

## Zone 7's School Program Offerings

For more than 10 years Zone 7 Water Agency has been offering teachers within its service area a variety of free programs to help make water science fun and meet tough state standards for every grade level.

The program includes grade-specific classroom presentations focused on specific water-related topics. It also includes creek walks, science fairs, after-school and lunchtime learning stations and a limited number of assemblies.

For Kindergarten:

### **K ~Water Matters**

This 45-minute presentation introduces kindergartners to the water cycle and will teach them the three states of matter in a fun, interactive way. Using a flannel board story, we describe the movement of water within the water cycle and identify how water changes form. We also teach kids about the importance of water in our everyday lives, and talk about how critical it is to conserve water. The presentation covers numerous physical, life and earth science standards, and also includes investigation work.

For 1st grade:

### **1<sup>st</sup> ~ Conservation Concepts**

This 45-minute presentation will teach your students about the importance of using water wisely and about the science that underlies conservation practices. We will review the water cycle, identify ways to cut down on water use, and discuss reasons why water conservation is critical, especially to Californians. We will also explore the relationship between water supply and people, fish, wildlife and plants, and we'll create a water usage wheel as a take home. The program covers several 1<sup>st</sup> grade science standards and will teach kids many important vocabulary words.

For 2<sup>nd</sup> grade:

### **2<sup>nd</sup> ~ Creek and Stream Environments**

This 45-minute presentation explores how water quality in our local creeks can impact our drinking water supply, as well as creek vegetation, local wildlife, and even San Francisco Bay. Students will learn how water from storm drains and pollution from residential areas ends up in creeks, and about how to prevent such pollution. They'll also discover the relationship between the creeks and our watershed, as well as the difference between the storm drain system and the sewer system. The program covers several

different 2<sup>nd</sup> grade state science standards and will teach kids a number of new vocabulary words.

For 3<sup>rd</sup> grade:

**3<sup>rd</sup> ~ What's Water Got To Do With It?**

This 45-minute presentation focuses on the influence of water on the settlement of the Livermore-Amador Valley. We answer questions such as, "Why did settlers move to this Valley?" and "Why did people settle where they did, and not somewhere else?" As part of the presentation, we will build a timeline to understand the sequence of events. The program covers several state science and history standards for 3<sup>rd</sup> grade, and will teach the kids many related vocabulary words.

For 4<sup>th</sup> grade:

**4<sup>th</sup> ~ California and the Race for Liquid Gold**

During this 45-minute presentation, your students will learn how water affects every aspect of our past and present lives here in California, from the missions, through the Gold Rush, to modern day farming. We will explain the complex historical and geo-political issues related to water in our state and help kids understand the importance of water as a limited natural resource. We will also identify the various water users throughout California, and discuss their often-competing interests. The presentation will cover numerous history/social science and earth science state standards for 4<sup>th</sup> grade and will review key water-related vocabulary.

For 5<sup>th</sup> grade:

**5<sup>th</sup> ~ You're Going to Drink That?**

During this 45-minute presentation, your students will learn the history of how water has been treated to make it safe for drinking. We will also review the hydrologic cycle, teach students about the make-up of a water molecule, and about the basic chemistry behind the water treatment process. The program covers several state science standards and will leave your students with a clear understanding of where their water comes from, how it is treated, and how it is distributed to homes and businesses. (Water treatment plant tours are offered on a limited basis to groups that have received this presentation.)

**5<sup>th</sup> ~ Life As a Water Molecule**

This 60-minute lesson includes a role-playing game in which students become water droplets and move through the hydrologic cycle with a series of dice rolls. As they move through the various stations keeping a log of their predictions and actual results, they learn how to conceptualize the water cycle as more than a predictable two-dimensional path.

For Middle Schools:

**6<sup>th</sup>-8<sup>th</sup> ~ The Wonder Down Under**

This 45-minute presentation will explore the local watershed and teach students how our groundwater and surface water systems are connected. We will also teach them about our drinking water supply, talk about pollutants common to our Valley, and discuss the effect of urban development on our watershed. The program covers several science standards and can be given to either 6<sup>th</sup> or 7<sup>th</sup> graders.

**6<sup>th</sup>- 8<sup>th</sup> ~ You're Going To Drink That?**

This 45-minute presentation provides a more advanced look at where our local water supply comes from, how it is treated to make it safe for drinking, and how it gets distributed to homes and businesses. Students will learn about the make-up of a water molecule and will find out about the basic chemistry behind the water treatment process. This program can be tailored for 6<sup>th</sup>, 7<sup>th</sup> or 8<sup>th</sup> grades.