

The SMILE Program  
University of Rhode Island  
90 Lower College Road, Roosevelt Rm 1  
Kingston RI 02881

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Newsletter  
volume 26 No.1, January 2020

26\* Years of service

FAMILY SCIENCE NIGHTS ACROSS RHODE ISLAND!



West Warwick SMILE students present engineering activities to families, friends, and their school communities.

In November and December SMILE clubs from across the state participated in district wide Family Science Nights. SMILE students look forward to this community event that brings together students and their families, friends, teachers, school administrators, and community leaders for an evening of interactive science, technology, engineering and math (STEM) activities. Family Science Night promotes community and education during this special which includes a potluck dinner and science and math activities taught by SMILE students designed for the whole family to participate in, learn from, and enjoy.

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Donate

The SMILE Program relies on the generous support of our donors. Invest in the future of RI students by supporting SMILE.

Please make checks payable to  
"The SMILE Program"

Mail to:  
The SMILE Program  
90 Lower College Rd, Roosevelt Rm 1  
Kingston, RI 02881

\*The SMILE Program is a 501(c)3  
non profit organization.

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Calendar

Weekly SMILE Club Meetings  
Scientific and Career Exploration Field Trips

Family Science Nights  
November-December 2019

Special Annual Events  
High School  
Engineering Challenge Weekend  
March 27-28, 2020  
URI Kingston Campus

Middle School  
Engineering Challenge Weekend  
March 20-21, 2020  
URI Kingston Campus

Elementary School  
5th Grade Outdoor Science Adventure  
April 3-4, 2020  
URI Alton Jones Campus  
4th Grade Ecology Event  
April 8, 2020  
URI Kingston Campus

Teachers' Professional Development Workshops

August 21-22, 2019	Dec 3, 2019	May 19, 2020
University of Rhode Island	University of Rhode Island	University of Rhode Island
Math and Science Curriculum Planning for the year	Math and Science Curriculum Special Events Planning	Program Evaluations

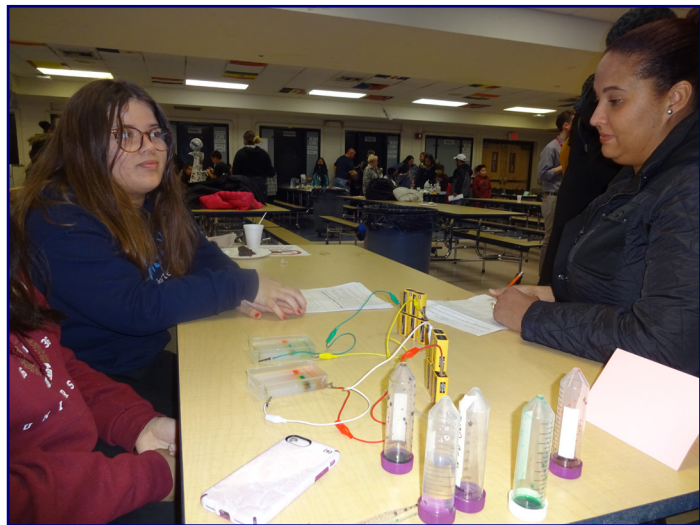
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Participants in Family Science Night are always impressed and proud of the accomplishment of their SMILE students. Many parents have expressed to SMILE staff their delight and surprise at seeing their child as a competent teacher as parents and siblings rotate through a series of stations. It is an evening where families are learners and begin to bond into a SMILE community and students present activities five or more times to their family and community members, impressing everyone with their enthusiasm for science and math and teaching, and building authentic confidence and self-esteem.

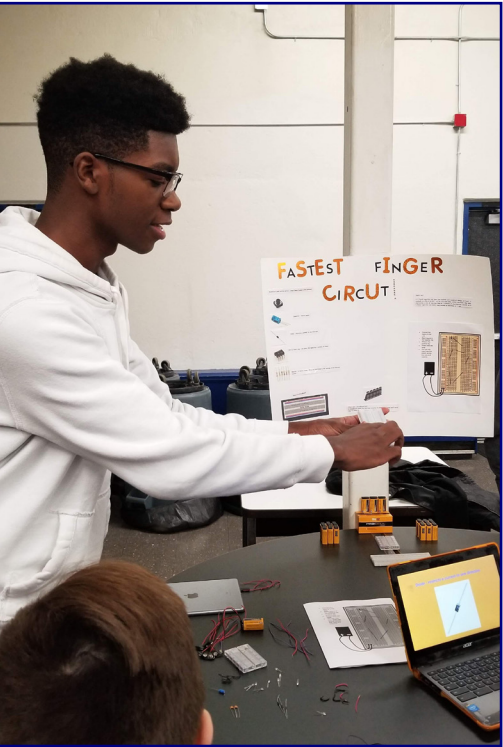
Activities presented at this year’s Family Science Night included: Making a battery tester, Leaf Chromatography, Marble Run, Newspaper Towers, Laser’s, Hovercraft’s. and Making Ice-cream among others.



“SMILE is a great program. It helps my child think outside the box.”



‘Woonsocket SMILE Parent



“SMILE is very good for the future of my children.

Central Falls SMILE Parent

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**  
Claiborne Pell Elementary  
Aaron Sherman  
Sybil Grayko  
  
Thompson Middle School  
Candace Lewia  
Elizabeth Gibbs  
  
Rogers High School  
Elizabeth Letourneau  
  
**PROVIDENCE**  
Dr. Jorge Alvarez High School  
Michelle Goewey  
  
**SOUTH KINGSTOWN**  
Peacedale Elementary  
Eileen Daly  
Christine Pierce  
  
Curtis Corner Middle School  
Brenda Dillmann  
Valerie Light  
  
S.Kingstown High School  
Christina Antaya-Dube  
Amanda Varone  
  
**WESTERLY**  
Springbok Elementary School  
Lisa Kenyon  
Melisa Ferando  
  
Westerly Middle School  
Carolyn Michaud  
Robert Brennan  
  
Westerly High School  
Lesley Fastovsky  
  
**WEST WARWICK**  
Horgan Elementary School  
Maria DePalma  
Amy Horne  
  
Deering Middle School  
Eugene Gallo  
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 Pyszczynski  
  
Citizens Elementary School  
James Bucci  
Jodi Michienzi  
  
Woonsocket Middle School (2 clubs)  
Michaela Gormley  
Deana McCarthy  
Marie Gentile  
Jenn Hardy  
  
Woonsocket High School  
Julia Grassini  
Ethel Locke

- Amgen Foundation

American Honda Foundation

Amica

Arnold Lumber

Boys & Girls Club of Providence

The Champlin Foundations

Connecting For Children and Families

Constellation, an Exelon company

Dominion

Graphic Expressions

Holiday Inn South Kingstown

June Rockwell Levy Foundation

Nordson Corporation Foundation

NOAA B-Wet Program

Ocean State Charities Trust

Pfizer

Ramsey McCluskey Family Foundation

Red Sox Foundation

Schneider Electric
- SPIE

Steere Engineering

Toray Plastics, America, Inc.

University of Rhode Island

URI Transportation Center

van Beuren Charitable Foundation

Verizon Foundation

YMCA of Greater Providence

Central Falls School Department

Newport School Department

Providence School Department

South Kingstown School Department

Walmart Foundation

Westerly School Department

West Warwick School Department

Woonsocket School Department

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

The SMILE Program		
<b>SMILE STAFF</b> Carol Englander Director  Claudia Hoddersen Curriculum Specialist  Clair Stengall-Murphy Curriculum Specialist  JoAnn Basel Curriculum Specialist  Kristy Armstrong Bookkeeper  Kaitlyn Czup Development Coordinator	<b>URI RESOURCE FACULTY</b> Kathy Collins, Vice President for Student Affairs  <b>ENGINEERING</b> Faye Boudreaux-Bartels Christopher Hunter Mercedes Rivero-Hudec Manbir Sodhi Jose Amador CELS-NRS  <b>BOARD OF DIRECTORS</b>  John Peterson, President John McCray, Vice President Ruth Jarrett, Secretary Malcolm Spaulding, Board Member Glenda Kirby, Board Member Steve White, Board Member Augusto Gomes, Board Member Fran Alexacos, Treasurer Cathy Valentino, Board Member	<b>COLLEGE OF ENVIRONMENT &amp; LIFE SCIENCES</b>  Larry Englander CELS, Plant Sciences Evan Preisser CELS-BIO  <b>MATHEMATICS</b> Orlando Merino  <i>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.</i>



## 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](http://www.RIScholarships.com); [www.collegeboard.com](http://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](http://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](http://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](mailto: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](http://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.

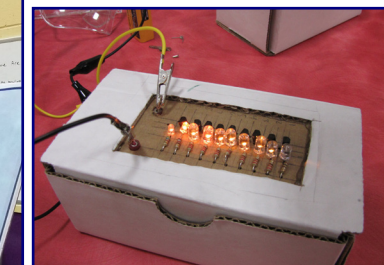
“We have seen a great confidence boost in our daughter and an intense curiosity and passion for learning.”

West Warwick SMILE Parent

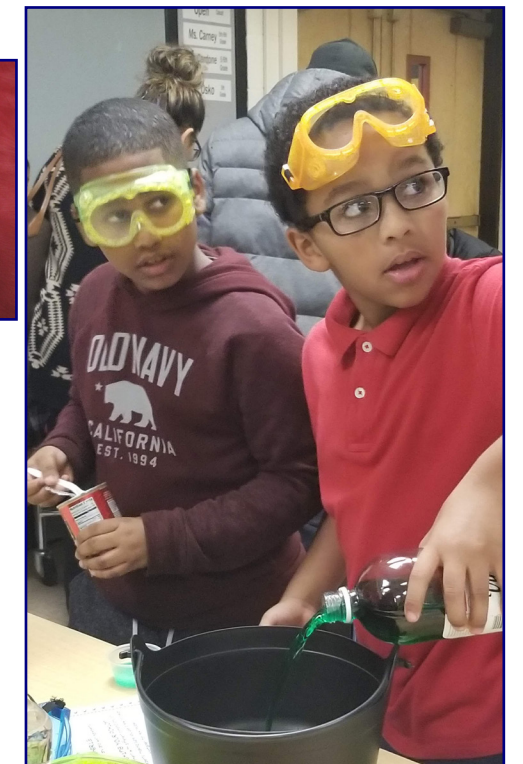


“SMILE provides opportunities to make connections with scientific content and social networks. Thank you for making my children SMILE!”

Westerly SMILE Parent



Family Science Night is a fun and engaging STEM experience where SMILE students showcase their knowledge.



Ella Risk Elementary School, Central Falls

Sheryl Wilson and Kara Scullin  
By Ella Risk SMILE Club



The Ella Risk SMILE Club has been able to do many different experiments using the engineering process. We designed a catapult that was able to hit the target. We used the process of elasticity and shooting at the right angle, which allowed us to hit the target. The only materials we were able to use were; popsicle sticks, elastics, medicine cups, and a ping pong ball. We also used the engineering design process to design boats out of; Seran wrap, straws, cups, and duct tape. The challenge was to make the boat float while holding 25 pennies. BOY, we were so successful; some people built a boat that was able to hold 50 pennies! We also dug into chemistry this year and completed a “Witch’s Brew” STEM challenge. The goal of this challenge was to see if you could make the witch’s cauldron bubble using ordinary household materials. That

was a fantastic experiment! Do you love ice cream? We do! We love ice cream so much that we made our own! It was important that we measured carefully and weighed the exact amount necessary. We weighed the sugar and salt, making sure not to put them in the same bag, YUCK! We had to use milliliters to measure the milk and vanilla to make it taste delicious. Lastly, we designed our own game of “Kahoot” based on all the things we learned in SMILE so far. Best of all, we were able to teach our families all of these great experiments and more during Family Science Night on November 19th! We look forward to learning new things and going to the 4th grade URI Ecology Field Day!

Coleman Elementary School, Woonsocket

Brittany Pyszynski and Anissa Hoard  
By Coleman SMILE Club

Coleman School SMILE Club has been learning about engineering and the design process. On November 7th we visited the Roger Williams Botanical Center. We saw and learned about some rare trees and plants, and even hung out with a goat!!

- “SMILE is a great program because it helps you to learn a lot and be a scientist.”  
Justin S  
“I like SMILE because you get to learn about engineering and it teaches you science.”  
Francisco  
“I like SMILE because I learn new stuff and do projects.”  
Serenity  
“SMILE is helping me get ready for college.”  
Christian  
“It is really exciting when we learn about new things.”  
Allison  
“I like SMILE because I get to build interesting things.”  
Kimcuong  
“ I like to go on field trips and do projects and learn how to be an engineer.”  
Anissa



Coleman visits Roger Williams Botanical Garden.

August 2019 Teacher’s Workshop

The SMILE Program’s Professional Development Summer Workshop for teachers took place on August 21st and 22nd 2019 at the University of Rhode Island. At the August workshop, teachers were trained and provided materials for the Engineering curriculum theme. SMILE’s Claudia Hoddersen, Claire Steggall-Murphy and Jo Ann Basel worked with teachers through a series of fun hands-on science and math activities that covered a wide variety of engineering related topics. The elementary teachers learned how to measure while creating ice cream, used fall leaves to perform chromatography, created duct tape wallets, created marble runs and catapults and devised special water filtration systems to clean pollutants out of water. The middle school teachers performed a measurement Olympics, saved a gummy worm by thinking like an engineer, built hovercrafts and battery operated paddleboats, and extracted micro plastics out of cleansers. The high school teachers learned a lot about circuitry and used breadboards to measure the width of human hair, determined who had the fastest fingers, created battery testers, measured color absorption, created gummy candies, and used gel electrophoresis. The teachers left the workshop with new knowledge, exciting curriculum and a huge box of science supplies for their clubs fall activities.



Above/Below: SMILE students from Newport and SK visit KVH Satellite Communication Industries in Middletown, RI.



December 2019 Teacher’s Workshop

The SMILE Program’s Professional Development Winter Workshop for teachers took place on December 3 rd 2019 at the University of Rhode Island. SMILE’s Claudia Hoddersen, Claire Steggall-Murphy and Jo Ann Basel worked with their level teachers on hands-on science activities. Elementary teachers received materials and activities to prepare the students for the Environmental Outdoor Science Adventure in April. The teachers will be teaching about abiotic and biotic factors using biodomes. They will be testing pH, temperature, soil porosity and permeability. Middle school teachers prepared for the Engineering Challenge by reviewing activities with materials that dealt with bridges and transportation. High school teachers were engaged in pre-activities that involved prototypes, databases, and informatics for a new Smart Helmet Engineering Challenge. All teachers left the workshop with materials that permitted them to engage in inquiry based activities with their students.



Above/Below: SMILE students from Coleman Elementary visit Roger Williams Botanical Garden.



Rogers High School, Newport

Elizabeth Letourneau  
By Elana LaHoud

Rogers SMILE club is in its third month of progress this school year. So far, we have built an electrophoresis chamber with an agar-based gel and a 9v battery power supply. This allowed us to see the movement of pigment molecules based on their size. The result was a visual representation separating the colors used to create the original base. Following that, we began assembling a battery tester. This project incorporated soldering metal and working with electric circuits and transistors. We were able to connect the wires of LED lights to transistors and resistors to show the level of power inside a battery. Finally, we transitioned to Young's Double Slit Experiment in which we learned how to measure the diameter or width of thin substances. We used a hair strand for the purpose of the experiment, using a laser to strike the strand and a piece of paper separated a small distance. This required us to use the wavelength of the laser light to convert the diameter into centimeters from nanometers. Our next challenge will be creating a hydrogel in the form of a gummy candy. This will require us to combine the perfect ratio of juice and gelatin (a solvent and solute) so our candy tastes good and keeps the shape of the mold. We have appreciated the scientific and mathematical challenges we have faced thus far and are excited for the rest of the school year.

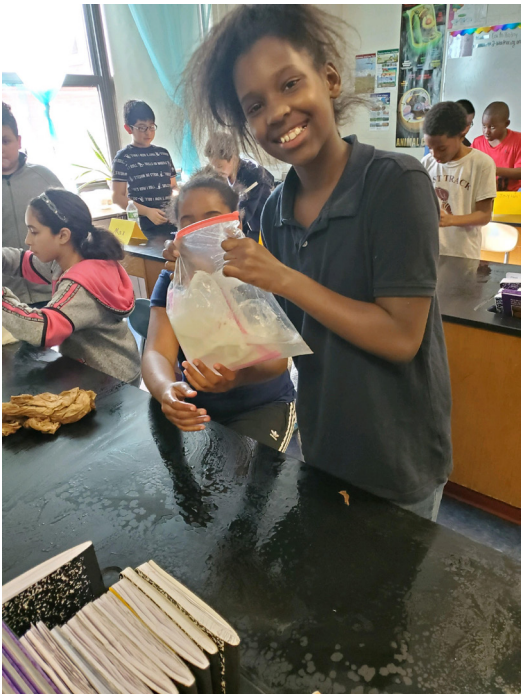


From left to right: Elora Florence, Brooklyn Wakefield and Riley Hebrock prepare to teach about making a battery tester.

Calcutt Middle School Grade 5, Central Falls

Molly MacDonald and Kelly Siera  
By Central Falls SMILE Club

The 5th Grade SMILE club is in full swing! We are having a great time with our engineering curriculum. One of our favorite projects so far has been the marble run, for this challenge we had to create a “roller coaster” for a marble to travel around a cereal box in a minute. This was by far the most challenging of the activities but very fun. We also had a great time learning about the metric system and making ice cream in a bag. This was one of the most popular activities. This November, we hosted Family Science Night. During FSN, we were able to showcase our work to our families and school admin. The projects we displayed were: Leaf Chromatography, Marble Run, Water Craft, and Newspaper Towers. It was a great night! After winter vacation, we will be getting ready for the camping trip!



Making Ice Cream!

Deering Middle School, West Warwick

Eugene Gallo and Chrisopher Baccei  
By Deering SMILE Club



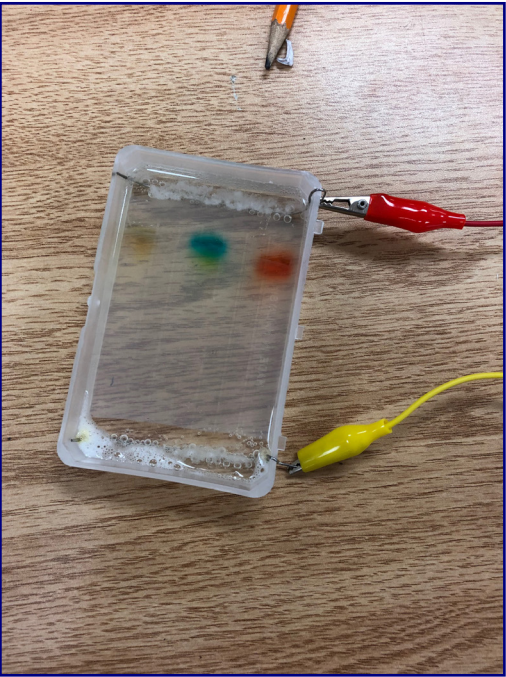
During this year of SMILE, we have worked on so many different things! At the beginning of the year, we learned to use our teamwork skills by doing an activity that needed all four of us to participate. We had to plan and work together to save Fred, a gummy worm, from drowning by putting a gummy life-saver on him without touching him. We all had fun. We also learned the importance of measurement. We had to pay attention to our estimates of measurements and compete in the Measurement Olympics! We worked with the idea of engineering motors for boats and cars as well. Lastly, we worked on hover crafts using different materials and focused on learning about the impact of friction. We cannot wait to do more! We also had a blast sharing what we learned at family science night. At family science night we were able to try different types of food and we got a taste of what other SMILE students were working on. Everyone is ready to learn more about science and math; we are definitely looking forward to working with bridges in the second semester! We are also very excited about our challenge weekend, where we get to look around the URI campus as well as socialize with other SMILE clubs! Ready to see you there!

## Central Falls High School

Austen Needleman  
By Jennifer Ramirez, Jordan Salazar, and Jasson Zapata

Central Falls High School students have been hard at work learning all they need to solve problems and build things this year! From making our own battery testers, gel electrophoresis chambers, and even gummy bears to testing new ways to measure a human hair, we have learned skills as diverse as circuitry, optics, and data collection through a variety of interesting and fun activities. We have also had amazing opportunities to connect with our local community through Family Science Night and with professionals and job opportunities through a field trip to Millstone Medical in Fall River, Massachusetts.

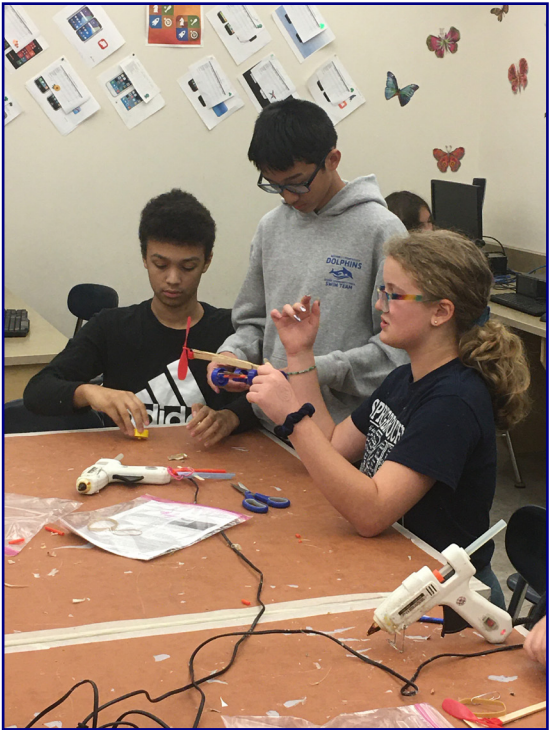
Our recent trip to Millstone taught us about how engineers solve problems to inspect, clean, and package the medical devices that many people rely on. We are preparing to solve problems ourselves ahead of this spring's Challenge Weekend by improving our data collection skills (with Skittles!), testing materials, and understanding the brain. We are looking forward to the opportunity to show what versatile engineers we all are in March!



Club-made gel electrophoresis

## Westerly Middle School

Robert Brennan and Carolyn Michaud  
By Westerly Middle School SMILE Club



This year's Westerly Middle School SMILE program has seen tremendous growth in student enrollment and enthusiasm. We have progressed through the curriculum, completing the weekly science and engineering challenges with impressive results. We recently had our Family Science Night at Springbrook Elementary School, where our club members took full responsibility for three projects – clay boats, propeller-powered rubber band cars, and the teamwork activity called Saving Fred. Our twenty-three members excelled at explaining scientific concepts to their families and friends. Parents left the night remarking how professional and involved our students were at walking them through their stations. We are really looking forward to the next round of challenges that will lead us to the URI Engineering Weekend.

## Claiborne Pell Elementary, Newport

Aaron Sherman, Sybil Grayko  
By Claiborne Pell SMILE Club



Our club has had fun over the last few months thinking like scientists and engineers! One of our favorite activities was making ice cream. We got to use graduated cylinders and scales to make our ingredients exact and learned about the chemical reaction that occurs after a LOT of shaking. The best part was that we ended up with delicious ice cream! Our marble runs were another favorite. We wanted to make marble runs that were bigger so we decided to use packing boxes instead of cereal boxes. Then we experimented with different materials and ramp angles to make our marbles run slower or faster. The biggest challenge was getting the marble to run around the corners of our boxes. This activity was a lot of work but we had fun working with our teammates to put the runs together.

## We love SMILE!



Claiborne Pell Elementary SMILE students showcase their STEM knowledge and skills at Family Science Night.