WHY RESET

CLAUDIA AUSTIN FIRST GRADE TEACHER

RESET volunteers provide experiences that are unique. Most students have little or no contact with STEM professionals and having a scientist come to the classroom is an amazing experience. Having a personal connection to a STEM professional may also nurture students’ interest toward science careers.

It is important to change the face of the STEM workforce and provide STEM experiences to ALL students (Change the Equation, 2015). In 2014, only 29% of American younger than 25 were White or Asian, down from 33% in 2001. If this percentage continues to shrink the future of U.S. leadership in technology and innovation will increasingly depend on young women and people of color (Change the Equation, 2015).

Unfortunately, minorities are scarce in STEM jobs and we need new strategies and initiatives that succeed in bringing students’ interest into STEM fields. Our challenge is to nurture students’ talents before they lose momentum and turn their sights elsewhere and RESET can provide a nurturing experience to all students. RESET volunteers bring challenging science activities to the classroom, nurturing and engaging young children. RESET is a one of a kind organization that connects STEM professionals to classrooms making possible for students to interact with scientists and to engage in STEM projects completely funded by RESET.
STUDENT IMPACT

MS. AUSTIN’S FIRST GRADE

After working with RESET volunteers for a year I have seen a change in my students’ engagement and interest in science. My students look forward to RESET volunteers and the science activities they provide.

In the Spring of 2015, I worked with two RESET volunteers and our partnership provided my first graders with unique experiences. My students learned about the effects of acid rain and pesticide on the environment, degradation of trash and the importance of recycling. We connected their experiences and explorations with the MCPS curriculum and the guiding question of how humans may harm and protect the environment.

After the lab lesson on acid and base, we watched a video and discussed how rain becomes acid. Then, we set up a lab area so my students could observe the effects of acid rain on seeds over a period of time. They watered seeds with water and lemon water to observe what would happen to the seeds. After their observations students were able to understand the impact of acid rain on our environment and the importance of reducing air pollution.

Activities like the acid and base connect science concepts to real world situations and make learning more meaningful to students. The merge of the pedagogical knowledge of a teacher and RESET’s volunteers’ science content knowledge provided the perfect setting for teaching and learning science.

We worked as a team to plan developmentally appropriate lessons and experiments that were hands on and that developed student understanding of the scientific method. My students favorite experiment was the acid and base where they observed the reaction of different solutions to and compared to a PH scale.
As a lifelong learner, I enjoyed collaborating and learning from RESET volunteers. I believe that teaching and learning go hand in hand and I enjoy teaching and learning with my students. RESET volunteers are very knowledgeable about science in general and our partnership improved my science repertoire. I was able to clear my own misconceptions and learn more in depth about the effects of acid rain and pesticide in the environment. I learned about the connection between pesticides and the excessive algae growth in rivers and ponds. These experiences supported my students’ learning and challenged me to step out of my comfort zone and collaborate with scientists to plan STEM lessons.

I shared some RESET lessons with the first grade team since the lessons connected to science concepts and skills from the first grade curriculum. Some teachers showed interest and were willing to implement some lessons in their classrooms. One of the lessons that was implemented by the first grade team was the trash degradation observation. We set up lab centers in the classrooms and students observed the degradation of paper, glass, wood, plastic, metal, and vegetable and fruit peels. Before the experiment students predicted what would happen to each item. The experiment lasted four weeks. Our first grade students took notes, compared their notes to their initial predictions and to a trash degradation table. To make learning more meaningful, we took the students to the Montgomery County Recycling Center. The field trip invitation was extended to three classrooms. After this lesson, students reflected on the importance of recycling certain item because of the long degradation.

Moreover, RESET scientists provide schools with experiences that can be shared and adapted to different grade levels. Other teachers may be become curious and willing to try different approaches to teaching. RESET volunteers bring new teaching perspectives and lessons that connect to STEM learning.