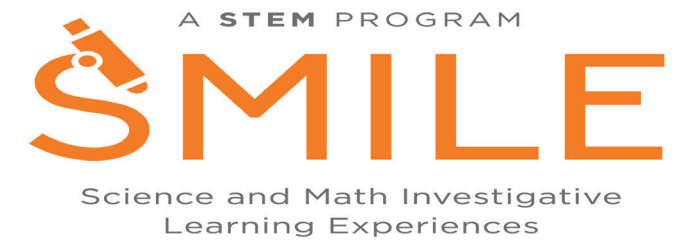


The SMILE Program
University of Rhode Island
90 Lower College Road, Roosevelt Rm 1
Kingston RI 02881

nonprofit org.
US Postage
PAID
Wakefield, RI 02879
PERMIT No.19



Newsletter
volume 23 No.1, January 2017

23 Years of service

FAMILY SCIENCE NIGHT

Students present hands-on activities from their Fall 2016
Great Inventors Engineering Curriculum



This November SMILE members 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. These activities are designed for the whole family to participate in, learn from, and enjoy. Family Science Night promotes community and education during this special evening including a potluck dinner and participation in science and math activities taught by SMILE students.

At Family Science Night SMILE students engage their family and community members as learners. Groups of parents and siblings rotate through a series of stations as the SMILE students present and teach hands-on activities. By the end of the evening, students have presented five or more times to their family and community members. This teaching experience helps students build confidence and self-esteem.

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. It is an evening where families begin to bond into a SMILE community and students impress everyone with their enthusiasm for science, math and teaching.

Continued on page 2...

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.

Visit Us Online

www.uri.edu/smile

Join Us on Facebook



Calendar

Weekly SMILE Club Meetings
Scientific and Career Exploration Field Trips

Family Science Nights
November 2016

Special Annual Events
High School
Engineering Challenge Weekend
March 31-April 1, 2017
URI Kingston Campus

Middle School
Engineering Challenge Weekend
March 3-4, 2017
URI Kingston Campus

Elementary School
5th Grade Outdoor Science Adventure
April 7-9, 2017
URI Alton Jones Campus
4th Grade Ecology Event
April 13, 2017
URI Kingston Campus

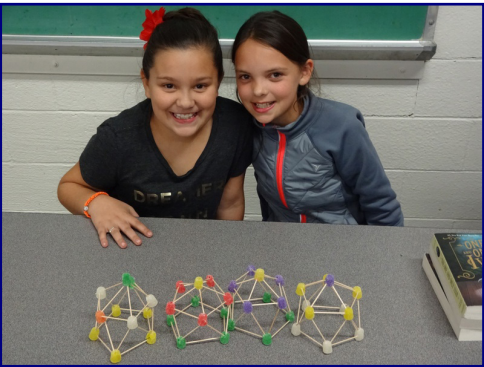
Teachers' Professional Development Workshops

| August 24-25, 2016 | Dec 1, 2016 | May 25, 2017 |
|---|---|----------------------------|
| 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 |



Printing donated by **Schneider Electric**

This Fall, SMILE students participated in an exciting new engineering curriculum focusing on the engineering design process. Through this curriculum students learned about a variety of engineering fields including including civil engineering, electrical engineering, mechanical engineering, and interdisciplinary engineering.



Students from West Warwick present a geodesic gumdrop build activity to see which geometric shape supported weight best.



Students from Woonsocket high school taught their community about biomedical engineering with a presentation and demonstration of a bionic hand.

This year’s FSN focus was on engineering and how this STEM field has tranformed the world in which we live.



Build a soaring satellite



The engineering process



Make a better “slime”



Improving aerodynamics

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:

| | |
|---|------------------------------------|
| Amgen Foundation | Ramsey McCluskey Family Foundation |
| Amgen Biotech Experience | Rhode Island Foundation |
| Amica | Schneider Electric |
| Anonymous Donors | Steere Engineering |
| Arnold Lumber | Toray Plastics, America, Inc. |
| The Champlin Foundations | University of Rhode Island |
| Connecting For Children and Families | URI Transportation Center |
| Constellation, an Exelon company | van Beuren Charitable Foundation |
| Dominion | Verizon Foundation |
| Eaton Aerospace Foundation | YMCA of Greater Providence |
| Graphic Expressions | Central Falls School Department |
| URI Graduate Students Association | Newport School Department |
| Holiday Inn South Kingstown | South Kingstown School Department |
| Lloyd G. Balfour Foundation, Bank of America, N.A Trustee | Pawtucket School Department |
| Nordson Corporation Foundation | Westerly School Department |
| NOAA B-Wet Program | West Warwick School Department |
| Pawtucket COZ-21 st Century | Woonsocket School Department |
| Pfizer | |

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

| The SMILE Program | | |
|--|---|--|
| SMILE STAFF Carol Englander Director Lacey Schlacter-Feeley Assistant Director Kaitlyn Czap Development Coordinator Kelly Gallo Curriculum Specialist Clair Wilson Curriculum Specialist JoAnn Basel Curriculum Specialist Cathy Valentino Curriculum Advisor Isha Chugh Bookkeeper | URI RESOURCE FACULTY Thomas Dougan, Vice President for Student Affairs ENGINEERING Faye Boudreaux-Bartels Christopher Hunter Mercedes Rivero-Hudec Manbir Sodhi Jose Amador MATHEMATICS Orlando Merino | COLLEGE OF ENVIRONMENT & LIFE SCIENCES Larry Englander CELS, Plant Sciences Evan Preisser CELS-BIO BOARD OF DIRECTORS Fred Frostic, President John Peterson, Vice President Ruth Jarrett, Secretary Domenic Valentino, Treasurer Malcolm Spaulding, Board Member Glenda Kirby, Board Member Carol Reppucci, Board Member William Kulick, Board Member |

The Science and Math Investigative Learning Experiences (SMILE) Program is an enrichment program for education-ally disadvantaged students in grades 4-12 in six 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



Keep your grades up

Take SAT Exam

Apply to colleges



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, 2017 and Feb 15, 2017 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.

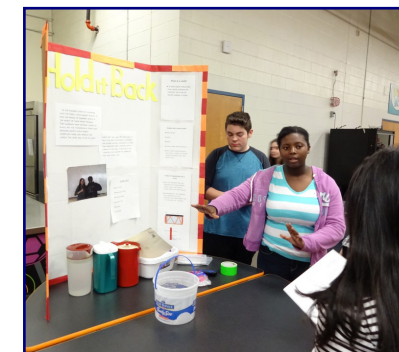
Need help with your college application?

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.

Activities presented at this year’s Family Science Night included: Electrical Circuits, Spaghetti Towers, Newton Knows, Lunar Lander, Marble Challenge, Engineering a Safe Stop Robot, and the Engineering Design Process (EDP) among others.



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



Welcome to the seventh SMILE Program school district, **Westerly**. This fall SMILE was awarded a grant through the **Rhode Island Foundation** to expand into Westerly. Three new clubs have been established: one each at Springbrook Elementary school, Westerly Middle school, and Westerly High school.

Claiborne Pell Elementary, Newport

Mary Nordby, Lori Delemos
By Pell SMILE Club

We are learning about engineering during our SMILE club meetings. We’ve explored STEM careers, such as chemical engineering and structural engineering. We were chemical engineers ourselves when we did scientific investigations using bubbles. We explored what bubbles can and can’t do and the ratio of ingredients in bubble solution. We were structural engineers when we built geodesic domes out of toothpicks and gumdrops. We also built structures using rubber bands and wooden dowels. It was a challenge to build structures that would stand by themselves, but when we used what we learned when we built the domes we were successful. Our favorite activity so far was our field trip to Hasbro World Headquarters. We met the engineer who worked on the Nerf Blaster. We asked him lots of questions and he showed us a prototype. The best part of the trip was when we got to make our own Play-Doh in the chemistry lab. We learned that the chemists keep detailed science notebooks, just like we do in our SMILE club. SMILE is a great way to learn while having fun at the same time. We love it!



Calcutt Middle School, Central Falls

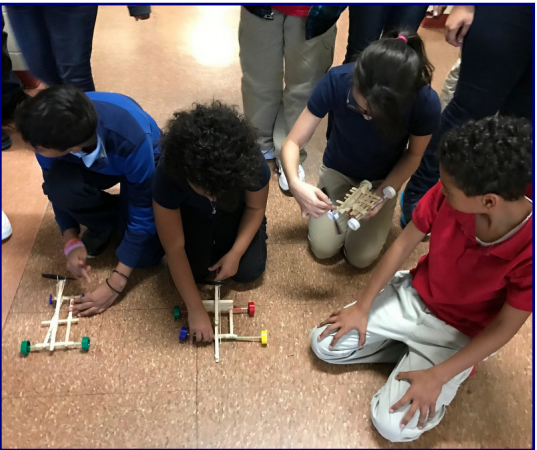
Karen Cardoza, Molly MacDonald
By Central Falls Middle School SMILE Club



The Calcutt Middle School SMILE club is in full swing and we love our engineering challenges! Every week we complete a new and exciting engineering challenge; at the end of each challenge we compare our results to declare a winning team. In our teams, we have built rubber band cars and raced them down the hallways. We have designed and manipulated a slime formula to create an extremely bouncy ball. We loved designing spacecrafts made of paper cups and index cards to keep marshmallow astronauts safe.

This November, we participated in our Family Science Night at Central Falls High School. At Family Science Night we taught

our families all about our engineering process and challenged them to create their own designs. The activities that we featured at Family Science Night were the Lunar Landing Project, Saving Fred, Building a Spaghetti Tower and Creating a Watercraft. We loved becoming teachers and sharing our engineering expertise with our families and our principals! We have just begun our bridges unit and we are excited to get ready for the Middle School Challenge Weekend!



Goff Middle School, Pawtucket

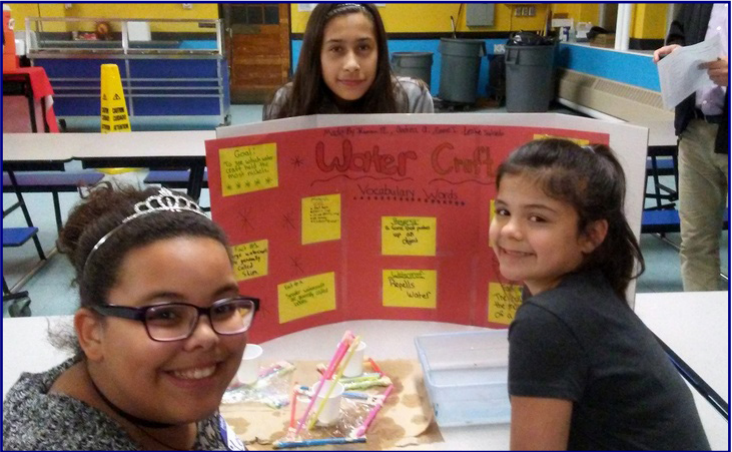
Jennifer Bromley, AnnMarie LaRoche
By Goff SMILE Club

SMILE is a fun, learning club to be in. You might think it’s all just learning, but it’s not. The activities we do are always fun; I don’t even notice we’re learning. -Emma Ise

In SMILE we have lots of fun! GOFF’s club meets every Friday. We have been learning about different types of engineering. My favorite engineering activities, so far, have been rubber band powered cars, lunar lander and marshmallow challenge. I hope you like to SMILE as much as I do! -Kemea Medina

SMILE club is so much fun. We do new cool activities almost every week. My favorite was when we made the watercrafts. Our most recent activity was making a rubber band car. We are going to test them in our next meeting. -Andrea Alonzo

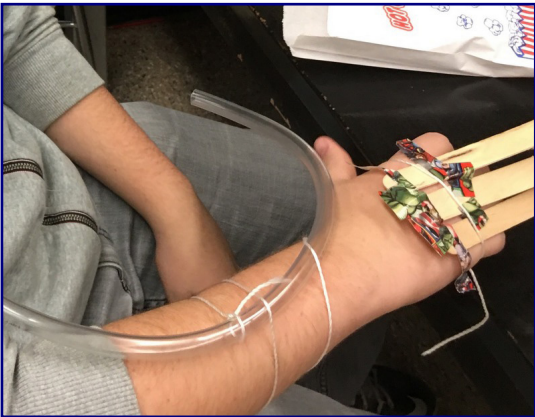
We use teamwork every week. -Sophia Alonzo



Woonsocket High School

Ethel Locke, Julia Grassini
By Gabrielle Bessette and Leighah Beausoleil

This year in SMILE we have been learning STEM (Science Technology Engineering and Math) skills. Thus far we have learned about the sciences of bioengineering, civil engineering, and electrical engineering. We have done this through projects such as when we built a mechanical hand for a little boy with cerebral palsy. We have built a bridge out of paper challenging ways to make it most durable. We have also built a joystick that turns on lights. In SMILE we also go on field trips. This year we went on a trip kayaking on Wood River. Being in SMILE is a spectacular experience for everyone who takes part. We have learned a lot of scientific information through this program that we would not have learned otherwise.



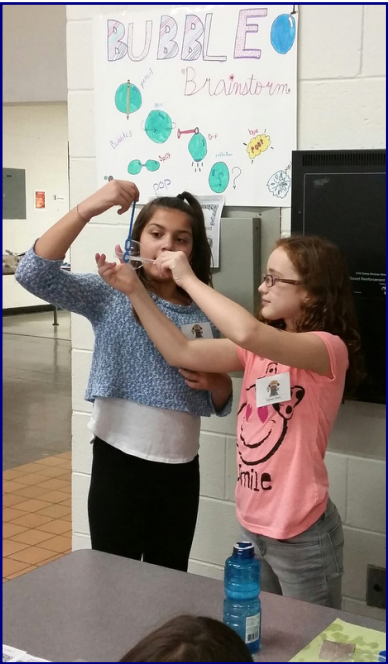
Horgan Elementary School, West Warwick

Maria DePalma, Amy Horne
By Horgan SMILE Club

We have had a very busy year so far in SMILE! We have been working as engineers, building and designing in many different activities. We built self-stopping motorized robots, paper structures that could support a beany baby, and structures built from toothpicks and gumdrops that held up 7 thick copies of the chapter book, “The One and Only Ivan.” We also designed and built roller coasters with banked curves and loops, and structures made of wooden dowels and elastics, big enough to stand up inside.

We took a great trip to the Kettle Pond Visitors Center in the Ninigret Wildlife Sanctuary. We hiked in the woods and learned about the moraine in the area left with the passing of an ancient glacier. The scraping of massive boulders left behind huge holes, or kettles, that later filled with water, making ponds. We later traveled to the barrier beach to see the ocean and the saltwater pond on the other side of the beach.

Finally, our Family Science Night was a great time for all. The food was terrific, as usual, and all our SMILE clubs had great exhibits and presentations to teach our families and friends all about what we have been learning. Now we can’t wait for our 4th grade ecology day at URI and the camping trip for grade 5 at URI’s Alton Jones Campus.



Woonsocket Middle School - Hamlet

Paulette Metivier, Rania Aghia
By Christianna Godin and Abigail Menard



So far this year in Woonsocket Middle School SMILE we have been focusing on being an engineer. SMILE students have been learning about what an engineer is and what it means to be an engineer. We have been doing many projects focusing on that subject. For one of our projects we had to build a float out of straws and a few other materials that would keep a certain amount of pennies in it without it sinking. There were a lot of different float structures that worked out. They all didn’t need to be the same. Some other floats didn’t work out as well so they needed to go through the engineering process a few times. Not even engineers will get things right on the first try. SMILE students try hard to get things right and succeed even if it takes multiple times and we will keep getting better.

West Warwick High School

Nelson DaSilva, Eugene Gallo
By Austin Laramie & Ekuzabetg Poirier

SMILE, or Science and Math Investigative Learning Experiences, is a program that allows students in grades 4-12 to explore further into the world of math, science, and engineering. During our weekly meetings, we have taken on various small projects and challenges. These tasks place students in different situations that allow them to apply their knowledge and test their skills. One week we designed prosthetic hands with the goal to lift small weights. This pushed students to experiment and test a variety of prototypes and find solutions to tough problems. Later on, we began constructing a functional joystick. Introducing students to the very basics of electronics. As the year goes on, we are faced with many more challenges, allowing us to work together and solve everyday issues which would be resolved by engineers.

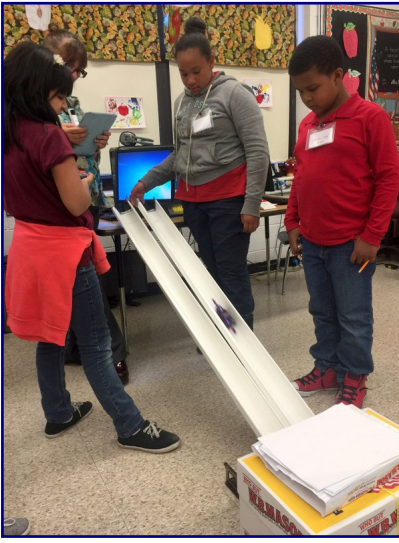
On November 16th, students from the West Warwick district elementary, middle, and high schools partook in SMILE’s annual Family Science Night. Up to this point, in their after-school clubs, students have been studying and preparing to showcase their engineering skills. With hands on activities, experiments, and a chance to show what they know, Family Science Night provides a fun environment to teach parents, teachers, and peers many interesting aspects of the world around them. We may not think of it much, but engineering is everywhere. From cell phones to windmills to airplanes, engineers sculpt nearly everything we do, and SMILE allows students to be involved in these processes. In addition, during Challenge Weekend at the end of the year, students have the opportunity to tour a college campus and are introduced to careers in the STEM field, preparing them for a better future.



Calcutt 5th Grade, Central Falls

Peg Boyer, Karen Cardoza
By Calcutt 5th Grade SMILE Club

We are 5th graders at Calcutt Middle School in Central Falls. Our favorite part about SMILE is that we get to do experiments and learn STEM skills; Science, Technology, Engineering and Math. We can also make new friends in Smile. Some of our favorite activities this year were Kahoot, bobsleds, domes, robots, satellites, and bubbles. We love going on field trips to experience how engineering works. We used the engineering process a lot this year and taught our families at Family Science Night. They learned a lot and we had lots of fun being teachers! We like smile because it gets you ready for college and at the same time you have a lot of fun!



Harris Elementary, Woonsocket

Katherine Krause, Melanie Clark-Medyesy
By Harris SMILE Club



It's been a busy start to SMILE Club! We have been learning about many different types of engineering and the engineering design process. We also had the opportunity to visit the Boston Museum of Science where we built and raced boats, watched an Omni Theater movie about the National Parks, and attended a presentation about lightning.

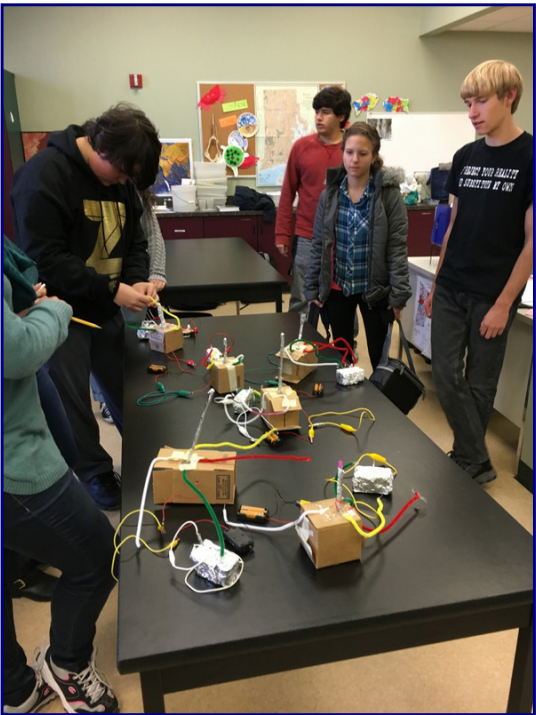
- My favorite type of engineering is mechanical, because of the building activities like bobsleds and rollercoasters. Amanda
- I really liked Family Science Night. We showed so many people how to make circuits and they all learned something new. Jordan
- This fall in SMILE I learned a formula for making your own bubble solution. Ryan
- I enjoyed making the bubbles. I had a bubble that stayed on the wand for 1 minute and 13 seconds. Kylie
- SMILE is awesome and I've made some new friends. There is also really cool stuff like roller coaster building, robots, circuits and more! Jonathan
- I'm loving SMILE already. I just want SMILE Club every day! Kendall
- When you are in SMILE you will smile because there are experiments, the problem you have to solve, and the field trips. Ashley



South Kingstown High School

Christina Dube, Kelly Gallo
By South Kingstown High School SMILE Club

This fall has been an exciting time at South Kingstown High School's SMILE club meetings. The focus this fall was Engineering and we have had many great hands-on engineering challenges. Members have enjoyed learning about the Engineering Design Process as a problem solving tool and putting this process into action. We used the Engineering Design Process to design, build, test and redesign a prosthetic hand and learned how biomedical engineers create assistive devices for people with disabilities. We also applied our knowledge of electricity to build a joystick which was used to illuminate four different colored light bulbs. Finally, we discovered different ways to transfer mechanical energy and create a Rube Goldberg machine that would perform a menial task. Club members used at least three different types of simple machines in their designs. The creativity of the machine designs was wonderful to witness! Everyone is looking forward to the Forensics curriculum and all are excited to attend the Challenge Weekend at the University of Rhode Island.



SMILE

Professional Development Workshops

Our SMILE Teachers have been busy learning SMILE curriculum and implementing engaging club activities this year. On August 24-25, Teachers gathered at URI to practice activities and gather materials for SMILE's new Great Inventors engineering curriculum. A second Professional Development Winter Workshop was held on December 1st at URI. During this Winter Workshop, Teachers prepared for their clubs pre-activities that they will conduct this winter in preparation for SMILE students Annual Events.

