

History
Pasadena Museum of History

Flowing Waters, Fruitful Valley

How Water Plays An Important Part In The Growth of Our Community

Time First meeting 1 hour with follow-up as needed

Grades 3-5

California History-Social Science Standards

Grade 3

3.1 Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.

3.2 Students describe the American Indian nations in their local region long ago and in the recent past.

3.3 Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.

3.5 Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region.

Grade 4

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

4.4 Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.

5.1 Students describe the major pre-Columbian settlements, including the cliff dwellers and pueblo people of the desert Southwest.

California Science Standards

Grade 5

Earth Sciences

3d. Students know that the amount of fresh water located in rivers, lakes, under-ground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.

3e. Students know the origin of the water used by their local communities.

Indicators of Achievement

- Student completes a map of a planned community using available water resources using correct map-making conventions.
- Student understands that natural resources are finite and citizens must protect, preserve and conserve water.

Materials

12 x 18 paper, colored pencils, pens, crayons, markers, water use charts (see below) transparencies (sample map of a Pasadena community, key of water resources/water use charts).

Vocabulary

community, Tongva/Gabrieleno, Indiana Colony, Arroyo Seco, Raymond Water Basin, Mt. Wilson, Eaton Canyon, Mallard Canyon, watershed, aqueduct, dam, reservoir, irrigation, ecology, agriculture, urban, residential, wilderness, preserve, vineyard, orchard, conservation, resource

Preparation/ Background

Discuss with students how a community grows with reference to basic Pasadena history. Look at a basic timeline of how the population has increased over the last 200 years. Discuss how people used the natural resource of water to support population growth in their community and how they might continue to do so. Discuss how this project can connect to the Tender Land theme.

Activity

1. Challenge your students to create maps of their ideal Pasadena community, based on available water resources. Each map should present a unique community that is balanced in growth and development and available water resources.
2. Each student will start off with 500 units of water, which is naturally provided by the Arroyo Seco and the Raymond Basin. Students can make their communities larger by adding new water resources, i.e. wells, aqueducts, dams, and reservoirs, which can be shown by symbols they create to use on their maps. They can use the charts provided for determining the number of water units needed and used in their communities.
3. Students should give a unit number in black to each “water resource” that they have in their community.
4. Students should give a unit number in red to any development that they put on their map that is a “water user.”
5. Students should calculate the total number of “water resource” units to make sure they can supply the “water user” units. The following charts should be used as an aid in determining the number of water units needed and used in their communities:

Water resources

Students may show the following 500 units of water as naturally provided to their communities:

- Arroyo Seco = 250 units
- Raymond Basin = 250 units

Additional Water Resources

Students may add additional units of water to their communities as follows:

- Dam and reservoir = 500 units
- Dig a well = 25 units
- Build an aqueduct = 500 units
- Build a water recycling plant = 250 units

Water Users

Students may show the water units used by the developments in their communities as follows:

- Farm = 25 units
- Park = 10 units
- City of 10,000 people = 100 units
- City of 50,000 people = 500 units
- Golf course = 25 units
- Wildlife preserve = 10 units
- Water park = 25 units
- Residential community = 50 units

Assessment

Students maps can be evaluated for correct use of symbols and a key, clarity, and for successful balance of their water resources. They also should receive recognition for artistic creativity.

Reference Materials

Kathleen Thorne Thompson, *The Way Pasadena Was*

Ann Scheid, *Pasadena—Crown of the Valley*

Anne Scheid Lund, *Historic Pasadena - An Illustrated History*

Internet census records

Link: Metropolitan Water District, www.mwd.dist.ca.us

Contact and Field Trip Information

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Field trip: visit the museum's exhibit *Flowing Water, Fruitful Valley*