



Edison Challenge 2010 Finalists' Project Summaries: Middle School Division

Unless otherwise noted, each summary was written by its respective team.

Medea Creek Middle School (Oak Park)

First Place

Team members: Shruti Aggarwal, Russell Tagawa, Tujare Jois, Maya Halthore, Jianna Zeola, Devika Chandramohan (teacher advisor Sharon Lavene)

SCIENCE LESSON PLAN SUMMARY: Energy Vampires - Trick or Treat

The objective of this lesson is to raise awareness of vampire devices and the energy wasted by such devices when they appear to be turned off. We taught our lesson to three fourth grade classes and close to 100 students at Brookside Elementary School. Words such as vampire, energy, electricity, electrical device and vampire device were explicitly defined and reinforces while students made pinwheels. Energy conservation strategies such as unplugging devices when not in use and using a power strip were prevented as tricks outsmart the vampires.

COMMUNITY SERVICE SUMMARY: The art and science of avoiding energy vampires

In an effort to protect our community from energy vampires, we coordinated several service activities over the course of 6 months. Our reverse "trick or treat" before Halloween captured attention as we canvassed the community at dusk dressed as vampires knocking on doors and delivering our information brochure. We delivered our message to the School Board in November and involved our peers in our outreach efforts in December with our holiday carol. Maya enlisted our 42 member concert band and TJ sung the new lyrics with 40 choir students in a holiday carol about vampire devices. In February, our teen council took over at the showing of Twilight and we established vampire protection boxes for check out at the library

Amargosa Creek Middle School (Lancaster)

Second Place

Team members: Francis Rivera, Alicia Escobedo, Y'noka Bass, Kalie Bonomo, Brielle Wallace, Jennifer Andrino, Erika Park (teacher advisor Kelly Miller)

LESSON PLAN SUMMARY: Change Is In Your Hands!

To begin, we showed the students a video called "What If?" To ensure their understanding, we questioned them. We then performed a skit. We also did a game which put recycling into practice. In conclusion, we did a rap song/break dance which included student interaction.

COMMUNITY SERVICE SUMMARY: What if...?

1. Implemented school recycling program
 2. Santa Monica Beach Clean Up
 3. Ecology Club Presentations/Activities
 4. Helped save the Rainforest
 5. Youth Environmental Leadership Conference
 6. Created ecology curriculum binders for the schools in our district and for our environmental partnerships
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Eastshore School (Irvine)

Green Campus Award

Team members: Evan Chang, James Young, Kate Jensen, Stav Yativ, Matt Atkins, Will Tomlinson (teacher advisor Bill Brooks)

LESSON PLAN SUMMARY: The chemistry of paper is a lab for fifth grade students, and students examine paper determines if paper is an element, a compound, or a mixture. After looking at paper under microscope to see how paper is held together, students shredded and blended the paper to make a pulp. The pulp was placed in a frame on a deckle, couched, and dried. The lab was taught to three fifth grade classrooms, and posted on our web page, on the school district's intranet for teachers, and shared with the Orange County Department of Education.

COMMUNITY SERVICE SUMMARY:

Our team developed ways to reduce our lunch time waste through recycling as well as teaching others how to make a green lunch. Through our web page, we are teaching others how to do the same. There is financial incentive as waste pickups can be reduced from daily to every-other-day making our project a cost savings for school districts. We helped kick off Orange County's "10% in 2010" waste reduction campaign. We've been filmed by Green Street Scene and all school districts in California will see our project.

Hillview Middle School (Whittier)

Thinking Outside of the Box Award

Team members: Halim Almuhabab, Alexander Romero, Rio Tapia, Steven Salgado (teacher advisor Julio Soria)

LESSON PLAN SUMMARY: Pollinator Conservation

Threats to and benefits of pollinators were discussed as well as what the average student can do to help them. Students were able to explain threat factors affecting pollinators, including honey bees and were able to explain their benefits and things they can do to help them. They created and spread seed bombs which help to introduce plant life to empty lots which is beneficial to bees and butterflies.

COMMUNITY SERVICE SUMMARY: Puente hills habitat restoration

Our project was about restoring natural habitats. We planted five flowering plants. We restored .5 of an acre in Puente Hills Preserve in Whittier. We planted native prickly pear cactus and hand-seeded the area with a native seed mix consisting of about 16 different species of native grasses, wildflowers and shrubs. Our efforts helped with the ongoing work in the area establishing coastal sage scrub habitat, a native shrub land plant that is rare and is home to the only federally threatened species in the preserve, the coastal California Gnatcatcher.

Roosevelt Middle School (Compton)

Awareness Award

Team members: Jonathan Coronel, Leo Silva, Monica Cruz, Martin Sanchez, Iris Antunez, Christian Gallo (teacher advisor Nikki Wood-Perkins)

LESSON PLAN SUMMARY: E-Waste

Our lesson plan was based on e-waste so we used standard 6.5b: Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment. To inform students about e-waste, we taught our lesson to four 6th grade classes.

COMMUNITY SERVICE SUMMARY: Recycling Ink Cartridges

In order to benefit our community, we began collecting ink cartridges and ink toners. By doing this, we reduced the amount of E-waste in landfills. To do this, we got many people involved including students, teachers, the school district, and residents of our community.

Will Rogers Middle School (Lawndale)

Best Lesson Plan Award

Team members: Suher Adi, Tee Chua, Zeshan Fayyaz, Kimberly Pham, Cheyenne Spearman, Iridian Chino (teacher advisor Tracy Tegtmeier)

LESSON PLAN SUMMARY: During the Edison Challenge we did lots of things and had tons of fun. We officially named our team the Go Solar School Team. In order to make our work ethic more efficient we made everyone in charge of something. Tee and Zeshan were both in charge of building tools for experiments (solar oven and soda bottle experiments). They also got devices like the radiometer and the voltmeter to use as examples while teaching the students. Iridian was in charge of all things that dealt with money. She found the cost of a solar panel and how much it would cost to have them installed. Iridian used a solar calculator to calculate how much it would cost to have solar panels installed on our school's rooftops. Kimberly was our main researcher but she also found two grants that we are signed up for. For one of the grants, which one is called the Pepsi Refreshed Project, we are on a waiting list to be chosen to get the grant. The other grant is named the Pacific Gas and Electric's Solar Schools Program. Cheyenne was in charge of

the teaching and organizing how we did things. Suher was the group leader. She led us and was the one who delivered the information between us and the principal and the teacher.

As part of this project we taught 4th, 5th, and 6th graders. The total amount of students we taught was between 210 and 245 students. We had all the students we taught to take a pre and post test so we could see how much they learned. We also had them do an observation worksheet. We also sent around petitions for students to sign. If they signed it, it meant that they agreed that our school should go solar. We are proud to say that 564 students have signed it and counting. We have contacted the Daily Breeze so they can print a story about what we are doing. We even presented our idea and plans to our school board, who was happy to hear from us, and want support us. Our plan is to teach the rest of our school about solar power and why we think our school should run on solar energy. We hope to do this on earth day.

In our group five out of six group members are 8th graders only one person is a 7th grader. Our plan is to carry out our ideas about a solar school to our future high schools, and our 7th grader will continue to carry out our plan here at Will Rogers Middle School.

COMMUNITY SERVICE SUMMARY: We taught students about solar energy. We sent out petitions around our school. We got 567 signatures so far. We prepared a presentation for the district board. They liked our idea and supported us. We're trying to contact the Daily Breeze in order to be in the newspaper.

Medea Creek Middle School (Oak Park)

Finalist

Team members: Dorinda Fong, Keun Hee Lee, Shayan Moghimi, Kristen Bender (teacher advisor Debby West)

LESSON PLAN SUMMARY: Turning the Tide on Trash

For our lesson plan, we taught two classes of fifth-grade students from Oak Hills Elementary School about the effects of marine debris. We gave them a survey to take before and after the lesson and a take-along quiz to understand what information they already knew and what information they learned.

COMMUNITY SERVICE SUMMARY: "Love Your Creek" Clean Up

For our community service event we hosted a clean up. On February 14, we gathered at our school to pick up trash. We were joined by about fifty people, which included students and parents. We were able to pick up approximately twenty bags of trash over the two hour period.