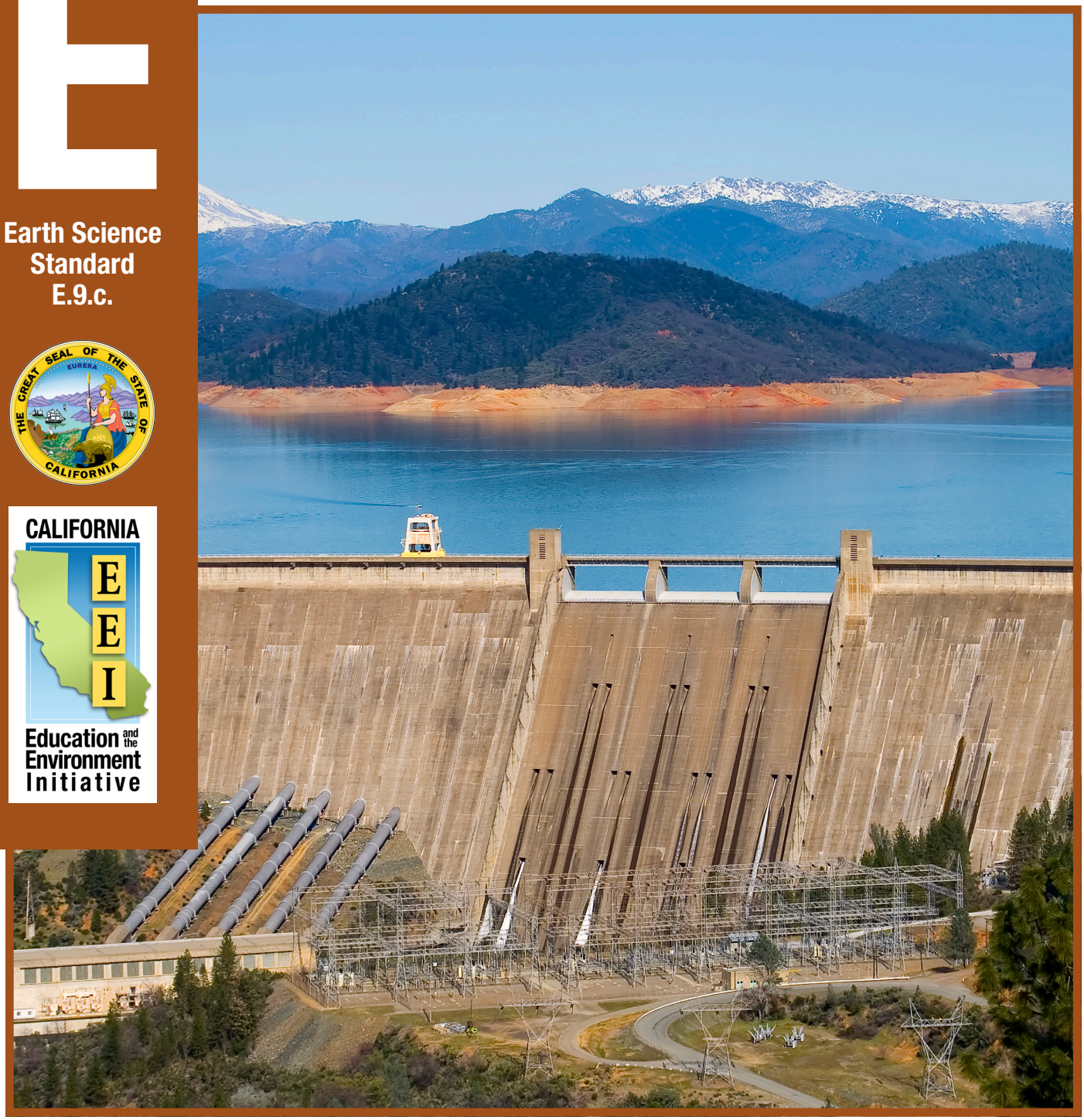
Teacher's Masters

California Education and the Environment Initiative

Earth Science Standard E.9.c.



Liquid Gold: California's Water

California Education and the Environment Initiative

Approved by the California State Board of Education, 2010

The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency

California Natural Resources Agency

Office of the Secretary of Education

California State Board of Education

California Department of Education

California Integrated Waste Management Board

Key Leadership for the Education and Environment Initiative:

Linda Adams, Secretary, California Environmental Protection Agency

Patty Zwarts, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency

Andrea Lewis, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency

Mark Leary, Executive Director, California Integrated Waste Management Board

Mindy Fox, Director, Office of Education and the Environment, California Integrated Waste Management Board

Key Partners:

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Office of Education and the Environment

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http://www.calepa.ca.gov/Education/EEI/

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Contents

Lesson 1 Who's in Charge of the Water?

None required for this lesson.

Lesson 2 Supply and Demand for California's Water

None required for this lesson.

Lesson 3 Moving California's Water

None required for this lesson.

Lesson 4 Salt and Smelt—Feeling the Effects of California's Thirst

None required for this lesson.

Lesson 5 The Watery Decisions We Make

None required for this lesson.

Assessments

Liquid Gold: California's Water—Traditional Unit Assessment Master 2

California's Water Brochure—Alternative Unit Assessment Master 6

Name: _____

Part 1

Instructions: Select the best answer and circle the correct letter. (2 points each)

1. In California, which of the following uses the greatest amount of the freshwater supply?
   - a. recreation
   - b. agriculture
   - c. landscaping
   - d. urban areas

2. In California, most of the precipitation occurs in which part of the state?
   - a. in the northern third of the state
   - b. in southern California
   - c. in the southeast region
   - d. along the coast

3. Most of California's fresh water comes from _____.
   - a. rivers and lakes in the state
   - b. the Colorado River
   - c. the Pacific Ocean
   - d. Mount Shasta

4. In which part of California are urban uses of water the greatest?
   - a. northern
   - b. eastern
   - c. central
   - d. southern

5. The state is divided into 10 areas that manage and redistribute water called _____.
   - a. state water projects
   - b. groundwater sources
   - c. hydrologic regions
   - d. coastal ranges

6. Most of the water transported to the southern part of the state is for what purpose?
   - a. to recharge aquifers
   - b. for drinking
   - c. to allow smelt to spawn
   - d. to irrigate crops

Name: _____

7. In California, how is surface water stored until it is used?
- a. in aquifers
- b. in reservoirs
- c. in wells
- d. in pipelines

8. Potential energy of water in reservoirs _____.
- a. is used to generate electricity
- b. drains the aquifers under the ground
- c. pollutes groundwater supplies
- d. causes salt to build up in soils

9. Which of the following is not a factor in determining where precipitation falls in California?
- a. topography
- b. salinity
- c. wind currents
- d. moisture from the ocean

10. Why did a judge stop the pumping of water from the Bay-Delta region?
- a. to protect the population of a species of fish
- b. to provide more water to agriculture in the area
- c. to help conserve surface water supplies in the area
- d. to prevent saltwater intrusion into the area's aquifers

11. Approximately what percentage of the state's waters are considered "impaired"?
- a. over 50%
- b. less than 10%
- c. 40%
- d. 100%

12. Which of the following best describes the water projects in the state?
- a. They are all overseen by the federal government.
- b. They follow natural waterways all the way to the ocean.
- c. They are all a result of the six-year drought that began in the 1980s.
- d. They are used to generate electricity as well as provide water.

13. Which of the following has resulted from human use of the Bay-Delta for water?
- a. More groundwater recharge occurs in the Tulare Lake region.
- b. Less precipitation falls in the Sierra Nevada.
- c. Changes to the wildlife and ecosystem of the Bay-Delta have occurred.
- d. Flooding in the Sacramento region has increased.

Name: _____

14. Which agency or group cooperates with local agencies to manage the state's water supply and use?
- a. federal government
- b. Bay-Delta Authority
- c. Department of Water Resources
- d. Delta Vision Blue Ribbon Task Force

15. Most of California's fresh water comes from _____.
- a. precipitation and snowmelt
- b. other states
- c. desalinized sea water
- d. underground aquifers

Part 2

Instructions: Provide short answers for the following questions. (5 points each)

16. Why is California's fresh water supply called "liquid gold?"

17. Explain what California's "water budget" is and why it is important.

Name: _____

18. What is the role of the Sacramento-San Joaquin Delta in California's water management system?

19. Describe a direct effect of California's use of freshwater resources on the state's natural systems.

20. How do irrigation practices in the San Joaquin Valley contribute to salinization of the soils?

Name: _____

Due date: _____

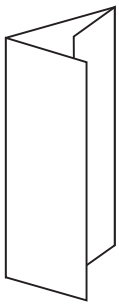
Each morning Californians turn showers on, or turn on the faucet to brush our teeth. We water our yards, and use fresh water to cook and clean. Our businesses and recreational activities also rely on the freshwater supplies in the state. But water use has become an issue in California. Changes in our fresh water supply and a growing population have put pressure on all of us to conserve.

Instructions: Produce a 6-panel brochure to inform the public about water in California. The first panel in your brochure should be the "title page"—make sure the title of your brochure, your name, and the due date appear on that panel. Your brochure must include information about:

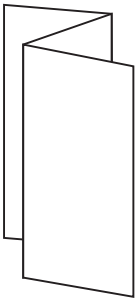
- the sources of fresh water in California.
- the locations of supply and the various demands (uses) for fresh water.
- how water is supplied to areas that need it.
- the effects of our use of fresh water on natural systems.
- what is being done by the state government to manage California's fresh water supply and use.

Use the **California's Water Brochure Scoring Tool** on page 3 to guide your writing.

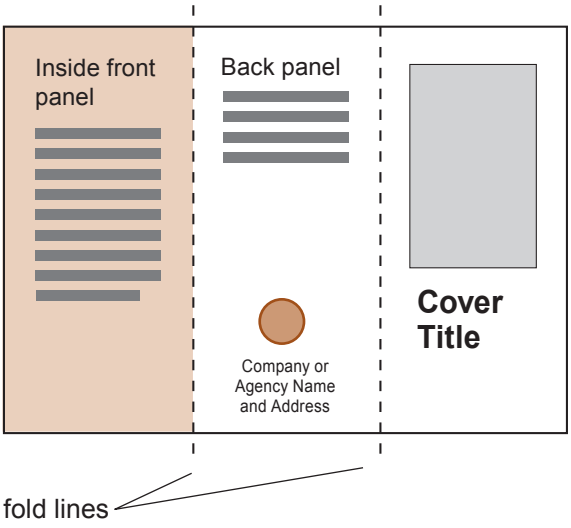
6 Panel Tri-Fold Brochure



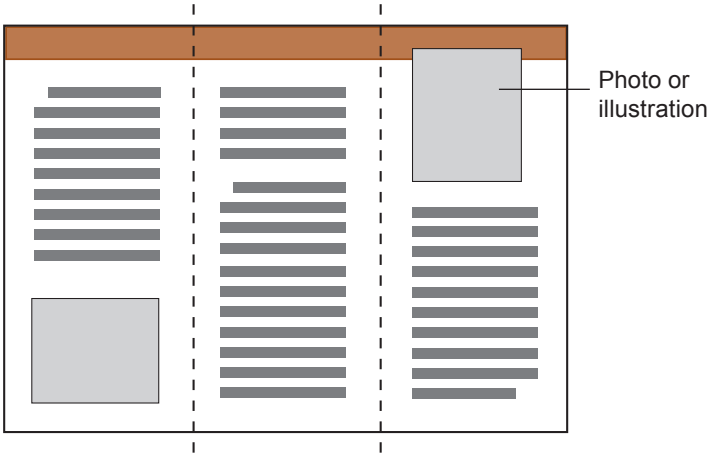
6 Panel Z-Fold Brochure



Sample Outside Brochure



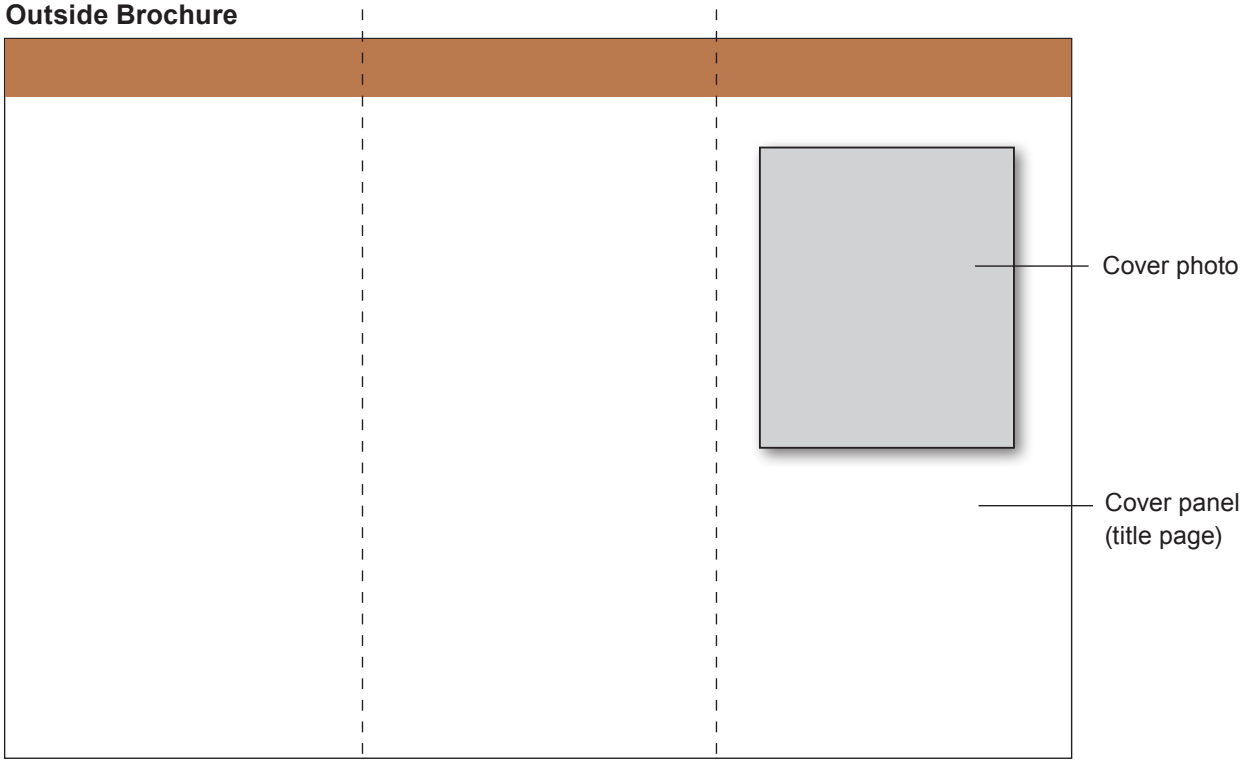
Sample Inside Brochure



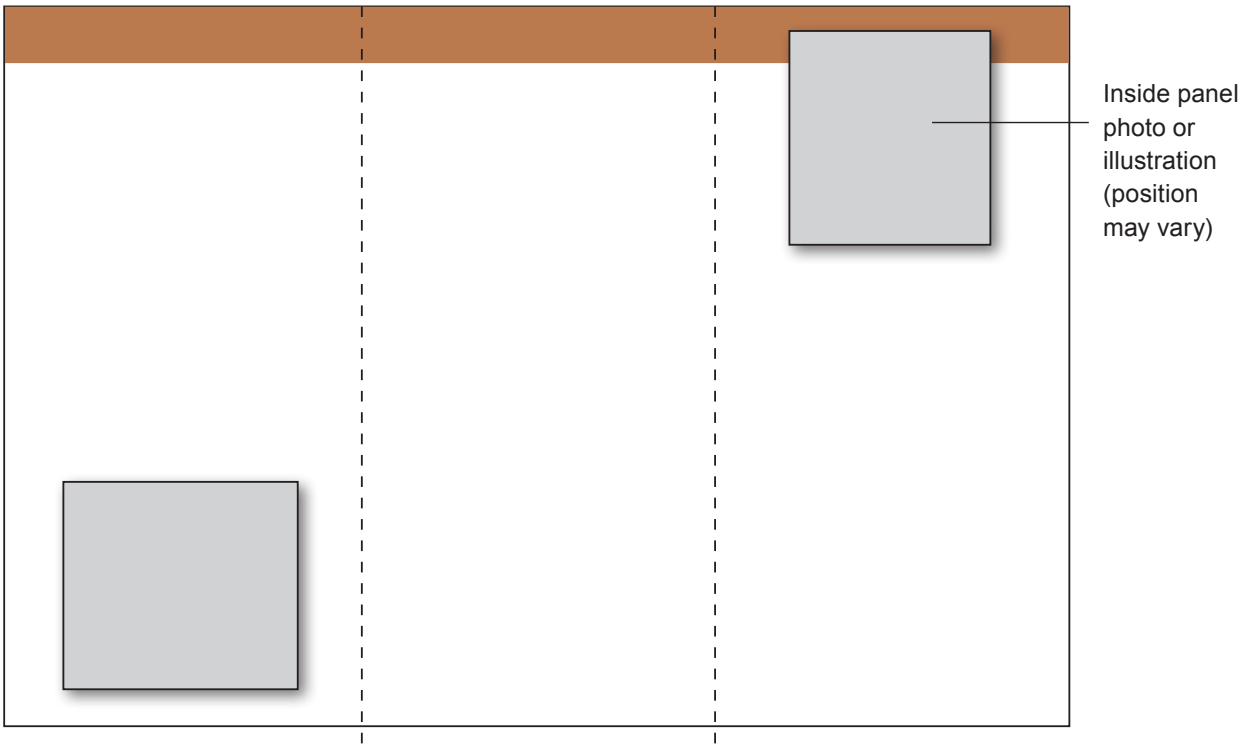
Name: _____

Instructions: Use the space below to plan the layout and content of the panels on your brochure (including the "title page").

Outside Brochure

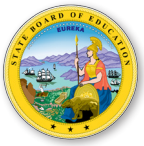


Inside Brochure



California's Water Brochure Scoring Tool

Component	Points possible
Identifies the sources of fresh water in California	10
Identifies the locations of supply and the various demands (uses) for fresh water	10
Describes how water is supplied to areas that need it	10
Points out the effects of our use of fresh water on the natural systems	10
Describes what is being done by the state government to manage California's fresh water supply and use	10



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