



The RESET Report - Fall 2020

For over 31 years, RESET has delivered STEM activities to DC-area students, including many from underserved communities. You play a vital role in sustaining our work and helping us in our fourth decade as an award-winning nonprofit. Please 'like us' on [Facebook](#) and 'follow us' on [Twitter](#).

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In This Issue

The French have a saying,

"Plus ca change, plus c'est la meme chose."

'The more things change, the more they stay the same.'

Today's Newsletter describes how RESET is striving to keep things the same, i.e. raising excitement for STEM using virtual learning and adapting our programs in the face of the changes forced by the novel Corona Virus:

- Realigning our School Day Programs for online learning;
- Continuing to provide children STEM role models through our "Career STEM Video" Initiative;
- Using virtual learning to strengthen, expand and adapt our Computer Science program;
- Adding Social Media Specialist Shreya Nandi to our team to strengthen and expand our social media presence and communication outreach; and
- Welcoming new Members to our Board of Directors to bring additional perspectives to addressing near term and longer term challenges.

We appreciate that all who read this, in these very different and sometimes troubling days, are coping with new, strange and often difficult conditions. We hope that your relationship with RESET will provide elements of continuity, stability and progress in the challenges you face.

STEM Quiz:

What is a subunit vaccine?

 Feature Article

RESET's 12 x 12 Realignment of 2020-2021 School Day Programs

This year RESET and our partner schools face twin challenges: NGSS curriculum demands limit flexibility in science programming and the pandemic results in all classes being virtual. RESET's Sherri Kohr designed a creative response that realigns our program to provide extended in-depth relationships with 12 long-time partner schools in D.C. and Virginia that reflect diverse student populations.

In earlier years teachers were more supportive of add-on enrichment programs and experiments that excited students, even if they didn't align with that year's curriculum. Today, in part due to widespread adoption of the NGSS, elementary school curricula must meet more ambitious and prescriptive demands. School days are now more tightly scheduled; accordingly, RESET experiments must cover curriculum topics that meet NGSS standards.



Sherri Kohr

While new RESET volunteers typically express interest in leading activities in their field of STEM, most are flexible and willing to include other topics requested by teachers.

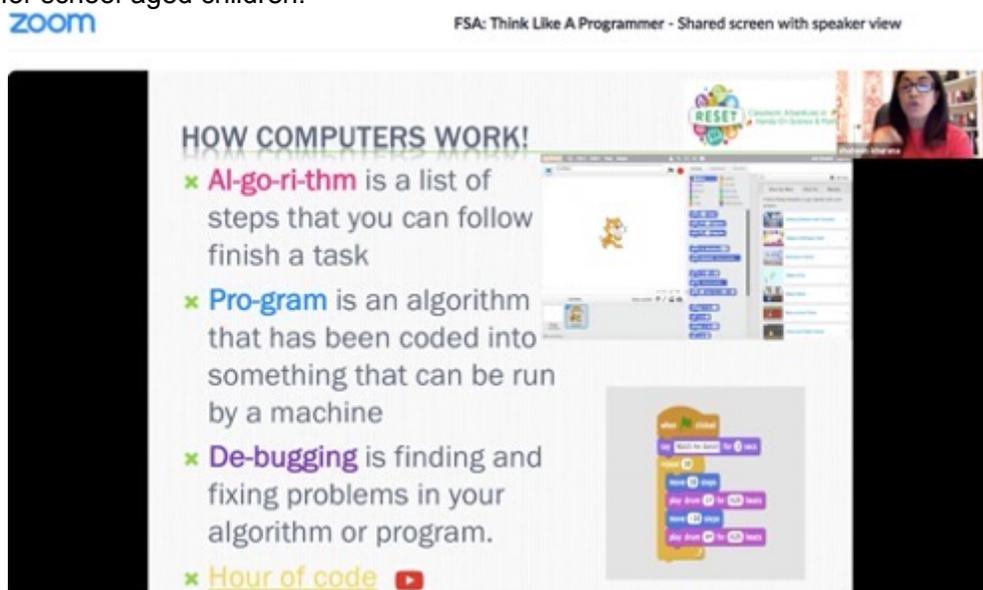
To accommodate this change, Sherri began reorienting RESET's school day program, preparing volunteers to lead activities that align more directly with their teachers' curriculum and standards of learning. This summer Sherri continued to focus on this evolution while planning for the possibility of virtual classrooms. With the challenges posed by distance learning, Sherri determined that it was essential that RESET programs both exhibit the highest quality in remote learning and line up ever more closely with teachers' specific STEM objectives and teaching methods. At the same time, RESET would continue its focus on hands-on STEM learning through experiments and engineering activities, which also pose challenges with volunteers, teachers and each student being in a different physical location.

RESET has always considered developing a close relationship between students and volunteers as vital to its mission. Encouraging students to envision STEM professions as an option for their own futures made maintaining that closeness essential to her plan. With these considerations in mind and with the cooperation of our dedicated and talented volunteers, Sherri conceived the program dubbed "12 x 12" because it matches the same 12 volunteers, or teams of volunteers, with the same 12 teachers and classes. Over the academic year 18

different video software programs being used for on-line teaching in DC, Fairfax, Alexandria, Arlington, Loudoun, and Prince William Counties so that volunteers can be trained and ready to start with their teachers and students.

Virtual Computer Science Learning

Along with the rest of the education community, RESET's Computer Science Program is moving from classrooms to "Zoom Rooms" and finding new ways to reach young people at home through partnerships with schools and community organizations, including the Girl Scouts. On August 5, 2020, RESET and CodeVA held a virtual workshop for 25 middle school girls in coding. Topics including the developing algorithms, converting their steps into instructions that can be followed by a computer, and debugging the programs to ensure that they work. All of this was accomplished with fun, hands-on activities like building a paper airplane using algorithms and SCRATCH coding, an MIT developed programming language for school-aged children.



Shaheen Khurana leads a Computer Science Zoom Session

RESET is building a strong virtual computer science curriculum that is aligned with learning goals at RESET schools. We will offer this program to teachers at nine schools and community service organizations in the Washington, DC region this year where RESET has previously presented computer science programs in the classroom.

RESET is also posting videos of activities for adults to lead for children at home in its #RESETuesday program. Volunteer Harkiran Singh has prepared two videos on the use of animation software. See:

https://www.youtube.com/playlist?list=PLm0u_BSljOpJxbVXZucrnPT1naXq2b0Qf

RESET's Girl Scout coding program has also gone virtual. Using a tiered educational approach, volunteers first have on-line sessions with teenage Scouts. This is followed by a second program for younger Scouts, in which the older Scouts participate as trainers. Our trained teen Scouts Casey Hummeldorf and Harkiran Singh did a spectacular job of training younger Brownie and Junior Girl Scouts online to earn their "Think Like A Programmer" STEM

"Thank you for all of the work you put into the "Think Like a Programmer events for the Girl Scouts STEM event. We truly appreciate it and helped these girls earn their bronze award!"

RESET has established partnerships with a number of community organizations in its computer science program, including Code.org, 500 Women Scientists, Women in Technology, Black Girls Code, Girls Who Code and CodeVA. Corporate partners include Electrosoft, the Air Conditioning, Heating and Refrigeration Institute (AHRI), Appian and Collabralink.

Looking to the future, RESET's Shaheen Khurana is planning to reach more children in underserved areas through partnerships with the Children's Defense Fund, Wesley Housing, Northern Virginia Family Service (NVFS) and the DC General Family Shelter. Another objective is to hold weekly coding events for Girl Scouts.

An advantage to developing on-line programs is that RESET can expand to other locations without having a local volunteer base, and Shaheen is working with RESET's Kate Vollmer on such a pilot program in Florida.

Career Videos Project

In addition to adding to students' STEM education, RESET aims to inform students, including those from disadvantaged backgrounds, about interesting and well-paying career pathways open to them. A new RESET initiative is creating videos for children that introduce them to professionals in STEM field, who describe their backgrounds and what they and their colleagues do on the job. If a student identifies with a professional in one of these videos, it could have a major impact on their education and career choices.

In the first of in this video series, young learners are introduced to a career in computer science by Neechie Greer, a successful software engineer at a federal consulting firm in Washington, DC. Neechie answers some of the core questions around software engineering, such as:

- What does a software engineer do?
- What kind of people should study software engineering?
- What are the best and worst parts of the job?

See the video at::

<https://www.youtube.com/watch?v=ZQhfn168n5E&t=1s>

Neechie's video was edited by Nicole Janeway Bills - check out her YouTube videos on Data Science:

<https://www.youtube.com/channel/UCO6JE24WY82TKabcGI8mAOQ>

If you have a suggestion for a STEM profession that you think should be a high priority for the career video project, please send a message to shaheen.khurana@gmail.com

RESET Welcomes Shreya Nandi

Shreya Nandi has joined the RESET staff as Social Media Specialist. Shreya graduated from Cornell University *cum laude* with a Bachelor of Arts, majoring in Biological Sciences and minoring in East Asian Studies. Shreya is a graduate of Thomas Jefferson High School for Science and Technology in Alexandria, Virginia.



With Shreya on board, RESET will strengthen and expand its social media presence and communication through commercials, advertisements, informational videos, and other digital media projects. Shreya is well-positioned for this with experience as Social Media Strategist for CurioLogie in the Classroom (CiC), a RESET partner that presents hands-on STEM learning and computer coding to DC's Center City Public Schools and local Girl Scout Troops.

Shreya has an extensive background with non-profit organizations, including serving as Fundraising Chair and President of Make-A-Wish at Cornell and as a Patient Ambassador at the National Institutes of Health Clinical Center's HIV Clinic and Operating Rooms.

In her initial project for RESET, Shreya developed a video to introduce stakeholders to RESET. See

https://www.youtube.com/watch?v=gr1zTBMUG0Y&ab_channel=ShreyaNandi

Chair Lew Mendelson announces new Board Members

Sara Holtz has nearly 20 years of experience in global public health including Peace Corps/Togo, USAID/Senegal, USAID/West Africa, World Bank, university research centers, and USAID-funded projects. She currently works for the CIRCLE Project focused on using evidence-based approaches to improve maternal, newborn, and child health in low- and middle-income countries. She has a bachelor's degree in international relations and French from William and Mary, a master's degree in public health from University of North Carolina, and a doctor of public health degree from Johns Hopkins Bloomberg School of Public Health.



In her spare time Sara enjoys volunteering and mobilizing groups of volunteers, particularly youth, to participate in community service projects. For the past ten years she has volunteered for the Girl Scouts Council of the Nation's Capital to bring STEM, Leave No Trace outdoor ethics, and global programs to Girl Scouts in the DC metro area. With the local BSA council she teaches Leave No Trace and advises scouts on significant conservation and environmental projects. At the local elementary school she's the parent member of the STAMP (Science Technology Art Music Philanthropy) committee aimed at providing family-friendly STEM and volunteer opportunities to the school community. In Fairfax County she serves as a site leader for the Fairfax County Park Authority Invasive Management Area program to educate the public and lead work days to remove invasive plants from public land, helps label storm drains with the Soil & Water Conservation District, and plants native trees with Fairfax releaf.

Elly Doyle recognition and IMA volunteer of the year award from the Park Authority and the Environmental Excellence Award from the Office of Environmental and Energy Coordination.



Juan Valentin is an Education Program Advisor in the Office of Education and Outreach (OEO) at the United States Patent and Trademark Office where he is responsible for the development and implementation of educational projects of national scope, with a particular emphasis on the development of STEM, design-thinking, or invention-focused projects infused with intellectual property (IP) concepts. Prior to joining the OEO team, Mr. Valentin was a USPTO patent examiner for 12 years, specializing in the art of optical measuring and testing devices. Community outreach is an important part of Mr. Valentin's life, his volunteer work with the Society of Hispanic Professional Engineers includes youth education and outreach on behalf of engineers and leadership training for members of all levels within the organization. Mr. Valentin holds a Bachelor's degree in mechanical engineering from the Clarkson University.



Christa Weber is a 5th grade teacher at Crestwood Elementary School in Springfield, Virginia and has been working with RESET volunteers for the past six years. Prior to becoming a teacher, Ms. Weber was a Peace Corps Volunteer in the South Pacific island nation of Vanuatu, where she spent two years helping a remote community build a vocational school. It was in the Peace Corps that Ms. Weber left her corporate career behind and started to imagine herself as an educator. After leaving Vanuatu, Ms. Weber acquired her teaching credentials from California State University, Monterey Bay and taught in East Salinas as well as in East Oakland through Girls Incorporated. Ms. Weber holds endorsements in Advanced Academics and STEAM (Science, Technology, Engineering, Arts and Math) through Fairfax County Public Schools (FCPS). These endorsements have supported her instruction

of students who might not have access to more rigorous opportunities to reach their full potential through a program called Young Scholars (YS).

Ms. Weber has experienced all elementary grades K-6 with primary knowledge in 4th and 5th Grade curriculum. Although she teaches all subjects, Ms. Weber has a strong interest in science. This was never something she expected to be her passion until she was selected to attend a pre-service teacher training institution, hosted by the National Institute of Aerospace (NIA) and NASA Langley. Being immersed for two weeks, in what was essentially science camp, was all it took to hook her. This experience empowered her to become a strong science educator that has led to many leadership opportunities in and outside of her school. Ms. Weber believes that in order to help children reach their fullest potential, it is essential they be provided opportunities to apply STEAM knowledge to real life scenarios and see themselves in roles they aspire to become. Nothing does that more than a child who sees themselves in a RESET volunteer.

A subunit vaccine includes only parts of the virus or bacteria, or subunits, instead of the entire germ. Because these vaccines include only the essential antigens and not all the other molecules that make up the germ, side effects are less common.



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