



## Fourth Grade Environmentalists Teach the Five Rs!

**Did you know that saying, “No thank you!”** to a plastic straw or packing your lunch in reusable containers could help protect a sea turtle? Fourth grade students from Searles Elementary School in Union City put on an Assembly to teach their whole school and many of their parents about the importance of reducing plastic waste to keep our oceans healthy. “The most important thing I hope the audience learned is to save our earth!” shared Jeremy. “For example, they might think of picking up trash and telling people to use reusable things instead of disposable things. I think it is important that they learned this, because they might think twice before littering and change their mind. Then our earth will be more clean and beautiful.”

“We had a larger than usual group of students cleaning up litter on Friday and Monday. More students want to participate in keeping our school community clean.”

— Ms. Mares, Fourth Grade Teacher,  
Searles Elementary School, Union City

The whole school community came together to learn from the students about how plastic pollution is harming ocean health and ocean life. Parents, grandparents, siblings and cousins were also part of the audience. Fourth grade teachers Ms. Mares and Mr. Bautista played sea turtles in the Assembly and the school principal, Ms. Raquel Bocage, played a whale—all in full costume! “I found the Assembly successful for the kids as well as the entire school,” Ms. Mares commented. “We had a larger than usual group of students cleaning up litter on Friday and Monday. More students want to participate in keeping our school community clean.”

Important messages about practicing the Five Rs (Reduce, Reuse, Recycle, Rot/Compost and Refuse) concluded the



Assembly. “Being a Storm Drain Ranger means practicing the Five Rs,” one performer explained to the audience. “The Five Rs are tools to reduce waste.” Students shared how they have been practicing the Five Rs to reduce all the plastic garbage in the environment. **“I’ve been practicing the Five Rs by bringing reusable containers for my lunch and I say no to straws,”** said Claire. The students were so proud to have the opportunity to perform on stage and to be the teachers for a day! Together, they informed their whole school of the harmful effects of plastic pollution and shared many waste reducing solutions to help create a cleaner, healthier future for all living things.

KIDS FOR THE BAY’S

**25 YEAR ANNIVERSARY**

**KICKS OFF SEPTEMBER 2017!**

### Experimenting with Creek Engineering Models

"I think the creek covered in English Ivy looks less healthy, because if there's only one type of plant, there can't be very many animals living there," explained Aris. In KIDS for the BAY's Strawberry Creek Watershed Action Program, a partnership with the University of California, Berkeley, third grade students from Berkeley Arts Magnet School learned about creek restoration engineering by comparing historic photographs of creeks. Using sand box models, the students then investigated how a creek habitat can be drastically changed by human engineering techniques. One student named Hanna shared, **"The concrete channel actually increased erosion and then there was no habitat left for the animals! What were people thinking?!"**



Students used cardboard pieces to represent creek-side plants in their models. Aris noticed, "I saw that the creek ecosystem is most healthy and has a natural, meandering pathway when there are creek-side plants along it." This activity taught engineering concepts using model-building, aligned with Next Generation Science Standards.

This spring, students are using what they learned in their experiments to help restore Strawberry Creek on the University of California, Berkeley's campus. Students are planting red flowering currant and other native plants along the creek to prevent erosion, create habitat for animals and increase the beauty of the environment.

"I saw that the creek ecosystem is most healthy and has a natural, meandering pathway when there are creek-side plants along it."

— Aris, Third Grade Student, Berkeley Arts Magnet Elementary School, Berkeley

### The San Francisco Bay Delta Estuary Comes to Life



Third grade students from Belshaw Elementary School in Antioch could not wait to get off the school bus to start their field trip at Brannan Island State Recreation Area! As they hiked around the park, which is part of the San Francisco Bay Delta Estuary, students used binoculars and field guides to identify birds and other wildlife. Students and parents saw over 12 different species of birds, including hawks and turkey vultures, as well as jack rabbits and muskrats.

Students were also excited to collect plankton using nets and identify the plankton species using microscopes and field guides. Gael said, "Plankton is super important for the food pyramid. Little fish eat it, and then big fish eat the little fish. If it weren't for the plankton, nothing else would be here!" Students made hypotheses about how salty the delta water would be, and then used hydrometers to test the salinity and compare it to the salinity of fresh, bay and ocean water.



After seeing all of the wildlife that lives in the Brannan Island area, students were inspired to keep this special habitat trash-free. They cleaned up over 800 pieces (14.5 gallons) of trash! Alondra exclaimed, "I found abandoned fishing line in the bushes. It's so sad, it doesn't belong there!" At the end of the field trip, Thomas shared, "We should care about this water source, because this is our drinking water. Also, there are so many different animals that live

"We should care about this water source, because this is our drinking water. Also, there are so many different animals that live here and call this place home."

— Thomas, Third Grade Student, Belshaw Elementary School, Antioch

here and call this place home." Cyrus added, **"I finally understand how we are part of a watershed,** and where we are in the delta—right here next to it. **This is a really important part of the Bay Area. It makes me want to take care of it more."**

### Green Alternatives to Toxic Pesticides



Pesticides have been linked to environmental and human health hazards for over 50 years, yet they are still used in homes and gardens throughout the United States. Marina Vista Elementary School fourth grade students from Pittsburg studied the effects of pesticides and were eager to make a difference in their homes and community. Sabah said, **“The problem is that toxic pesticides are sprayed on the plants and then get into food chains. Even people can eat them and sometimes get very sick.”**

To begin their Action Project, students created a farm model to see how pesticides can spread throughout a watershed. After completing the experiment, Carlos concluded, “The pesticides went on the crops, into the ground and to the water.” Jeremiah added, “The pesticides made the water poisonous, and if it was real life, the toxic pesticides could spread everywhere.”

The students then created all-natural alternatives to pesticides to protect their plants without introducing harmful chemicals into the environment. Students had the option to create a peppermint neem oil pesticide or an orange citrus pesticide.

Students wrote letters to their family members and friends to explain the importance of using their green pesticides and to explain how to make them in the future. Jadana said, “I am going to give this letter and pesticide I made to my grandma as a gift. She has a lot of plants and her birthday is coming up.”



“The problem is that toxic pesticides are sprayed on the plants and then get into food chains. Even people can eat them and sometimes get very sick.”

— Sabah, Fourth Grade Student, Marina Vista Elementary School, Pittsburg

## Be an Environmentalist!

### Is California Still in a Drought?

We’ve had a rainy winter here in the San Francisco Bay Area, but does that mean we’re no longer in a drought?

While Governor Jerry Brown lifted the State of Emergency on the drought in April, unfortunately, scientists say that we are still in a drought. James Famiglietti, a water scientist at NASA, explains, “Any aquifer recharge that occurs as a result of this winter’s storms is just a small uptick in a century-long decline of groundwater storage.”

This means we should all continue to do our best to conserve water! Here are some water conservation tips you may not have thought of before:

- If you drop an ice cube on the floor, put it in a plant instead of in the sink.
- Keep water from the tap in a pitcher in the fridge, so that you don’t have to run the tap waiting for the water to cool down.
- Avoid rinsing your dishes before putting them in the dishwasher.
- Save water from boiling pasta and washing vegetables and use it to water plants.
- Use a broom, not a hose, to clean your patio or walkways.
- Use the cold water setting on the washing machine.
- Serve meals from the pot instead of from a serving dish so that there are fewer dirty dishes that need to be washed.



Photo credits: [www.pinterest.com/leslietse/water/](http://www.pinterest.com/leslietse/water/); [Olivia Hubert-Allen, ww2.kqed.org/news/2014/01/20/123932/eight-simple-ways-to-conserve-water](http://Olivia Hubert-Allen, ww2.kqed.org/news/2014/01/20/123932/eight-simple-ways-to-conserve-water)

Let's get outside!

# Summer Camp 2017

Register today!

Join KIDS for the BAY for a fun-filled summer of hands-on science and nature exploration in the outdoors.

KIDS for the BAY campers will learn how every living thing is interconnected and become Inspired Environmentalists!

## KIDS for the BAY

### Adventures

Campers ages 5 - 7 will:

- Discover purple ochre sea stars
- Explore bay shorelines
- Meet local wildlife
- Delve into dinosaurs
- Investigate aquatic invertebrates
- Help restore Strawberry Creek
- Enjoy belly biology

## KIDS for the BAY

### Explorers

Campers ages 8 - 10 will:

- Go kayaking on the bay
- Enjoy an overnight camping trip
- Visit the Aquarium of the Bay
- Take a ferryboat ride to Angel Island
- Study bay plankton using field microscopes
- Explore an ocean beach
- Test creek water quality

## KIDS for the BAY

### Leaders in Training (LITs)

Ages 11 - 14 will:

- Enjoy outdoor science adventures and exploring in nature
- Learn leadership skills by helping and teaching younger campers

Special discounts available for LITs selected for this program.

### NEW THEMES FOR 2017

Marine Science Adventures and Marine Science Explorers!

Visit our website at [www.kidsforthebay.org/camp](http://www.kidsforthebay.org/camp) to choose from seven exciting Summer Camp themes

**Camps** run Monday through Friday from 9am – 3:30pm, with flexible drop-off from 8:30 – 9am and flexible pick-up from 3:30 – 4pm.

**Nature Club After-Care** is available from 4–5:30pm daily.

**All camp drop-off and pick-up locations are in the Berkeley area.**

Combined discounts and scholarship spaces are available.



*"The Camp Staff is amazing! We really like their energy and that they show kids how to love nature and have fun doing it!"*

» MAGNUS' MOM, 2016



*"I feel like this camp is deeper science, not just lightweight science!"*

» CINDEE BURNS, TORIN'S MOM, 2016

**REGISTER NOW!** [www.kidsforthebay.org/camp](http://www.kidsforthebay.org/camp)

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