

## **LAUSD Water Conservation/ Save The Drop Contest 2016**

### **Action Plan Submitted by Kester Avenue Elementary, NE**

Mrs. Perros Barrett, NBCT, Kindergarten

Our Kester Avenue kindergarten team, **MPB's Water Wise Wee Ones**, wants to build drought awareness within our school community and wants to encourage everyone to save water at school and at home. We have come up with a creative project that can be done at school and at home that will conserve water, grow gardens, and help with recycling efforts. It is called the "GRAVITY-FED RESERVOIR IRRIGATION SYSTEM". But, first, let's explore the learning that will take place before we build this creative system.

#### **What will our students learn?**

Our students will learn about the water shortage in California and that California has been facing drought conditions for decades. They will learn that water conservation is vital to ensuring we continue to have a reliable source of clean water.

Our students will learn to value water, a natural resource shared by all living things. They will reflect on their own water use and hopefully begin thinking about how they can make a difference as responsible global citizens by developing good water-saving habits.

#### **What types of discussions will be taking place at school and at home to support this learning?**

In school, our classroom discussions begin with this simple question: *What do we use water for in our lives?* This is our first water topic in our Circle Map. Students are able to use their prior knowledge and experiences to share information about water and its many uses. Parents are asked to reinforce this discussion at home.

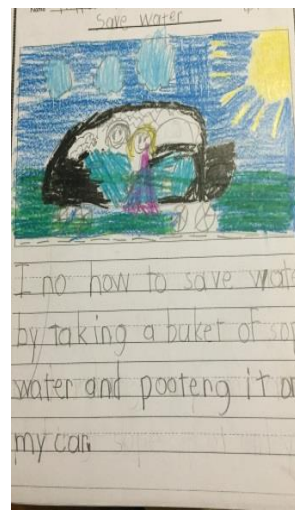
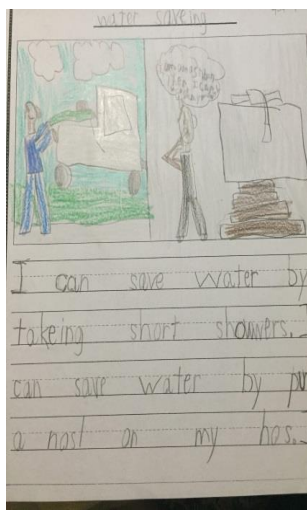
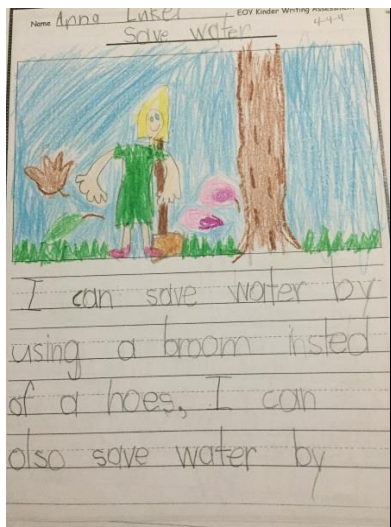
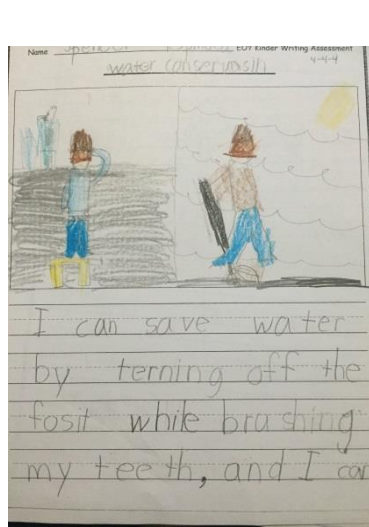
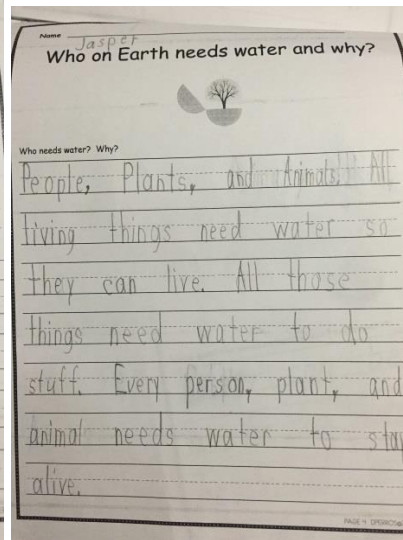
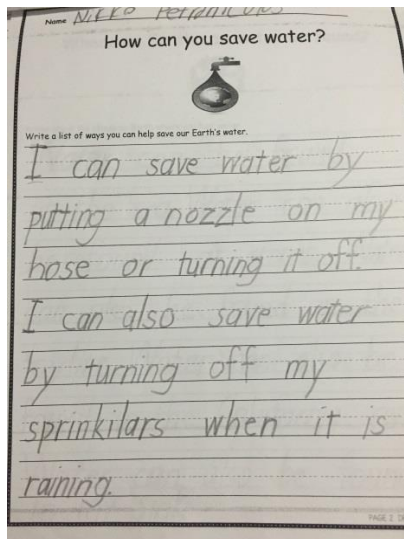
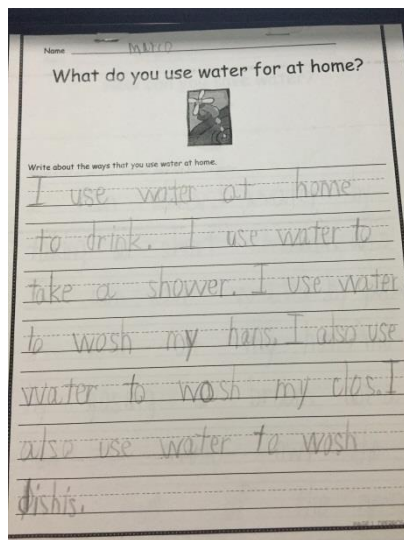
We then sort our information from the above discussion by using another Thinking Map: the Tree Map. We discuss "Water Use...At Home... and ...At School". We also discuss "water wise" choices and "water wasting". This discussion is also supported by a parent-child discussion at home: *How do we use water for fun and enjoyment (recreation) and how is water used in our environment?*

## Other questions to be presented in school and at home for discussion are:

- How much water do I use at home? How is water used at our school?
- How can I limit my water use at home? Or at school?
- How is water being used in my neighborhood? Note wise and unwise water usage.
- Where does our water come from? How does it get to our homes? To our school?
- What happens to the water that goes down the drain?
- Why is water important to people? To animals? To all living things?
- Why do you think we should be concerned about water?

## Student Writing and Art Work Samples That Answer “What do you use water for at home?”

### How can you save water? Who on Earth needs water and why?”



## **We take local field trips to learn more about water conservation and water reclamation efforts in our surrounding community:**

Here are some of the facts that we learn by taking field trips to the nearby Donald C. Tillman Water Reclamation Plant, the Japanese Garden, the Wildlife Reserve, and Lake Balboa.

Los Angeles has long recognized that water is a limited and extremely valuable resource. Today, wastewater can be reclaimed for many uses that, at one time, could only be supported with drinking water. The Donald C. Tillman Water Reclamation Plant (DCTWRP) is one of Southern California's leaders in the production of recycled water.

Over 23 million gallons per day are fed to three nearby lakes: the Japanese Garden Lake, and the Wildlife and Balboa Recreation Lakes, located in the Sepulveda Basin Recreation Area. The recycled water continually flows through the lakes to the Los Angeles River.

The DCTWRP combines advanced wastewater treatment technology and water reclamation with the beauty and tranquility of its famous Japanese Garden. The plant serves over 750,000 residences and many businesses in the western San Fernando Valley. The plant was named after Mr. Donald C. Tillman, the City Engineer from 1972 to 1980.

Over 65 million gallons of wastewater are treated on average each day at Tillman. Approximately 60% of the wastewater is from residents and 40% from industrial and commercial sources. Sewage entering the Plant must pass through a series of steps including screening, primary settling, aeration, secondary settling, filtration, disinfection and dechlorination.

### **The Japanese Garden:**

The 6.5 acre Japanese Garden, created by world famous designer Dr. Koichi Kawara, was dedicated in 1984 as a sanctuary where the public could enjoy the peaceful surroundings while learning about water reclamation. The garden is irrigated with Tillman's treated water. The idea of having a Japanese Garden adjacent to a water reclamation plant was conceived by Tillman. The garden's purpose was to demonstrate a positive use of reclaimed water in what is generally agreed to be a delicate environment: a Japanese Garden.

### **Wildlife Reserve and Lake Balboa:**

The treated water from the DCTWRP is available for a variety of uses which include irrigation, on-site industrial use, and aquatic habitats such as the Japanese Garden, Balboa Park, and the Wildlife Lake and Lake Balboa. In addition, pipelines have been constructed to carry reclaimed water to adjacent golf courses and park land in the Sepulveda Basin.

The Wildlife Reserve is located next to the Japanese Garden. Thousands of native plants have been planted in the Reserve. Many other plants have grown on their own from seeds, underground shoots, or from broken pieces of plants that rooted and took hold. The Wildlife Reserve also has a wide variety of birds visiting the different habitats...over 200 species!

**So, LAUSD friends...we ask you this:**

**What do you want to be ... WATER WISE LIKE US? Or WATER WASTERS?**

Through these field trip experiences, our students learn that we get our water from nearby rivers and lakes and that water is brought to us through aqueducts and in reservoirs and wells. From there, the water goes to treatment plants where it is cleaned and then sent to our homes, businesses, schools and surrounding communities. Because water is so vital, we can not waste it. Our students learn the difference between water-wise choices and water-wasting. We conduct science investigations in our school's science lab that pose examples of water use and then we determine whether or not those uses are water wise or water-wasting behaviors. We then campaign to save our water and to be water wise! We look for ways to save and conserve water at home, in our neighborhoods, and at school.

**Here's The Message That We Share:**



**BE WATER WISE!**



**NOT A WATER WASTER!**





## USE OUR GRAVITY-FED RESERVOIR DRIP IRRIGATION SYSTEM!

It's a simple, fun, effective, and creative "do it yourself" project that we would like to see all around our campus and at home. Here's how it works:

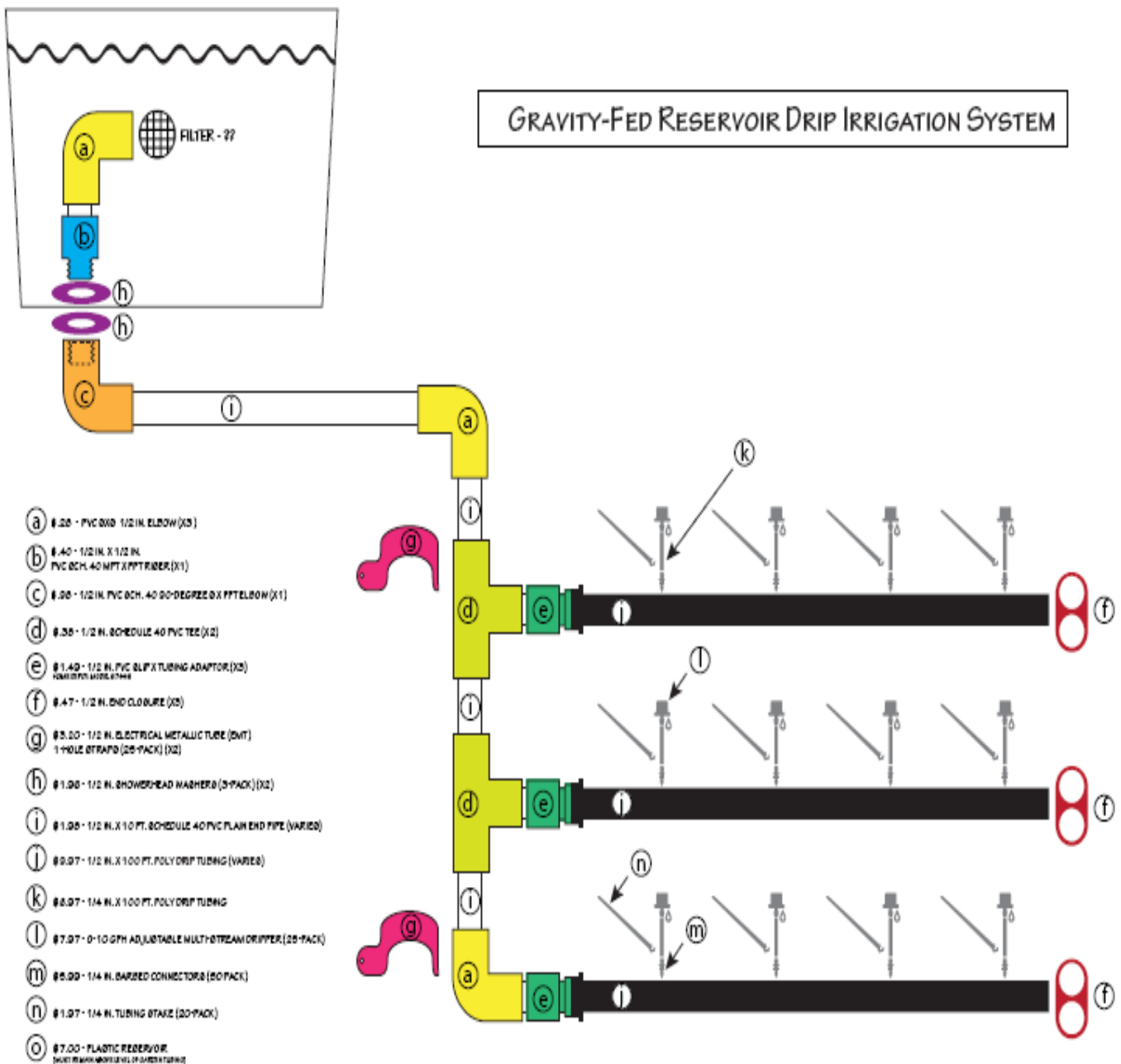


Collect rain water using storage tubs or use the leftover water in bottles that you find all around the school's campus. Use this collected water to fill up the water collection tank or storage tub and let it feed water into an edible garden, flower-filled garden, or drought-resistant/tolerant planter box.



Let gravity do its magic to feed your gardens! The water will drip slowly into the garden box from the elevated storage container and will be irrigated all around the garden box by pipes. Then recycle the water bottles to help our environment!

Here is our project:



TOTAL APPROXIMATELY: \$50-\$60

We would like to build these gravity-fed irrigation systems all around campus and we also like to use them in our Kester farm to grow an edible and sustainable garden.

