

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

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PERMIT No.19



Newsletter
volume 25 No.3, May 2019

25* Years of service

4th Grade Ecology Field Day



On April 11, 2019, 82 SMILE students attended the annual Fourth Grade Ecology Field Day at the University of Rhode Island. Hailing from six school districts and nine elementary schools across Rhode Island, the students rotated through three ecology-themed stations, enjoyed lunch in the dining halls, and took a college tour.

SMILE students were easily spotted across campus with their bright red SMILE sweatshirts. Undergraduate and graduate students from the College of the Environment and Life Sciences volunteered time as mentors and led learning stations.

Continued on page 2...

High School Engineering Challenge



This year, 85 SMILE students participated in SMILE's 25th annual High School Challenge Weekend. Students arrived to the University of Rhode Island on Friday, April 26th, from Central Falls, Newport, South Kingstown, Westerly, West Warwick, and Woonsocket. Each team was assigned the task of assembling a Remote Operated Underwater Vehicle that would be able to deliver cargo (rings) through an obstacle course in the fastest time.

Before beginning the challenge, students listened to a presentation by two URI Graduate students, Zachary Pimentel and Weishu Zhao on how ROVs are used in collecting deep water samples in their study of microorganisms that thrive in extreme conditions.

Continued on page 6...

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

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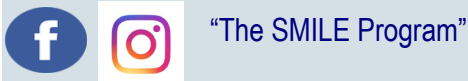
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Kingston, RI 02881

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Calendar

Weekly SMILE Club Meetings
Scientific and Career Exploration Field Trips

Family Science Nights
November-December 2018

Special Annual Events
High School
Engineering Challenge Weekend
April 26-27, 2019
URI Kingston Campus

Middle School
Engineering Challenge Weekend
March 29-30, 2019
URI Kingston Campus

Elementary School
5th Grade Outdoor Science Adventure
April 5-7, 2019
URI Alton Jones Campus
4th Grade Ecology Event
April 11, 2019
URI Kingston Campus

Teachers' Professional Development Workshops

August 22-23, 2018	Dec 3, 2018	May 21, 2019
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**



“Ecology Field Day was excellent. I loved exploring the water, and looking at sand, soil and animals.”

`SMILE Student

“I feel more connected to the environment because we were outside and exploring what we were learning about.”

`SMILE Student

“I enjoyed learning how to collect data.”

`SMILE Student

“Hands on science is the best!”

`SMILE Student

Several members from Society for Women in Marine Science (SWMS) led activities for the Marine Encounters station. During this station, students searched for pieces of plastic in the guts of seabirds, used a dichotomous key to identify a variety of marine organisms, completed a food web and identified several New England species of seaweeds. Mentors also led activities in the greenhouse. There, SMILE students planted cherry tomato plants to take home, checked out rare plants in the conservatory, and tested soils for permeability. The third station brought students into North Woods. Here students flipped logs and searched for critters. The most exciting finds were a red-backed salamander and a garter snake! In the North Woods, they also explored a vernal pool and counted wood frog egg masses. They also learned about and tested for dissolved oxygen and pH.

As the day started to wind down, SMILE students returned to Beapres Auditorium and sat down with undergraduate students and students had an opportunity to ask questions. SMILE students then said farewell to the URI mentors and headed to the buses with their tomato plants in tow. For the majority of the students, this was their first time on a college campus. We can’t wait to see them back on campus again soon!



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	Rhode Island Foundation
Amgen Biotech Experience	Schneider Electric
Amica	Steere Engineering
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We would also like to thank our Individual Supporters, who are vital in helping The SMILE Program to continue its mission

- CENTRAL FALLS**
Ella Risk Elementary School
Sheryl Wilson
Tim Valenta

Calcutt 5th grade
Karen Cardoza
Molly MacDonald

Calcutt Middle School
Karen Cardoza
Molly MacDonald

Central Falls High School
Laura Stanish
Kerri Valentine
- NEWPORT**
Claiborne Pell Elementary
Aaron Sherman
Sybil Grayko

Thompson Middle School
Candace Lewia
Elizabeth Gibbs

Rogers High School
June McGreavy
- 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
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Melisa Ferando

Westerly Middle School
Carolyn Michaud
Robert Brennan

Westerly High School
Sharon Facarro
Susan Wood
- 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
Jennifer Paolozzi
Anissa Hoard

Citizens Elementary School
James Bucci
Melanie Clark-Medyesy

Woonsocket Middle School (2 clubs)
Jenn Hardy
Deana McCarthy
Marie Gentile
Rania Aghia

Woonsocket High School
Julia Grassini
Ethel Locke

The SMILE Program		
SMILE STAFF Carol Englander Director Claudia Hoddersen Curriculum Specialist Clair Stengall-Murphy Curriculum Specialist JoAnn Basel Curriculum Specialist Gina Haberlin Curriculum Specialist Kristy Armstrong Accountant Kaitlyn Czap Development Coordinator	URI RESOURCE FACULTY Kathy Collins, Vice President for Student Affairs ENGINEERING Faye Boudreaux-Bartels Christopher Hunter Mercedes Rivero-Hudec Manbir Sodhi Jose Amador CELS-NRS BOARD OF DIRECTORS Fred Frostic, President John Peterson, Vice President Ruth Jarrett, Secretary Malcolm Spaulding, Board Member Glenda Kirby, Board Member Steve White, Board Member Augusto Gomes, Board Member Fran Alexacos, Board Member Cathy Valentino, Board Member	COLLEGE OF ENVIRONMENT & LIFE SCIENCES Larry Englander CELS, Plant Sciences Evan Preisser CELS-BIO MATHEMATICS 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 six districts in Rhode Island. SMILE’s mission is to increase the number of students who graduate from high school well prepared to enter higher education.</i> <i>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>



Grace Chen
West Warwick HS
RIC, Biology & Mandarin



Randy Mata
West Warwick HS
Salve Regina, Nursing



Olivia Santucci
South Kingstown HS
URI, Nursing



Ethan Ferris
West Warwick HS
CCRI, Engineering



Jaden Cuozzo
West Warwick HS
URI, Kinesiology



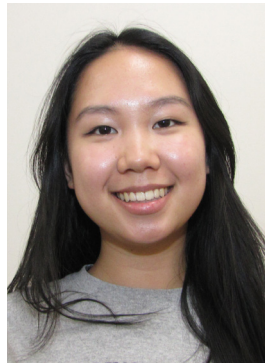
Moniliza Davit
West Warwick HS
Salve Regina, Nursing



Kate Alvarez
West Warwick HS
Brown, Psychology



Kenneth Uribe
Woonsocket HS



Jasmin Li
Westerly HS
Brown, Environmental science



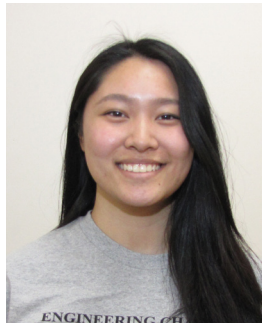
Abril Cruz
West Warwick HS
Salve Regina, Global Business



Erin Mackin
West Warwick HS
Roger Williams, Engineering



Elijah Santiago
Woonsocket HS



Colleen Chen
Westerly HS
Drexel, Film & TV Production



Samantha Andres
West Warwick HS
RIC, Nursing



Celina Tomasso
West Warwick HS
URI, Communications



Juan Rodriguez
Woonsocket HS
NE College, IT



Elizabeth Davis
Westerly HS
Easterern Connecticut Uni., Undecided



At the Marine Encounters Station, SMILE students used a dichotomous key to identify marine organisms, complete a food web, and identify species of New England seaweeds.



Planting Tomatoes at the Greenhouse to take home.



Soil Scientists!



South Kingstown High School

Christina Antaya-Dube
By Nick Pierson

SMILE has been great so far this year! The SKHS SMILE club has more than doubled in size since last year, from less than 10 members to over 20 this year! We have done lots of interesting lessons and experiments so far. We are all excited for challenge weekend and the ‘SeaPerch’ challenge this year. To start out the year, we explored energy and how to harness it. We learned about batteries and how the energy can be stored in the most efficient way possible. The next topic covered was density, as it relates to challenge weekend. Recycled bottles were used in multiple labs about density. For example, one of our labs was about a diver who had run out of power at the bottom of the ocean. Their only chance of survival was to drop some of their cargo, and return to the surface. To be successful, we needed to calculate and run multiple trials to simulate the dive down, and then return to the surface without any external stimulation. After a few tries, we succeeded and had many more successful runs. Another large topic this year has been submersibles and what all of their parts that work in conjunction with each other. In small groups we researched and presented about specific submersibles and their achievements. This has prepared us for challenge weekend, and we can use our newly acquired knowledge for our own subs. We have lots more fun to come this year in SMILE, an outright awesome after-school club!



Harris Elementary, Woonsocket

Melanie Clark-Medyesy, Katherine Krause
By Alexandria Hall, Jaeli Levasseur, Malen Saine



Stewardship is very important to Harris Elementary School. For one of the activities during the stewardship project, we made a sensory wall. We painted flowers on the hallway wall in the kindergarten and first-grade wing. We plan to put paper plates in the center of each flower. Each plate has different materials on them in the middle. The materials in the middle have different textures for the students to feel like marbles and shells. We also collected tin cans to repurpose. We painted and then decorated them with washi tape. We planted pansies and violas in the cans. Then we put one in each classroom in the building to brighten the day. The teachers loved them! After the spring break, we will clean up the Nursery Rhyme garden and plant in May (because it’s too early to plant now). In the back of the school, we will plant hostas and other shade plants. We will also clean up around the schoolyard. Stewardship is fun!



Woonsocket High School

Ethel Locke, Julia Grassini
By Woonsocket High School SMILE Club

This year’s 2018-2019 Woonsocket SMILE Family Science night went off without a hitch in November. There were many different SMILE clubs from High School, Middle School, and Elementary School levels. Nearly 400 attendees visited the event including children and their families. The science started with each club displaying different projects, ideas, and experiments to show what they learned this year. Some notable ones included: rubber band powered paper car races, arts and crafts DNA helices, and ramps with balls showing gravity’s effect on different weights. Most people there seemed to be in awe and wonder at how their children performed and presented their scientific demonstrations. Parents and their friends of different cultures and tastes were arriving with food from their native lands. The potluck included; Spaghetti, fried noodles and chicken, stuffed grape leaves, beef lasagna, Spanish rice, spring rolls and even a carrot cake to feed the masses. While people were dining, a hush fell from the crowd and from the podium; teachers and leaders were brought up to speak to the crowd. There was laughter, awe and even tears at some points. The biggest level of focus and silence was seen then when the current director of SMILE, Carol Englander, came to the podium. She spoke of current events, science, discovery, leaders and learners. Then she reminded the crowd that the people who will soon fix these problems and take the roles of the future are all around them. The leaders and problem solvers of the future are their children. These children study, learn and understand today’s problems and are the ones who will solve them in the future. The speeches ended, the food was finished and the projects were put away. Not a single person who came in left not knowing something new about the SMILE program’s focus. People were taught, people were happy; and a love for what the SMILE program does was assured.



Woonsocket Middle School, Hamlet

Jenn Hardy, Rania Aghia
By Ewelina Smusz, Ashley Koala, Shantasia Waters, and Matthew Cusson



This year’s SMILE challenge weekend was definitely one to remember! We had such an amazing time, and it was very fun meeting and working with new people from all over Rhode Island. During the SMILE challenge weekend, we did many things such as building a windmill, along with testing different blade materials, lengths, widths, designs, and the placement of the blades on the hub. We were working on our windmills in our groups for about 6 hours in total, not including lunch, dinner, and our mid-day activity break. For our mid-day activity break, the newcomers of the challenge weekend went on a tour of the URI campus and those who have been to the challenge weekend before, went on a tour of the Library. In the Library, we broke up into groups and rotated taking tours of the History Center, the AI lab, and the Makerspace. In the History Center, many important documents, and historical pieces date back to as far as 1751! In the AI lab, we learned about how some of their robots were being controlled, and even got to play with some of them! The robots were very interesting, because one of them could recognize shapes, and faces! In the Makerspace we got to look at all the different types of 3D printers that they have, what to do and not to do when you’re 3D printing, and we also got to see the VR gaming station! In conclusion, we had much fun at the 2019 SMILE Challenge Weekend, and can’t wait to go back again next year!

Horgan Elementary, West Warwick

Amy Horne, Maria DePalma
By Horgan SMILE Club



Our spring season in SMILE has been very busy. We have learned about how to make inferences and scientific observations by guessing the contents of mystery bags. We learned classification skills in an adventurous way by categorizing the flavors of Jelly Belly Harry Potter beans using a dichotomous key, and got some good and some bad surprises along the way. Studying about vernal pools was a key element in preparing for our end of year excursions to Alton Jones Campus and the main Kingston Campus of the University of Rhode Island. The study of food chains and trees also helped prepare us for our trips.

Grade 5 spent Friday morning through Saturday afternoon at Alton Jones. Five field studies were done in areas including the pine grove, the bubbling pond, the stream, the brook and the meadow. We all ate family style in the great hall and even enjoyed an indoor campfire while the rain and sleet fell outside. We made new friends and learned a lot of science.

Grade 4 spent a day on the URI main Campus, visiting the vernal pool in the woods, a marine biology lab and greenhouses. Each fourth grader brought home a tomato plant they planted themselves. The day also included lunch at the Hope dining hall and a college campus tour. We are excited to get on with our stewardship project!

We were also grateful to receive our own copies of a great book, Is This My Home? , by Sean Henrik Moore. It makes us think about caring for our planet and all its creatures.

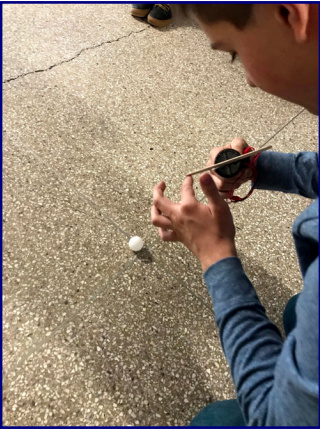


West Warwick High School

Eugene Gallo, Chris Baccei
By Celina Tomasso



Having been in SMILE for eight years, Challenge Weekend is always the moment to look forward to. Challenge Weekend brings new faces, new experiences and most of all new challenges. Furthermore, this weekend is where we are able to reinforce and demonstrate all we have learned in our own SMILE clubs. This year I have been especially interested in the material we have reviewed, including density and buoyancy. Out of all of the experiments, making the eyedropper cartesian diver was the most interesting. This was my favorite because it seemed like magic. Simply squeezing a soda bottle caused the eyedropper to move up and down in the bottle. I further learned that this happens due to the increased pressure forcing the water into the eyedropper. From here, there was an increase in the mass and density, causing the eyedropper to sink. Releasing all of this pressure then decreases the pressure causing the eyedropper to fall. In conclusion, I have always loved SMILE, a club that increases and interests your learning with every meeting, all leading up to the awaited Challenge Weekend.



Calcutt Middle School, Central Falls

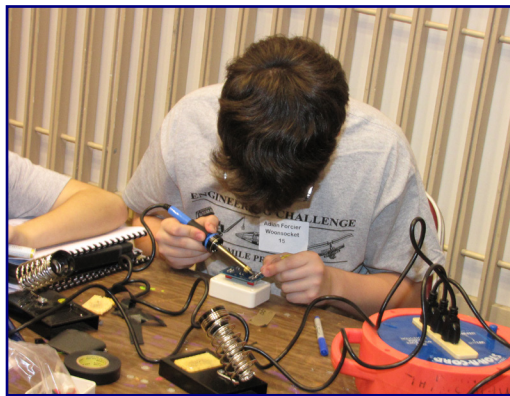
Karen Cardoza, Molly MacDonald
By Calcutt Middle School SMILE Club

The Calcutt Middle School SMILE group has had a busy year! We started our year with an amazing trip to URI and participated in a Biomedical field trip, put on by some URI students and their professor. We got to explore some real research and teaching labs. We learned a lot and got to explore the URI campus. As always, we loved eating in the dining hall. Our club has been working hard on the engineering curriculum; we were able to build boxes to successfully ship a chip from Cumberland to Central Falls. At the Middle School Challenge Weekend, we worked with students from all over the state to build a wind turbine. For our SMILE stewardship project we will be working on our SMILE mural and doing some work to improve our SMILE classroom. It has been a great year for our club!



"The SMILE Program is a great experience for children. It pushes the envelope on what they can do. It has positively influenced me by opening up my eyes to more possible science careers."

– West Warwick High School SMILE Student.



After a morning of ice-breakers and preparing for the challenge, the students made their way to Hope/Butterfield for a much deserved lunch. Following lunch, the students went to CBLS for a hands on activity designed by Dr Ying Zhang's graduate students modeling how enzymes and substrates work. This activity supported the bioinformatics unit that the students worked on in the Pre Challenge Curriculum.

From CBLS, many of the students moved onto the Library for presentations by URI Engineering students. Students were able to visit the Makerspace and Artificial Intelligence lab, both housed in the library.

The rest of the day involved completing the build of the ROV and testing in an outdoor kiddie pool. After hard work and persistence, and not deterred by the inclement weather, all sixteen teams had a working model ready for Saturday morning's competition.

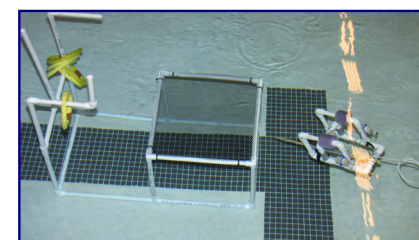
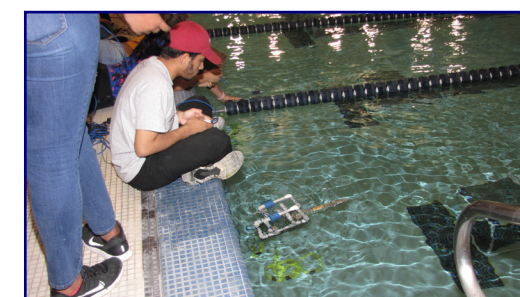
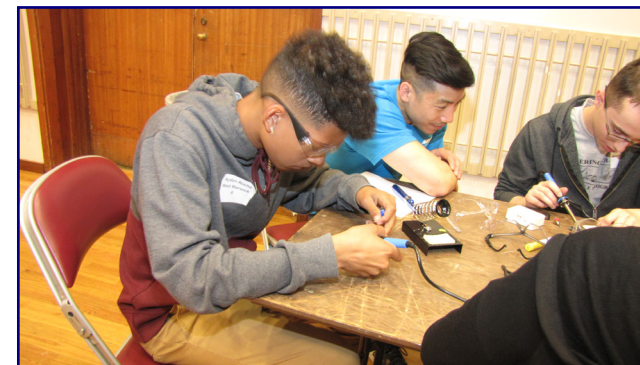
Once the long day of engineering was complete, SMILE students enjoyed some much-deserved downtime in the URI pool and on the Tootell basketball courts before heading to the Holiday Inn in South Kingstown.

On Saturday, after a breakfast of donuts, egg wraps and hot chocolate, the students headed over to Tootell Pool to test their ROV. The students first had to demonstrate that their ROV could do basic maneuvers such as moving up, down, left and right in the water. They then had 10 minutes to use the ROV to carry and deliver the most number of rings to the underwater obstacle course. Thankfully, the Scuba Club volunteers helped retrieve rings as well as set up the course.

As usual, volunteer mentors were an integral part of the event. URI students from different organizations, as well as professionals from the Navel Underwater College and Amgen were a valuable part of the Weekend.

It was another successful challenge weekend. Coming to a college campus, interacting with college and industry mentors, accomplishing a challenging task, and working with other motivated students from around the state are just a few of the major highlights that SMILE students get to experience to set them on a pathway to college and success. Many of our High School SMILE senior are heading off to college and we wish them success in all that they do. Our freshmen, sophomores, and juniors will return to SMILE next year to build on what they have learned and be excellent role models for the younger students. Of course, a special thanks also goes to Amgen, Pfizer, Nordson, Schneider Electric, and Verizon Foundation – whose funding support made this event possible.

"The SMILE Program has gotten me really involved not just in my school community, but with the world."
–Woonsocket High School SMILE Student.



**And
the
Testing
Begins!**



Below: Dr. Zhang's Lab on enzymes and substrates.



"The SMILE Program has not only taught me to appreciate science, but to look at it in many different ways. The possibilities are endless."

– Central Falls High School SMILE Student.