

A STEM PROGRAM

SMILE

Science and Math Investigative
Learning Experiences

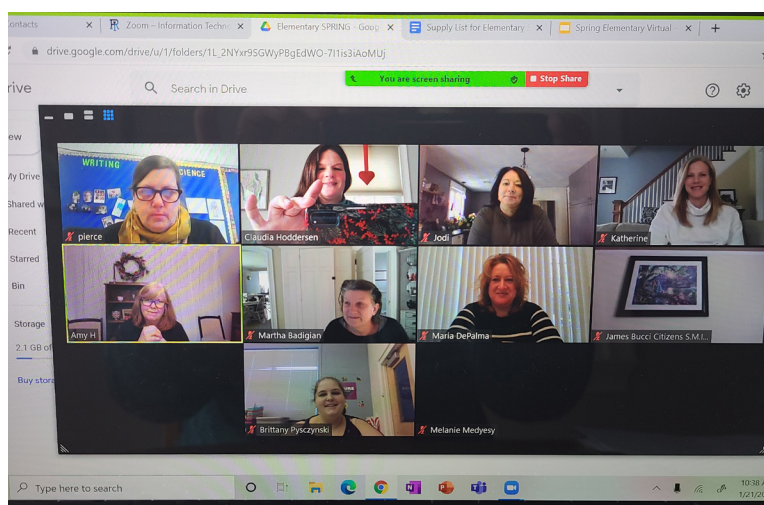
Newsletter

volume 27 No.1, January 2021

27* Years of service

Like many things today, SMILE looks different. We are holding club meetings remotely and sending home STEM supplies to each student. Students and teachers are not occupying the same physical space at this time, but SMILE is more important than ever.

Schools are struggling to keep minority and economically disadvantaged student engaged. SMILE is a program that keeps those at risk students involved and engaged by doing home based hands on activities. Despite the different way SMILE looks this year, we are proud to be succeeding.



Please check out our GoFundMe and consider sharing and supporting SMILE today

@ [#KeepSMILEingRhodeIsland](#)

The August 20, 2020 SMILE Teachers Workshop was accomplished virtually through Zoom due to the Covid -19 pandemic. Teachers picked up their club equipment materials prior to the workshop. Each club had individually packed bags for each student and for the teachers as well. Director, Carol Englander, greeted and welcomed all the teachers to the 2020-2021 year of all virtual clubs. She reviewed the strategies for holding virtual club meetings, emphasized the importance of gender and ethnic equity in calling on students virtually, answering questions and distributing praise. The procedures for electronic student membership, teacher activity logs, and student pick up of individual student club packets were discussed. SMILE staff were introduced: Claudia Hodderson, Elementary Coordinator and Assistant Director, Jo ann Basel, Middle School Coordinator, Seth Wojciechowski, High School Coordinator. The coordinators then used different Zoom rooms to introduce the new curricula and have teachers review the materials, engage in the activities, ask questions about STEM concepts and other procedural issues. It was a successful Zoom Teachers workshop that launched a very unconventional SMILE year.

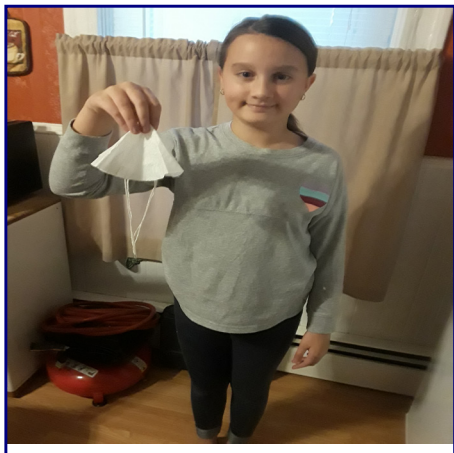
SMILE clubs started in September and October. SMILE staff virtually attended the meetings and were able to observe the delivery of the curriculum. It was a very interesting transition from "in person" to virtual club meetings. Students were happy to see their friends and teachers virtually, do STEM activities, and after encouragement, enter into discussions. A few clubs have taken virtual field trips. A group of Dassault Systemes employees led by Melissa Kearns, Senior Project Manager, Simulia R&D define, along with Gary Comtois, Bala Ram and Fabien Letaille gave West Warwick High School SMILE students an overview of the simulations they produce, video simulations that show how Covid-19 can spread in a hospital and ways to prevent the spread of the virus. Students viewed Dassault simulations that test new types of face masks without having to make multiple prototypes, wasting material. There was a very enlightening discussion focusing on the importance of education and to value life long learning. The fall semester of 2020-2021 virtual SMILE has gone very well, and we look forward to teachers and students enjoying the upcoming Winter/Spring virtual curricula.

CLUB UPDATES

Coleman Elementary, Woonsocket

Brittany Pyszczynski

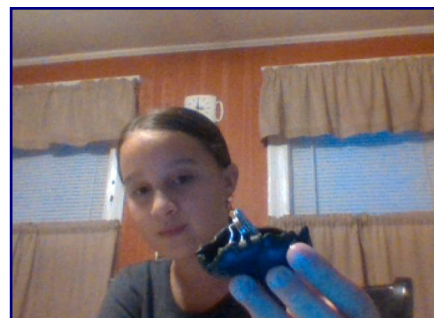
By Brittany Pyszczynski



Even though we are virtual, SMILE is in full swing at Coleman Elementary! We miss being able to physically collaborate with each other, but the students are still sharing ideas and helping each other on their activities. We have transformed ourselves into engineers and continue to reflect and develop on our activities.

We have built towers to hold weight and towers to support our favorite little stuffed animals. We discovered how boats float and talked about density. The students really loved this one and were very proud of what they made. They liked how they were able to try different shapes to see which float best and hold the most weight. We have also sent parachutes flying across our screens and rooms. The students have been so creative throughout the activities to think outside the box.

Our group may be little, but we are growing larger. However, no matter the size, we always support one another. The students are always willing to help one another when they are having a tough time on an activity. I constantly hear words of encouragement! One student expressed that she, "loves SMILE because she gets to build really cool things, and be with her friends." Another student said, "I want to be an engineer when I grow up. I love that I get to be one now!"



Rogers High School, Newport

Elizabeth Letourneau, Brooke Anderson

By Julia Delany

Rogers High School SMILE Club has been having virtual meetings since mid October. So far we have discussed Bioinformatics, where we learned about a baby who was genetically modified and we talked about the cancer genes BRCA 1 and BRCA 2. Then we played a game about the Carbon Cycle, explored Resistance using graphite pencils, alligator clips and small LED lights. We also played with projectile motion by making a catapult that launched a chocolate chip (or Skittle). Then we did some Python Programming with Penjee where we were given challenges to make a penguin catch the fish without going through the water. The most recent challenge we completed was making a cup hold water while it was upside down and only an index card was in place to stop the water from coming out. This was the biggest challenge because we had to try and see how much water the cup could hold upside down.

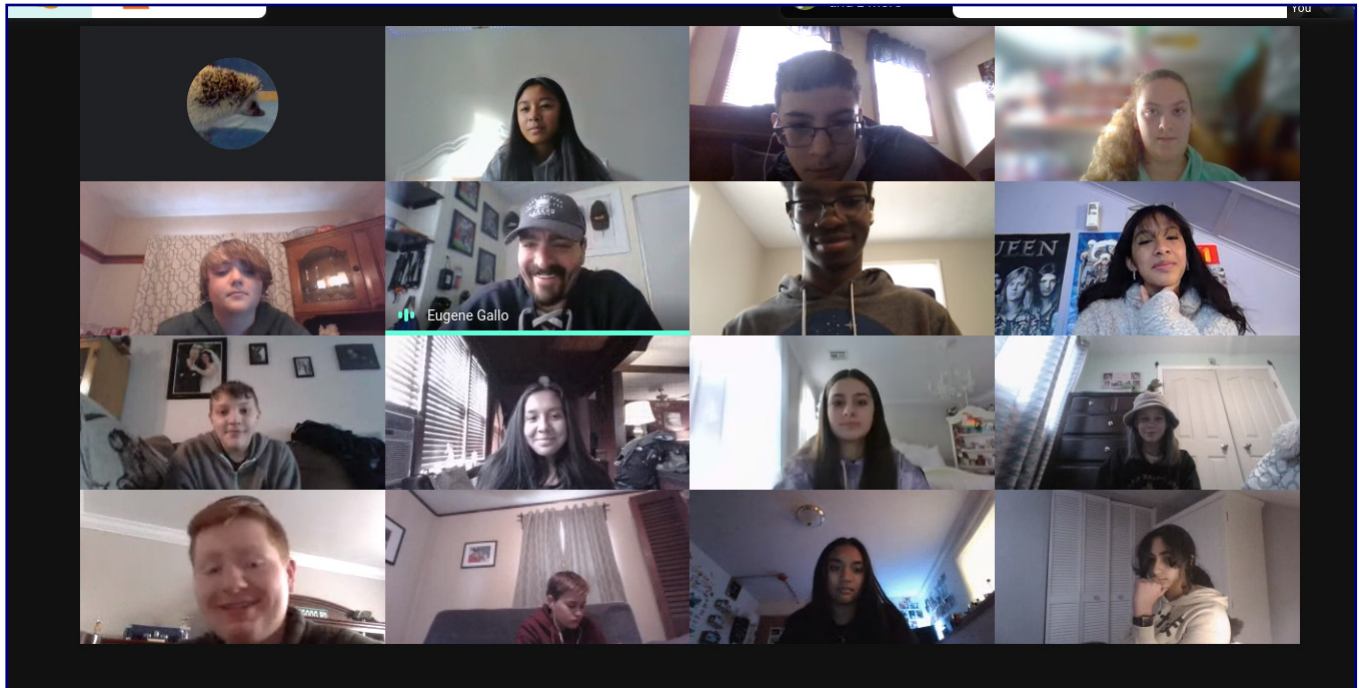
We also took a virtual field trip to SeaQuest, which is an aquarium in Utah. Each of us explored three different animal videos and shared what we learned with the group. This was fun and informative! We look forward to our next challenge of building a water wheel.



CLUB UPDATES

West Warwick High School

Eugene Gallo
By Eugene Gallo



What an interesting time for people around the world. During the summer, SMILE was on the chopping block in our district. Through the efforts of Mr. Baccei (Deering Middle School) SMILE was successfully saved for our students. It was with great concern that I faced the upcoming meetings. Virtual learning and engagement is very difficult. How could we feel like a true club of young scientists? As they say, "it is what you least expect..."

Although our club's membership numbers are lower than usual our students are quite engaged as they focus on a well developed curriculum focused on bioinformatics, genetics, and ethics. Students have eagerly engaged in relevant activities investigating phenotypes, genotypes, DNA, gene editing, ethics, and morals. A case study of Deb Lawler produced rigorous intellectual output and conversation dealing with pedigree charts, punnett squares, and DNA testing. Students then investigated our government's response to genetic advancements during the 21st century by studying recent legislation (G.I.N.A.). Most recently, our club has been studying Dr. He's (China) use of CRISPR to edit the genetics of human babies during embryonic development. As a result of the reading, research, and questioning, West Warwick High School students have benefitted from this intellectually stimulating activity and the rich conversations and debates that have stemmed (pardon the pun) from them.

Ironically, my fear of the club growing weaker during this pandemic was misplaced, we have evolved into a stronger club as a result of the thoughtful direction that the SMILE program has provided.

Westerly Middle School

Robert Brennan, Carolyn Michaud
By Westerly Middle School SMILE Club



Wow! One year later sure does look a little different - not only in everyday life, but also in our SMILE Club. In spite of (and maybe because of) the challenges, our club in Westerly is growing stronger than ever. We are moving forward with grace and courage like Bulldogs do...especially Bulldogs with a SMILE! This year the curriculum is being done online, of course. We have a full cohort of club members who have been showing up to the online Meets with enthusiasm each week to reconnect with each other, work in virtual groups through breakout rooms, and learn fun and exciting things with engineering activities along the way. Here are several of the quotes from our SMILE members so far this year:

"...I like hearing everybody's ideas and incorporating all of them into one big project."

"SMILE is something to always look forward to every week. The challenges are always fun and exciting".

"SMILE is a very educational program where you learn to work with people you don't know and it helps you learn to problem solve and work through rough and uncertain times".

Our club in Westerly would like to thank all of the SMILE staff for making this opportunity possible for all of us. We know that it hasn't been easy!

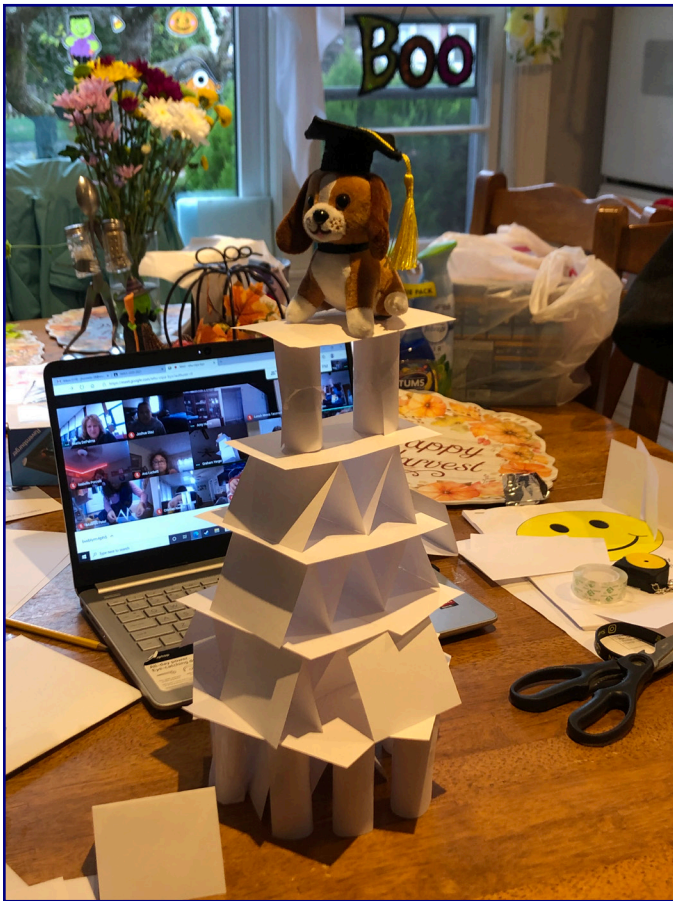


CLUB UPDATES

Horgan Elementary, West Warwick

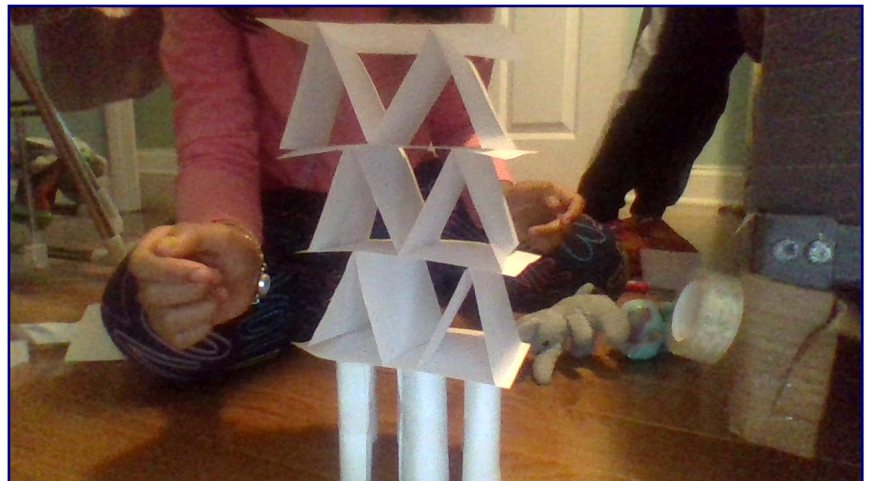
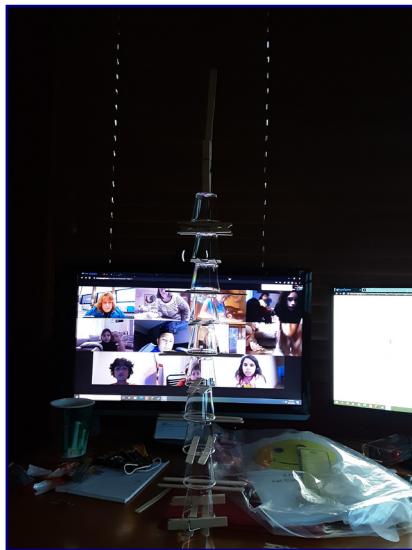
Amy Horne and Maria DePalma

By Horgan SMILE Club



This year has brought new challenges to our SMILE organization and changed the look of things for our SMILE club. For the very first time in our history, we have been put in the position of having to carry on our SMILE meetings in “virtual” format, completely online. While the thought of this was a bit daunting initially, our student members have brought their best scientific selves to our Google meetings each week, and haven’t missed a beat in their quest for scientific knowledge. While we dearly miss our weekly person to person contact at school, and beloved traditions such as Family Science Night, we have reached out to members with all the materials needed to learn science concepts and to create hands-on experiences in the comfort of their own homes.

The students have experimented with household materials such as popsicle sticks and binder clips to learn how to build towers that soar upward from the simple base of a paper cup. They have constructed other towers from index cards, using the Engineering Design Method to conduct trials and revisions to their designs, enabling their structures to bear weight without toppling. They have built boats of clay and competed to see whose could hold more pennies without sinking. They have learned about the science of osmosis and what happens to a gummy bear submerged in water, salt and vinegar. (It’s not pretty!) They have constructed bridges with only straws and tape as building materials. But even more, they have brought their never-ending curiosity and enthusiasm for learning to each SMILE meeting. We are still learning concepts while also learning to consult with one another, encourage and congratulate each other, while sharing the occasional catastrophe and reveling in the successes of all. Hugs and pats on the back have been replaced with applause and “virtual” high-fives, and our meetings are full of laughter and genuine smiles. How appropriate!



Central Falls High School

Austen Needleman

By Central Falls High School SMILE Club

This year has been a unique one for the Central Falls High School SMILE Club, but we have found unique ways to connect with one another and continue having fun while doing science!

So far this year, we have had conversations about bioethics, including the ethical considerations in genetic testing and in gene editing, improved our understanding of genetics, climate change, and the carbon cycle, and explored building circuits using paper and pencil lead! This week, we are building catapults to launch chocolate chips and determine which launch angle allows our chocolate to fly the furthest.

As it has for people across the country, the COVID-19 pandemic has changed the way we do things in our SMILE Club, but we have continued to explore science and engineering anyway. We meet virtually each week, first talking about the science concepts behind our experiments and clarifying the procedure, then break up into smaller groups to try things using the materials we have at home. Before logging off, we take time to show what we have created, discuss our results, and put our findings in a broader context.

PARTNERSHIPS

We would like to thank the following list of funders that have allowed SMILE to grow and continue to provide high quality after-school STEM programming to Rhode Island students:

CENTRAL FALLS

Ella Risk Elementary School
Sheryl Wilson
Kara Scullin

Calcutt 5th grade
Kelly Sierra
Molly MacDonald

Calcutt Middle School
Molly MacDonald

Central Falls High School
Austen Needleman

NEWPORT

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Rogers High School
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Deering Middle School
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Christopher Baccei

West Warwick High School
Eugene Gallo
Christopher Baccei

WOONSOCKET

Harris Elementary School
Melanie Clark-Medyesy
Katherine Krause

Coleman Elementary School
Anissa Hoard
Brittney Pysczynski

Citizens Elementary School
James Buccì
Jodi Michienzi

Woonsocket Middle School (2 clubs)

Michaela Gormley
Deana McCarthy
Marie Gentile
Jenn Hardy

Woonsocket High School
Julia Grassini
Ethel Locke

Anonymous

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Providence Boys & Girls Club

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Westerly School
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West Warwick School
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Woonsocket School
Department

We would also like to thank our Individual Supporters, who are vital in helping The SMILE Program to continue its mission

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The SMILE Program

The Science and Math Investigative Learning Experiences (SMILE) Program is an enrichment program for educationally disadvantaged students in grades 4-12 in seven districts in Rhode Island. SMILE's goal is to provide group activities for these students in science, technology, engineering and math. Generous gifts by participating donors make this program possible. The SMILE newsletter is published three times a year. We encourage your comments and ideas. Please share this newsletter with others who might be interested in SMILE.



SMILE High School Seniors

College Check-list

**Keep your grades up
Take SAT Exam
Apply to College**

Remember it is always good to consider two “safety schools,” two “good matches,” and at least one “reach” college.

As soon as possible start working on your college applications, check the deadlines.

As you work on your application essays, have your parents, teachers, or counselors review them.

Teachers’ recommendation letters must be requested at least one month before the deadline.

During Challenge Weekend you will have the opportunity to talk to SMILE graduates about their college experience.

Look for Scholarships

Check your guidance school’s counselor office for local and national scholarships.

Check out the following web sites www.RIScholarships.com; www.collegeboard.com

Financial Aid

Students and families should apply for financial aid. Contact the financial aid office at the colleges in which you are interested to find out about forms and deadlines.

Fill out the FAFSA (Free Application for Federal Student Aid) to apply for financial aid soon after January 1, 2020 and Feb 15, 2020 to ensure it is received before the college deadlines. You can apply online at fafsa.ed.gov.

Learn about college loan options. Borrowing money for college can be a smart choice, especially if you get a low-interest federal loan.

Need help with your college application?

1. www.ed.gov/prog_info/SFA/FAFSA

2. Call the SMILE office at (401) 874-2036 or send us an email at smileprogramuri@gmail.com.

Visit College Planning Center of Rhode Island. Located in the Warwick Mall. Monday to Saturdays Noon to 7.00 PM and Sundays Noon to 3.00 PM. Phone: (401) 736-1182. Web: www.collegeplanningcenter.org

They offer help with the college admission process, how to apply for financial aid, free scholarship searches, assistance in completing the admissions and financial aid applications, and more.

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Kingston RI 02881

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