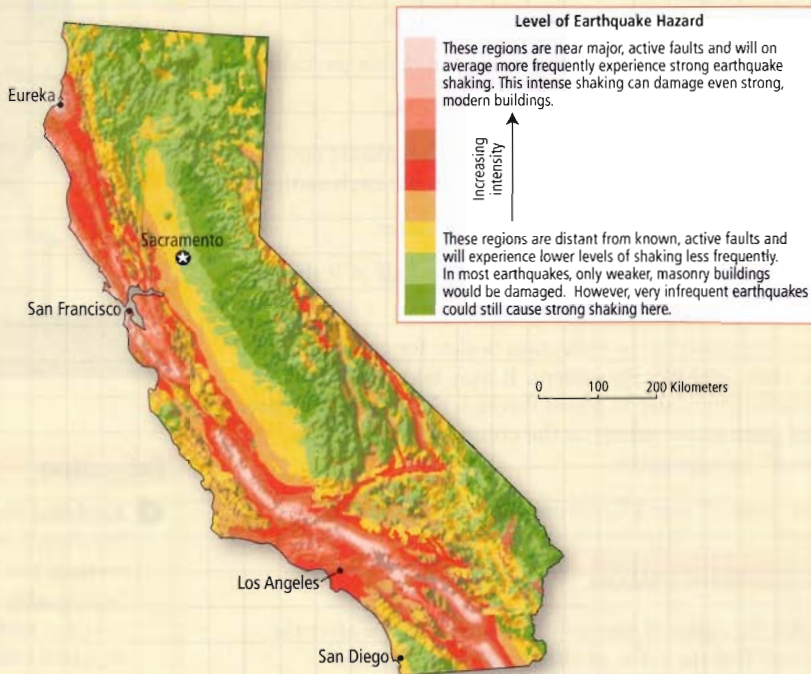
The pie graph below shows the value of non-fuel mineral resources produced in California in 2004. Values are given in millions of dollars, and the total value of all mineral resources is \$3.61 billion. Use the graph to answer the questions that follow.



Values in millions of dollars

28. Name the top four nonfuel mineral resources produced in California in 2004 in order of value.
29. Approximately what percentage of the total value of nonfuel mineral resources produced in California in 2004 do the top four nonfuel mineral resources represent?
30. California is known as the "Golden State." What was the value of gold produced in California in 2004?
31. Approximately what percentage of the total value of nonfuel mineral resources produced in California in 2004 does gold represent?

Earthquake Hazard Map of California



Map Skills Activity



This map shows the level of earthquake hazard for California. The earthquake-hazard level for California is based on the relative intensity of ground shaking and damage from anticipated future earthquakes.

- Using the Key** Which areas of the map have very high earthquake-hazard levels?
- Using the Key** Which areas of the map have very low earthquake-hazard levels?
- Evaluating Data** Explain why certain areas on the map have high earthquake-hazard levels.

- Inferring Relationships** Most earthquakes take place near tectonic plate boundaries. Given the hazard levels on the map, indicate the areas where you think tectonic plate boundaries are located.
- Analyzing Relationships** Locate where on the map you live, and describe the level of earthquake hazard where you live.