Teacher at Sea Alumni Spotlight

Forbes "30 under 30" TASA Inspires Next Generation of Scientists

DJ Kast holding her Forbes "30 under 30" award. Photo credit: Roee Fung

Dieuwertje (DJ) Kast (TAS, 2015) was selected for the 2016 *Forbes* "30 under 30" in science annual list for her Science, Technology, Engineering, and Math (STEM) work with 3000 low income and minority students in the Los Angeles, California community. DJ is the STEM Programs Manager for the University of Southern California (USC) Joint Educational Project, which encompasses the USC Young Scientist Program (YSP), as well as, the USC Wonderkids Program. She is also the coordinator for the USC Neighborhood Academic Initiative. DJ was one of "600 of the brightest young entrepreneurs, breakout talents and change agents in 20 different sectors" selected from 15,000 nominees. She said she was deeply honored to be included in a class that features so many outstanding individuals representing the best in their fields.

"This honor strengthens my belief that helping to educate and train our next generation of young scientists is of utmost importance, and it further encourages me to move forward with this work."

DJ continues her work to inspire and educate youth by participating in Teacher Research Experiences (TRE) such as NOAA Teacher at Sea. Through TRE's, DJ is able to bring real-world science back to her students.

Through a highly competitive process, she was selected to join the Ocean Exploration Trust (OET) Nautilus Exploration Program expedition as a Science Communication Fellow in May 2016. DJ was among 17 educators and 22 students aboard Exploration Vessel (E/V) *Nautilus*. This Corps of Exploration explored the deep sea in Western Canada. They went to 4 main deep-sea sites – Barkley Canyon, Cascadia Basin, Clayoquot Slope and the Endeavor. These four locations are all along the Juan de Fuca tectonic plate and are submarine canyons, continental slopes, abyssal plains, and mid ocean ridges respectively. DJ helped research hydrothermal vent ecology including some tube worms and black smokers, underwater volcanoes, ocean earthquake activity, gas hydrates, sediment dynamics, and plate tectonics on the seafloor.

PolarTREC (Teachers and Researchers Exploring and Collaborating) selected DJ to travel to the Arctic Circle in June 2016 to work with scientists to study the microbial ecology of the Arctic tundra. This research encourages a greater understanding of the Polar Regions by addressing the impact of microbial ecology on the Arctic tundra, specifically the permafrost. DJ said she is excited about the opportunity because it's important for her students to know about this cutting edge science, the important issues of the Polar Regions, and how those issues impact them.

"I want to inspire all my students to do field work and be on the front lines of research collection while I give them up-to-date and current data and research from scientists all across the world. In my STEM students I see budding passions and appreciations for science and technology. Not everyone will become a scientist, but science comprehension and interpretation can be applied in a wide variety of fields."

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