

April 12, 2013

Dear Mr. John M. Vassiliades and the PECG,

I am Joseph Canalita, a 7th grader from The Nativity Catholic School in Torrance, California. My favorite subjects are Science, Math and Social Studies. I love playing video games and go biking in my free time. I have an older brother and sister. All of us have participated and won awards in our school's Science Fair. My parents and our teachers encourage us to pick a topic that we are most interested in so we would enjoy doing our experiment.

This is my second time to participate in the Los Angeles County Science Fair. This year, my science fair project was about testing the strength of bridges. I wanted to find out which bridge would not collapse after weights were put on them. The reason that I chose testing the strength of bridges is that I have crossed many bridges so many times in my life (like the Golden Gate Bridge, Oakland Bay Bridge, San Mateo Bridge in San Francisco, the Bixby Creek Bridge in Monterey, the Port Mann Bridge and the Capilano Suspension Bridge in Vancouver, Canada, and the Mactan Bridge in Cebu, Philippines, to name a few) and I wondered which one was the strongest and safest that engineers should build a lot of. I tested three out of the many different kinds of bridges. I used popsicle sticks and wood to make the models of the arch, truss, and boxed girder bridges. My hypothesis was, *"If each of the three bridges had weights added to them until only one was left unbroken, then the truss would be the bridge left unbroken."* My hypothesis was correct. After I added a brick (5.5 pounds each) at a time, the boxed girder bridge failed and broke at 14 bricks, or at 77 pounds. The arch bridge failed and broke at 15 bricks, or at 82.5 pounds. The truss bridge held the most weight and was left unbroken. With 16 bricks, or 88 pounds on it, it only sagged by 3/16 of an inch. The triangular trusses made the bridge rigid and strong. The trusses and the deck absorbed and evenly distributed the weight that was put on it.

I really had fun doing the experiment. I could not believe that popsicle stick bridges can hold so much weight! I dedicated this project to all those engineers out there who work hard to make strong, safe and nice bridges, buildings, and roads.

My experiment won 2nd place at the Nativity Catholic School Science Fair, so I went on, along with some of my classmates, to the Los Angeles County Science Fair. I had fun during the 3 days. I met my classmates, and I made a lot of new friends. I also saw a lot of interesting experiments. Then, to my most pleasant surprise, I won the special award from PECG, the James E. Roberts Award! This is the greatest award I have ever won in my entire life! The glass plaque with my name on it is very, very nice. The cash prize is a lot! I am very grateful to PECG, Mr.

John Vassiliades, and to all the judges who voted for me. This award inspires me to do better, to pursue my love for Science, and to become a very good civil engineer someday. I know I want to do honor to Mr. James E. Roberts. My dad is also a civil engineer and I see how hard he works. I want be just like him, if not, even better!

My experience at the Los Angeles County Science Fair was great. I am grateful that there are some people who really want children like me to be encouraged to become scientists. I understand that we are the future. We need help to be given the opportunity and the support to become good citizens of tomorrow. We have to be the good scientists and engineers that will help our country and the world. The people behind the Los Angeles County Science Fair, and their supporters like the PEGC and Mr. John Vassiliades, are providing me with this opportunity, and inspiring me to do even better in the future. I will not PEGC down. Someday, I will be a good civil engineer who will make a good contribution to our country and the world!

Once again, thank you very much for believing in me and my project. Thank you for a wonderful experience, and thank you for my plaque, certificate and cash prize!

Sincerely,

Joseph Valentin Canalita