

Leucadia Wastewater District Resources for Teacher Grant Projects

Leucadia Wastewater District awards up to four grants to local teachers of up to \$2,000 each to fund projects to help students' understanding of wastewater resource management, water resource management or water reuse. Many of the granted projects have been for elementary school gardens; starting or maintaining water reduction projects such as native plant gardens, rainwater harvesting or water saving irrigation.

In the interest of promoting more varied applications, we have compiled a list of resources that educators may wish to integrate into a grant project, with an emphasis on science, environmental education and local resource protection. Grants may be written to provide funding for lab or field equipment, field trip transportation, educational program materials, etc.

1. Tours of Leucadia Wastewater District or Encina Wastewater Treatment Facility

These facilities, both located in Carlsbad, safely transport and treat wastewater in our local community. Some wastewater is recycled into non-potable water for irrigation purposes, while some of the treated water is discharged into the ocean. The Encina facility also produces fertilizer from the treatment by-products! The process of this crucial work can be understood during a visit to either facility. Tours are suitable for any school-aged children and can be adapted to grade level and interest of the class visiting.

www.lwwd.com 760-753-0155

www.encinajpa.com (760) 438-3941 (Operations)

2. Earth Echo International

The EarthEcho Water Challenge (formerly World Water Monitoring Challenge) is an international program that runs annually from March 22 (the United Nations World Water Day) through December and equips anyone to protect the water resources we depend on every day. The EarthEcho Water Challenge builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local waterbodies. The resource materials available for the EarthEcho Water Challenge include videos, event checklists, action guides, and other materials to support your participation in the Challenge www.monitorwater.org/tools & www.earthecho.org

3. Project WET – Worldwide Water Education

The mission of Project WET is to reach children, parents, educators and communities of the world with water education. Activities are designed to satisfy the goals of educational programs by complementing existing curricula rather than displacing or adding more concepts. See Water

Education Foundation below for more information.

www.projectwet.org

4. EPA Teacher Resources and Lessons Plans

The EPA offers dozens of activities and projects for schools from kindergarten through high school on everything from learning about parts per million as a concept; climate change projects, pollution prevention and ecosystems; tap water; science fair projects; “beach kids” activities; build your own aquifer; down the drain activities; the hydrological cycle; “cool school” activities; bird counts; “respect the beach” and more. There are so many projects that we might want to concentrate on a few to recommend to teachers.

www.epa.gov/students/teachers.html

5. Water Education Foundation

The Foundation also provides educational resources for grades k-12 with maps, games, curriculum, stories and activities. Resources may be purchased by a teacher or school, and they all meet CA science curriculum standards. Project WET curriculum contains over 90 interdisciplinary activities designed for grades k-12 and for use in formal and non-formal educational settings.

<http://www.watereducation.org/project-wet>

6. Water On the Web (WOW) for High School

Water on the Web helps high school students understand and solve real-world environmental problems using advanced technology. WOW is a complete package containing two sets of curricula, data from many lakes and rivers nationwide, extensive online primers, data interpretation and Geographic Information System (GIS) tools, and additional supporting materials. Students learn about aquatic ecology, water quality, watersheds, data collection, data interpretation; see animated data and supplemental information from lakes and rivers nationwide; and use lessons from the aquatic environment and real lake data to explore basic science and water science concepts.

<http://www.waterontheweb.org>

We hope this list will provide insight and ideas for projects that your school might undertake to educate your students about the challenge of water issues in our local community and how they can impact and change their environment through their actions.