



Raising **E**xcitement for **S**cience,  
**E**ngineering, and **T**echnology

*STEM Volunteers Inspiring Children  
Through Hands-On Learning*



# 2019 Annual Report



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**RESET - Raising Excitement for Science,  
Engineering, and Technology**  
*STEM Volunteers Inspiring Children Through Hands-On Learning*



*Cover Photo: A kindergarten student in RESET Volunteer Amber Fandel's optics session at Barrett Elementary School in Arlington, Virginia.*

## Reflecting Upon 2019

### *A Message from RESET's Executive Director*

Creativity and innovation are key to the way Science, Technology, Engineering and Math (STEM) are presented to students in schools today. In 2019 those qualities also guided RESET as we looked anew for ways to reach more children with hands-on STEM learning. For decades RESET volunteers have led programs in elementary and middle school classrooms during the school year. This year showed robust growth in newer non-traditional learning environments – summer programs, STEM events, and weekend sessions for Girl Scouts. These programs not only increase the number of children RESET is able to inspire, but help with recruitment of STEM volunteers who have work schedules that conflict with traditional school-day programs. Because of these innovative approaches, RESET was able to reach more students in 2019 than ever before in its 31-year history.



I am deeply grateful to the hundreds of STEM professionals who share their time, expertise and enthusiasm with this new generation that will lead us into a STEM-imbued future. I also thank the Principals, teachers and community leaders who welcome our volunteers to work with their children, our Board of Directors for their guidance and direction, and RESET staff who made our record-setting year possible.

- Keith Osterhage

*RESET is a volunteer organization of science, technology, engineering, and math (STEM) professionals whose mission is to motivate children to discover and explore the worlds of science and math, and to encourage them to consider education and career choices in related fields.*

# Volunteer Bill Mitchell

## Putting Creativity in Computer Science

“How do you eat an elephant?” is Bill Mitchell’s opening line for one of his classroom sessions. Eying the bemused looks on his student’s faces, he says “one bite at a time.” He then explains that “one bite at a time” is the way they will approach the animation software lesson for the day – steps that include selecting and introducing virtual pets on their laptops, and then animating,



feeding, watering and making them talk. As the students work on these tasks, he wanders through the classroom looking at their screens, commenting “I love the creativity, guys!”

Bill is a volunteer at Fairhill Elementary School in Fairfax, Virginia. As his students activate their on-screen unicorns, monkeys and other pets, sixth grade teachers Jessica Gannon and Margaret Albertson and Fairhill’s School-Based Technology Specialist Stephen Giese, are also actively engaged with the students. The virtual pet lesson is midway through Bill’s twelve-session fall computer science program with two classes of

**RESET Volunteer Bill Mitchell**

sixth graders, who join together in the library for his weekly visits. He is leading another program this spring so that all Fairhill sixth graders have the opportunity to experience the program.



Bill hails from western Canada. He studied computer science and artificial intelligence at British Columbia’s Simon Fraser University and, after working in Montréal and California, is now at PublicRelay.com in Tyson’s Corner, Virginia. He became interested in volunteering when he met RESET’s Shaheen Khurana at a Tech Talk in Reston, a monthly meeting where computer professionals meet and share ideas. He likes working with children because of their excitement when they learn to do things

themselves. His goal is to make them competitive in their future world of work. Bill says, “I want to take the fear of complexity of computers out of kids – and to get to them early.” He cited his relevant personal background, having worked with his daughter ten years ago on making stop-motion animation using Scratch. At Fairhill he also uses Scratch, a popular software in today’s elementary schools. Bill has also volunteered at local libraries and with Scouting organizations as part of the “Hour of Code” program.



Commenting on Bill’s program, Technology Specialist Giese says that it’s great to have an outsider from the computer industry show the students “how what they do connects with their jobs in the future.” He explains that Bill also reinforces Fairhill’s participation in the nationwide Positivity Project, which each week emphasizes a different character trait for the school community; examples are open-mindedness, curiosity, and teamwork/citizenship.

RESET has had programs at Fairhill for two years, since RESET advocate Courtney Korb was appointed as Assistant Principal. In her previous assignment Courtney had hosted RESET programs at Camelot Elementary School. While there she reported “There was such positive feedback last year; we would love to be involved with RESET again.”

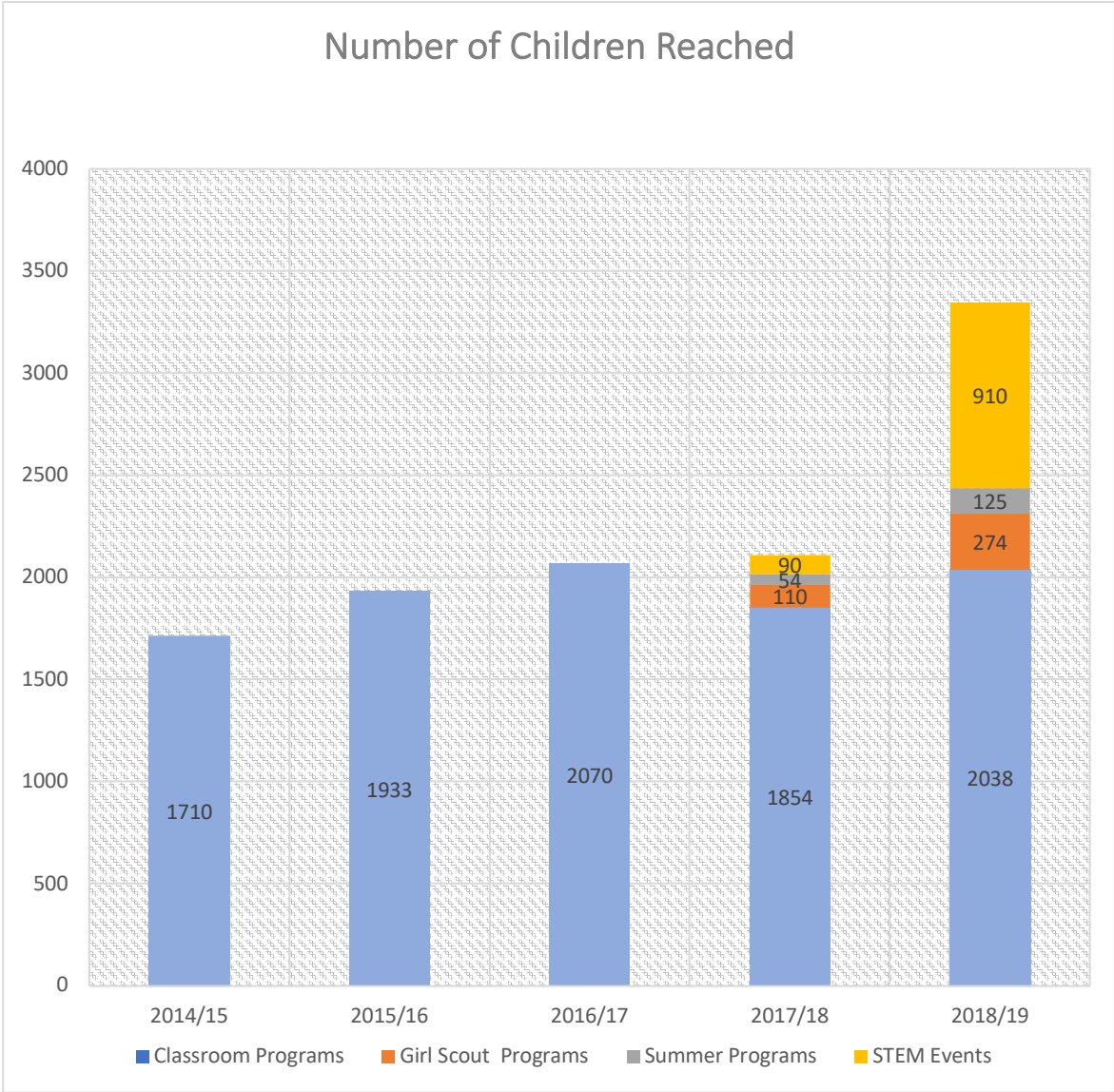
Bill acknowledges that it has taken a lot of time to develop the lessons and slide presentations for his program. He is willing to share the lesson plans and materials with any others who may consider volunteering to bring the program to other students. Please contact [reset@resetonline.org](mailto:reset@resetonline.org) if you are interested.



Students share their pet animation ideas

# RESET Program Data

As STEM grows ever more important in today’s economy and culture, community institutions outside of schools are seeking ways to include relevant content in programs for youth. This provides new avenues for RESET to reach children with hands-on STEM learning, and 2019 showed significant growth in RESET activity in summer schools, Girl Scout sessions, and at community events. The number of young participants in those RESET programs grew from 254 in 2018 to 1299 in 2019. Students enrolled in RESET classroom programs during school year 2018/19 reflected a slight increase over the previous year. RESET reached a total of 3,347 children in 2019. The graph below shows RESET growth over a five-year period.



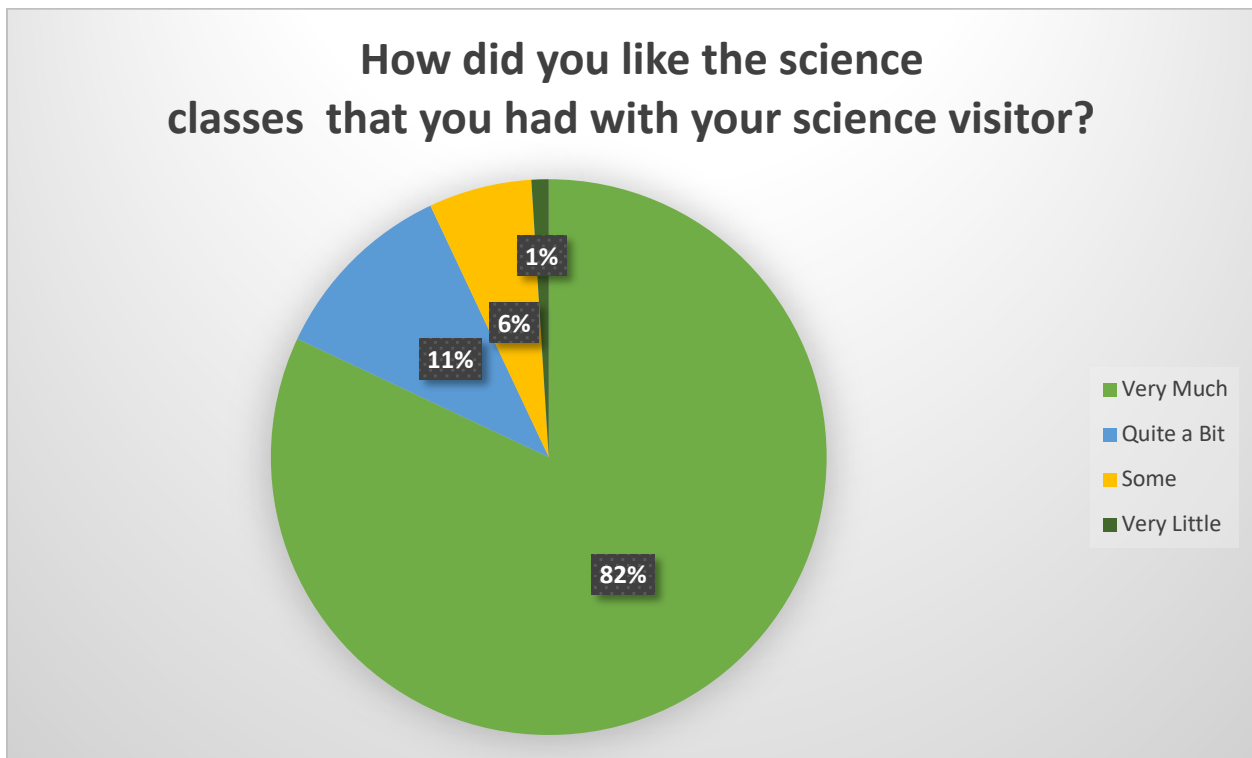
## Student Assessment Results

To measure RESET's effectiveness in achieving its goal of sparking children's enthusiasm for STEM, RESET surveys students who have completed a program. The survey instrument measures attitudes towards science learning and uses questions developed by the National Center for Education Statistics (NCES) in preparing The Nation's Report Card. With these metrics RESET can compare the responses of students in our programs with those of students nationwide who completed the NCES assessment.

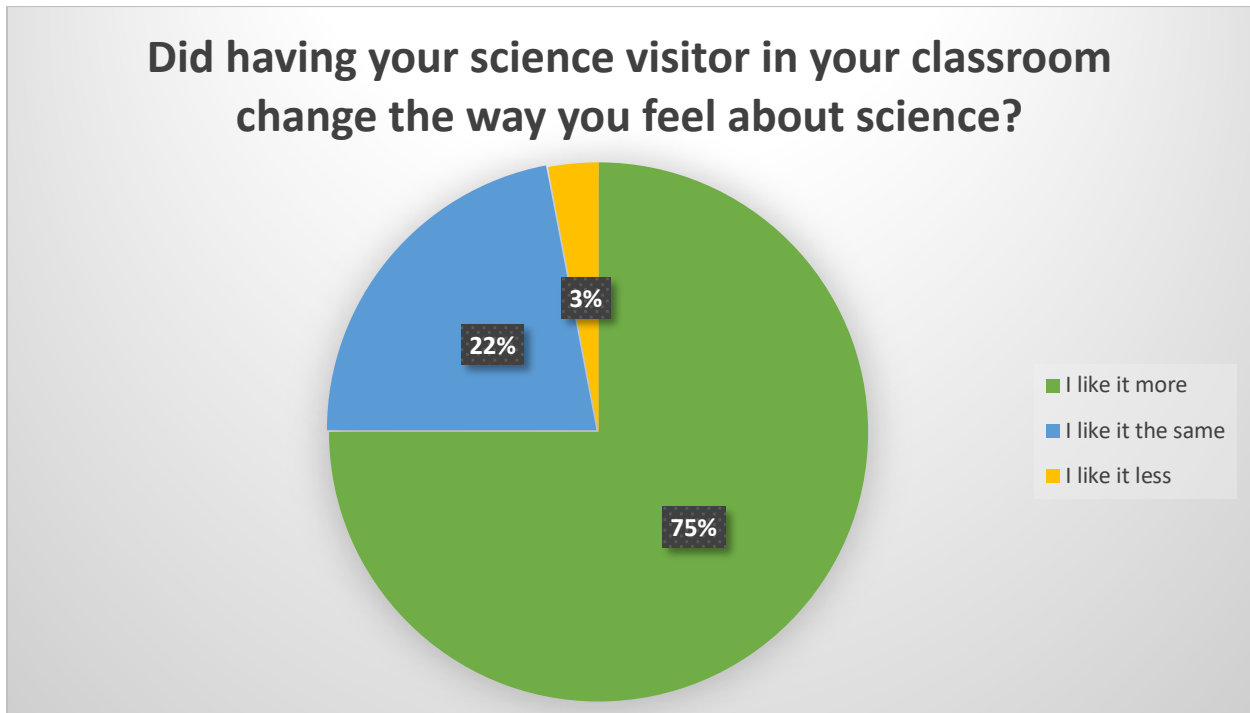
RESET received 323 responses to its Student Assessment Questionnaire in school year 2018/19. The data below show RESET's positive impact on students compared with responses of students nationwide.

How much do you like studying science?	Nationwide Results	RESET Results
Very Little or Some	41%	20%
Very Much or Quite a Bit	59%	80%

RESET asks several additional questions. The results below show the positive impact RESET volunteers have on student attitudes toward STEM.



## Student Assessment Results (continued)



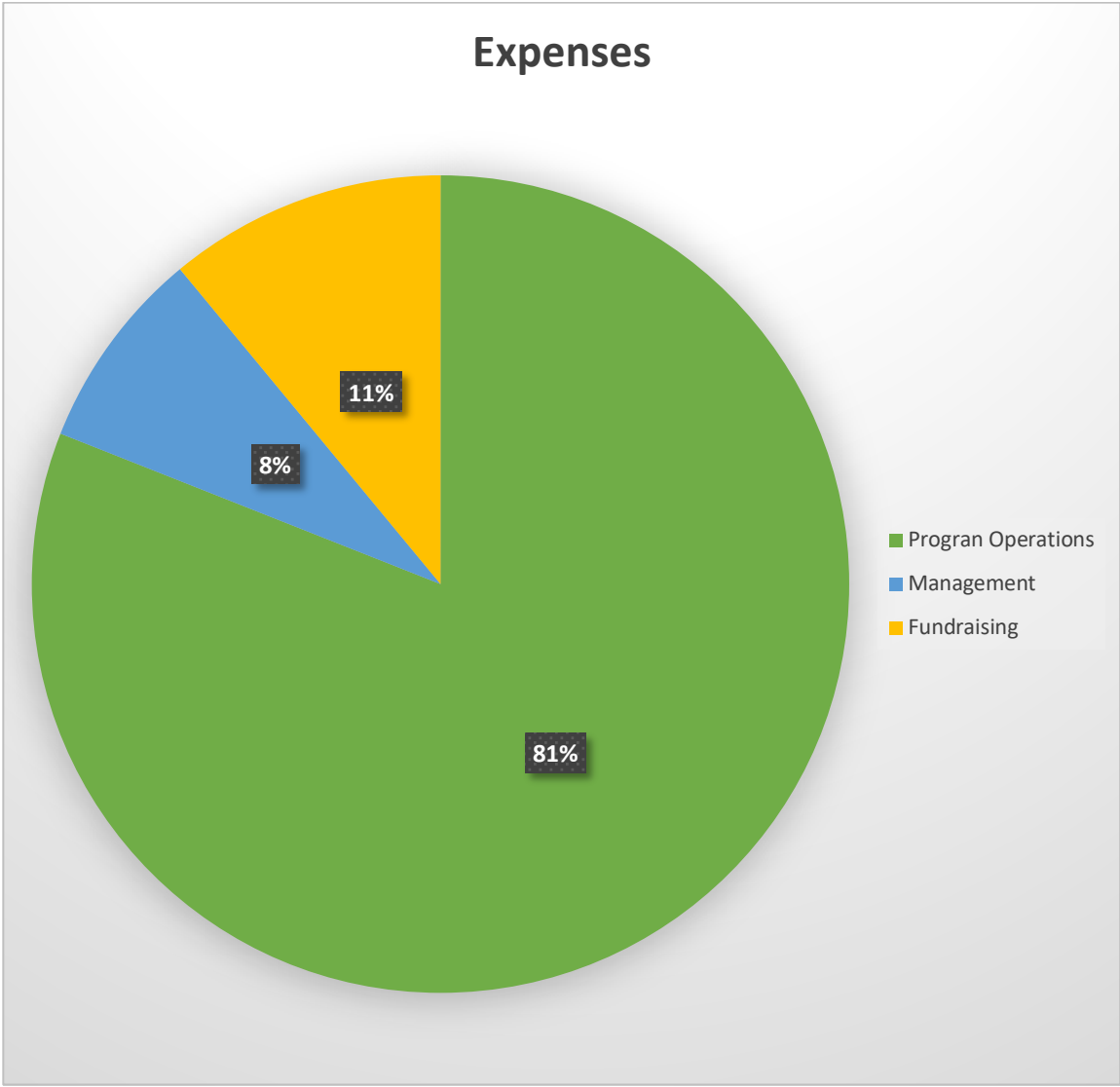


# Operating Expense Report

In Fiscal Year 2019 RESET received \$187,673 in financial contributions through grants and individual contributions and incurred \$172,456 in expenses, resulting in an increase of \$15,217 in net assets.

RESET continues to keep our administrative and management costs at a modest level, investing a high percentage of the operating budget in the delivery of programs. Because our volunteers donate their time and expertise and community partners provide help, the impact of donations to RESET is amplified to support our mission.

RESET expenses include program operations staffing, classroom skills training, field trips, classroom materials, fundraising, communications and liability insurance.



## RESET Schools and Community Partners

RESET is grateful to our partner schools and community service organizations that help us deliver hands-on STEM learning to children.

### District of Columbia

Amidon-Bowen Elementary—Ward 6  
DC Prep Anacostia Campus—Ward 8  
DC Prep Benning Campus—Ward 7  
DC Prep Edgewood Campus—Ward 5  
Excel Academy—Ward 8  
Harmony Public Charter—Ward 5  
John W. Ross Elementary—Ward 2  
JC Nalle Elementary—Ward 7  
Lawrence E. Boone Elementary—Ward 8  
Martha’s Table—Ward 8  
Payne Elementary—Ward 6  
Shaw Center City Public Charter—Ward 6  
Whittier Educational Campus—Ward 4

### Maryland

Annapolis Elementary  
Cashell Elementary  
Cannon Road Elementary  
Captain James Daly Elementary  
Clopper Mill Elementary  
Dunloggin Middle School  
High Bridge Elementary  
Girl Scouts of America –  
Montgomery County  
Oak View Elementary  
Sligo Creek Elementary  
South Lake Elementary  
Summit Hall Elementary  
Waugh Chapel Elementary  
Wheaton Woods Elementary

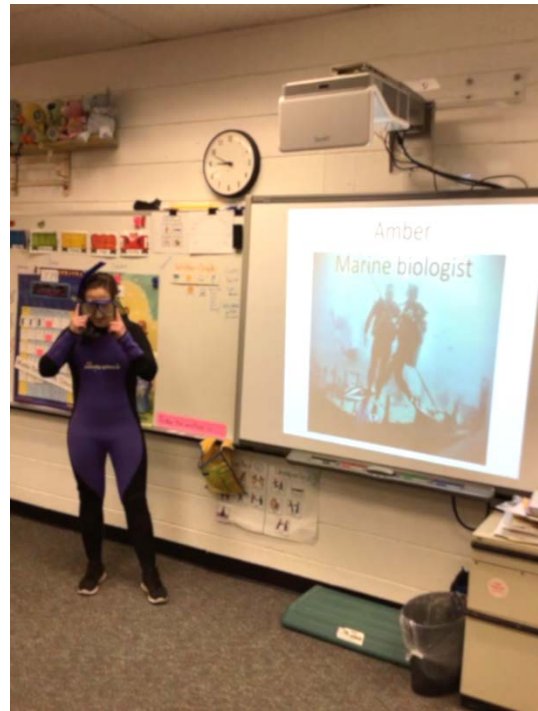
### Virginia

Barrett Elementary  
Bren Mar Park Elementary  
Buckland Mills Elementary  
Camelot Elementary



**Volunteer Marya Sabir presents Shaw School Patrick Ashton with RESET’s Student of the Year Award**

Churchill Road Elementary  
Creighton Corner Elementary  
Cora Kelly Elementary  
Crestwood Elementary  
Drew Model School  
Ellis Elementary  
Fairhill Elementary  
Ferdinand T. Day Elementary  
Forest Grove Elementary  
Girl Scouts of America – Alexandria  
Girl Scouts of America - Ashburn  
Girl Scouts of America – Reston  
Glebe Elementary  
Hoffman-Boston Elementary  
Horizon Elementary  
INMED Partnerships for Children  
Jefferson-Houston Elementary  
Kings Glen Elementary  
Landmark Science Club  
Liberty Elementary  
Moorefield Station Elementary  
Northern Virginia Family Service  
Stratford Landing Elementary  
Sugarland Elementary



## Volunteer Sarbari Gupta

*“These are good fields for women and those from disadvantaged families. Helping them onto a STEM Pathway makes sense.”*

As she prepared to lead a computer science lesson, RESET Volunteer Sarbari Gupta explained that this session would differ from her previous visits because it would not involve the use of computers. The topic for that day was algorithms. The children were to develop a step-by-step set of directions – a non-digital exercise in logic preparatory to coding a computer program. In this case, the sequence of steps the children were to identify would be like those used to program a robot. Before the students arrived, Sarbari had marked a pathway on the floor with masking



tape. When the lesson began, the children were broken into teams; one child on each team was blindfolded and led to the starting point of the course laid out on the floor. The other teammates then directed the unseeing student along the pathway using only spoken instructions: turn left, turn right or go forward. Students each had a turn being blindfolded and following the guidance from their teammates. Sarbari had wanted the children to be active and have fun as they

learned about algorithms. That was certainly the case as the team members jumped up and down in excitement while shouting out their instructions.

This “unplugged” lesson was one in a series included in Sarbari’s program at INMED’s Partnerships for Children in Loudoun County, Virginia. INMED has been a RESET partner for two years, hosting computer science volunteers in its after-school program for children. Their mission is to build pathways that enable vulnerable children, families and communities to achieve well-being and self-reliance. At the Family & Youth Opportunity Center, the after-school program site, INMED’s goal is to help at-risk children get a healthy start in life and provide them opportunities to achieve academically and socially. RESET volunteers help with this goal by providing hands-on computer science programs and connecting the children to professionals who have chosen career pathways in related fields. INMED’s Youth Education Services/Volunteer Coordinator Yahaira Hanon values Sarbari’s contribution: “We really appreciate Dr. Sarbari’s volunteer work; the kids love and enjoy her class.”

Sarbari is Chief Executive Officer of Electrosoft Services, a Reston, Virginia company

that focuses on cybersecurity, software and information technology, with clients that include the U.S. Army and Navy. Her educational background includes a degree in Electronic and Electrical Communication Engineering from the Indian Institute of Technology in Kharagpur, and masters and doctoral degrees in Electrical Engineering from the University of Maryland. Sarbari met RESET's Shaheen Khurana through code.org, a nonprofit dedicated to expanding access to computer science in schools and increasing participation by women and underrepresented minorities. While raising her two daughters Sarbari ensured they were aware of options in STEM fields. With her children now grown, Sarbari volunteers for RESET because she wants to inspire other children, especially girls and those from disadvantaged backgrounds, to explore information technology. She also volunteers as a mentor for Women in Technology and an instructor for code.org.

When asked how she finds the time for volunteering while serving as the CEO of Electrosoft, Sarbari says that she makes it work because giving back to the community is a priority for her. She explains that Shaheen Khurana helps by providing the content for her computer science program, which would otherwise be a time-intensive endeavor. Sarbari thinks RESET can attract more volunteers with demanding jobs by providing content in other STEM fields as well.



## RESET Volunteers

Jonathan Abramowitz  
Isabel Alexandra  
Kaylea Algire  
James Henry Alstrum-  
Acevedo  
Tara Altman  
Wilfred Amisial  
Raul Arenas  
Rebecca Arruda  
Thomas Artman  
Jana Austin  
Nick Balanda  
Samantha Ballinger  
AnuOlu Balogun  
Emily Behrman  
Nicole Bills  
Rachel Bittner  
Cody Bolling  
Kristin Branson  
Marcus Cajuste  
Marquis Chapman  
Charles Cisneros  
Brandon Cole  
Brian Coleman  
Paola Correa  
Elise Croteau-Chonka  
Christopher Dolce  
Mike Economo  
Rojan Egnor  
Mina Ekramnia  
Anne Erickson  
Chigozie Erondu  
Isabel Espinosa-Medina  
Amber Fandel  
Dylan Fitzgerald  
Greg Fleishman  
LaShawn Fortune  
Claire Gao  
Justin Geffrey  
Ramit Ghosh  
Mike Goldstein  
Eric Greenlee  
Sarbari Gupta  
Shobhit Gupta  
Arthur Hall  
Jessica Han  
Sarah Hebert  
Sandra Hernandez Hangarter

Jenny Hsin  
Casey Hummeldorf  
Sean Hunter  
Tom Ilich  
Sara Inglis  
Nikita Israni  
Rajani Joglekar  
Rebecca Jonas  
Ujwala Joshi  
Jennifer Kane  
Amrit Khalsa  
Shaheen Khurana  
David Klinges  
Andrew Kubiak  
Briana Kulisch  
Jonte Lee  
Patrick Lee  
Stephen Leete  
Yingquan Li  
Kevin Lin  
Brandon Long  
Clara Long  
Fonya Long  
Kit Longden  
Joe Mait  
Curtis Mayes  
Briana McClain  
John McDermott  
Joe McDonald  
Monti Mercer  
Rebecca Mickol  
Bill Mitchell  
Nina Mortazavi  
Lukasz Olinginski  
Tess Oram  
Cecilia Ortega  
Adeoye Owolewa  
Alexis Pacheco  
Gaby Paez  
Goral Pahuja  
Bashir Partovi  
Nitin (Kumar) Patel  
Cynthia Peacock  
Jessica Pedersen  
Mike Perkins  
Minh Phan  
Wendye Quaye  
Ben Rahimi

Nadine Randel  
Catherine Rastowski  
Allie Reichart  
Alice Robie  
Terrell Robinson  
Lexi Rubin  
Bobby Rushing  
Ashley Russell  
Lizma Saeed  
Marya Sabir  
Ajmeeta Sangtani  
Harkiran Singh  
Pedro Santos  
Katie Schretter  
Josh Scieurba  
Nuttiya Seekhao  
Charles Shedrick  
Harold Smith  
Hallee Soderholm  
Peter Sowa  
Halyi Spence  
Sanjay Sreekumar  
Gwen Tervo  
Rachitha Tolasi  
William Thomson  
Jordan Towne  
Rebecca Trinklein  
Cheng-Yuan Tseng  
Sharaya Tulpule  
Dan Turner-Evans  
Juan Valentin  
Sarada Viswanathan  
Andy Vo  
Katie Vollmer  
Chen Wang  
Monique Watts  
Laureen Weeden  
Andrea Wellington  
Nathaniel Wiehe  
Oscar Wiygul  
Ann Williams  
Zhou Yu  
Dah-Wei Yuan  
James Zhang  
Art Zhao  
Qinsi Zheng

**RESET partners with government, private sector and non-profit organizations that provide teams of volunteers to deliver RESET programs:**

- Curiologie in the Classroom
- The Environmental Protection Agency
- General Dynamics
- The Howard Hughes Medical Institute
- The National Oceanic Atmospheric Administration
- The U.S. Patent & Trademark Office



## RESET Remembers Teacher Kelly Chapman

April 27, 1983-October 28, 2019

RESET's John Meagher remembers a conversation with Stratford Landing Elementary School's Assistant Principal Shirley Shannon about which teacher she would recommend for a RESET program. Without hesitating Ms. Shannon recommended Ms. Chapman because she was an innovative teacher who loved science. Ms. Chapman showed an enthusiasm for the experiments that spread to her second-grade students. Her favorite lesson was raising tadpoles in her classroom; when their legs emerged, she reported that her students asked if they might hop around the classroom at night.

John said "Kelly Chapman actively participated in the lessons and went from table to table to help the students. She was the kind of teacher that makes sure her students got the most out of what RESET offers."

*"I cannot thank you enough for enriching our curriculum, bringing excitement to every Thursday, and bringing science to life for them in ways I could have never dreamed of. It has been such a pleasure to work with you and such a joy to watch my second-grade scientists fully engaged. I can only hope that we are able to continue this partnership and to bring the joy, fun, and excitement of science to as many kids as possible."*

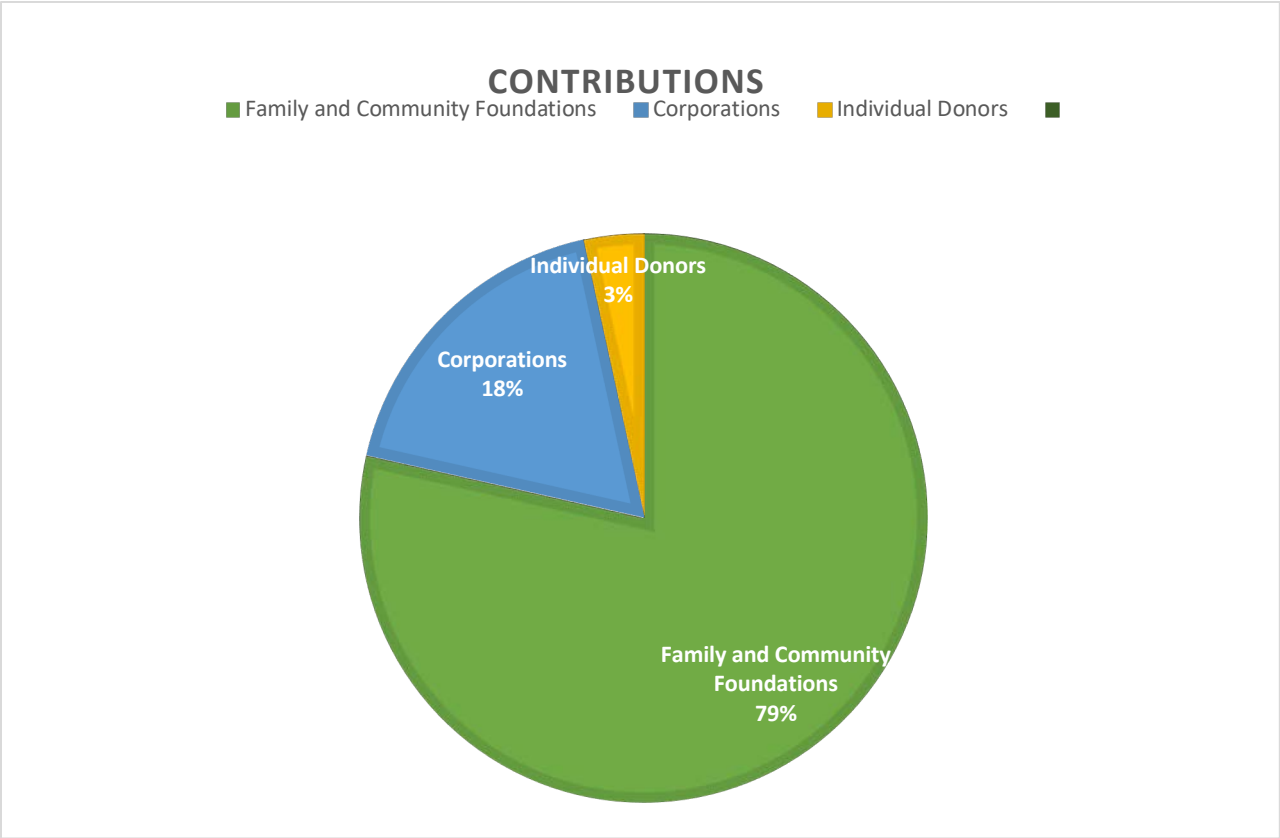
- Teacher Kelly Chapman, Stratford Landing Elementary





# RESET Program Support

RESET's income from Community and Family Foundations and Corporations grew in 2018. Increased funding enabled RESET to expand to new locales, establish more partnerships with schools and community organizations, improve volunteer classroom skills, and expand classroom content, including in the computer science program.



**RESET is grateful for the generous financial support it receives from corporations, community & family foundations, and individual donors.**

## Community and Family Foundations

- Boothe Family Fund
- Business Women’s Giving Circle of the Community Foundation for Northern Virginia
- The Max and Victoria Dreyfus Foundation
- Morris and Gwendolyn Cafritz Foundation
- Dimick Foundation
- Max and Victoria Dreyfus Foundation
- Elkes Foundation
- John Edward Fowler Memorial Foundation
- Marilyn T. and David R. Heebner Foundation, Inc.

## Community and Family Foundations (Continued)

- Matthew Korn and Cynthia Miller Family Foundation
- Richard E. and Nancy P. Marriott Foundation
- Mufson Family Foundation
- Luther I. Replogle Foundation
- Silicon Valley Community Foundation
- Hattie M. Strong Foundation

## Corporations

- American Airlines
- Northrop Grumman
- SRC, Inc.
- Virtru Corporation

## In-Kind Support

- Living Classrooms (cost sharing for science cruise field trips)



# RESET Board and Staff

## Board of Directors

- David T. Adler, Financial Analyst, Washington, DC
- Claudia C. Austin, Teacher, Richard Montgomery High School, Rockville, MD
- Nina Barcelli, Science Curriculum Designer, Washington, DC
- Susan Hesser, Consultant, Commercial Real Estate Agent, Annandale, VA
- John W. Meagher, RESET Communications, Fairfax Station, VA
- Lewis Mendelson, Board Chair, International Capital Market Consultant, Bethesda, MD
- Keith Osterhage, RESET Executive Director, Fairfax Station, VA
- Adeoye I. Owolewa, RPh, Pharmacist Washington, DC
- Katie Vollmer, National Institutes for Health Fellow, North Bethesda, MD

## Advisory Committee

- Salim Adogo, DC Neighborhood Advisory Commissioner, Ward 8, Washington, DC
- Noradeen Fariakas, Chartered Financial Analyst, Fairfield, CT
- Brian Gaines, Nonprofit Chief Executive Officer, Gaithersburg, MD
- Jon Simon, Mathematics Professor Emeritus , Potomac, MD
- Sheila Tobias, Author and Educator, Tucson, AZ

## Staff & Contractors

- Keith Osterhage, Executive Director, [reset@resetonline.org](mailto:reset@resetonline.org)
- Shaheen Khurana, Program Specialist, [shaheen.khurana@gmail.com](mailto:shaheen.khurana@gmail.com)
- Sherryl Kohr, Volunteer Classroom Skills Advisor, [sherri.kohr@gmail.com](mailto:sherri.kohr@gmail.com)
- John Meagher, Communications, [johnmeagh@gmail.com](mailto:johnmeagh@gmail.com)
- Helen Nelson, Certified Public Accountant, [hnelsoncpa@gmail.com](mailto:hnelsoncpa@gmail.com)



**Seated: Lew Mendelson; Standing from left: Susan Hesser, Ramiro Ramirez-Valdez, Katie Vollmer, John Meagher, Salim Adogo, Jon Simon, Adeoye Owolewa, Keith Osterhage**



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