

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

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Newsletter
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23 Years of service

4th Grade URI Ecology Field-Day



On April 14, 2017 80 SMILE students attended the second annual Fourth Grade Ecology Field Day at the University of Rhode Island. Hailing from 6 school districts and 8 elementary schools across Rhode Island, the students rotated through three ecology-themed stations, enjoyed lunch in Butterfield Dining Hall, and interviewed URI students.

SMILE students were easily spotted across campus with neon green “SMILE! You’re a scientist” sweatshirts. Undergraduate and graduate students from the College of the Environment and Life Sciences volunteered time as mentors and led stations.

Continued on page 6...

5th Grade Elementary Outdoor Science Adventure



On the afternoon of April 7th, the SMILE Program’s 5th grade students stepped off a school bus and onto the beautiful and peaceful grounds of URI’s W. Alton Jones Campus. They were welcomed by 21 URI mentors who spent the spring semester preparing themselves, activities and hands-on lessons to educate the SMILE students about the ecology of the W. Alton Jones Campus during their 3 day, 2-night stay. The SMILE students and URI mentors quickly bonded on Friday during their first field study, dinner, campfire and cabin talks before it was LIGHTS OUT for a restful sleep to prepare them for a full day of field studies, games, meals and another campfire on Saturday. The students and mentors spent the weekend together learning about the plant and animal life throughout the campus. The URI mentors not only captivated the SMILE students with their hands-on lessons at four different sites, they also led the students in fun campfire songs and shared their challenges and successes throughout their academic careers. The EOSA weekend was a rewarding, heartwarming and educational experience for all in attendance.

Continued on page 2...

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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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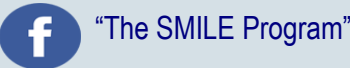
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Kingston, RI 02881

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Calendar

Weekly SMILE Club Meetings
Scientific and Career Exploration Field Trips

Family Science Nights
November 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

“One touch of Nature makes the whole world kin.” -William Shakespeare

At the Bubbling Pond, URI mentors engaged the students by getting down and dirty in the mud to learn about macroinvertebrates and their importance in the ecosystem of the pond. At the pond, the students found adult salamanders, saw salamander egg masses and got wet while looking for life and/or evidence of life in the pond and identifying the different plants and animals they observed.



In the Pine Forest, URI mentors involved the students in learning not only about the massive Pine trees but also about the history of W. Alton Jones and how human impact allowed the students to observe succession in progress and take a walk back in time. The Eastern White Pine trees were once under the possession of the British Crown and resulted in deforestation in New England. The students learned how to estimate tree height and diameter and how to determine if a tree had the preferred measurements of the British Navy to be used for building of their ships and ships’ masts.



“My favorite place in nature is everywhere!”
-SMILE 5th grade student



- CENTRAL FALLS**
Ella Risk Elementary School
Sheryl Wilson
Peggy Boyer
- Calcutt 5th grade
Karen Cardoza
Peggy Boyer
- Calcutt Middle School
Karen Cardoza
Molly MacDonald
- Central Falls High School
Laura Stanish
- NEWPORT**
Claiborne Pell Elementary
Lori Delemos
Mary Nordby
- Thompson Middle School
Candace Lewia
Elizabeth Gibbs
- Rogers High School
Beth Copeley
June McGreavy
- PAWTUCKET**
Shea High School
Ann Marie LaRoche
Jennifer Bromley
- Tolman High School
Kevin Collard
Jason Rushton
- Goff Junior High School
Ann Marie LaRoche
Jennifer Bromley
- SOUTH KINGSTOWN**
Peacedale Elementary
Martha Badigian
Christine Pierce
- Curtis Corner Middle School
Gina Haberlin
Jo Ann Basel
- S.Kingstown High School
Christina Antaya-Dube
Kelly Gallo
- WESTERLY**
Springbrook Elementary School
Lisa Kenyon
Nicole Roberts
- Westerly Middle School
Carolyn Michaud
Robert Brennan
- Westerly High School
MaryJane Utley
Stacey Leitz
- WEST WARWICK**
Horgan Elementary School
Maria DePalma
Amy Horne
- Deering Middle School
Eugene Gallo
Christopher Baccei
- West Warwick High School
Eugene Gallo
Nelson DaSilva
- WOONSOCKET**
Harris Elementary School
Melanie Clark-Medyesy
Katherine Krause
- Coleman Elementary School
Jennifer Paolozzi
Anissa Hoard
- Citizens Elementary School
Amanda Ward
Jodi Cifelli
- Woonsocket Middle School (2 clubs)
Paulette Metivier
Deana McCarthy
Marie Gentile
Rania Aghia
- Woonsocket High School
Julia Grassini
Ethel Locke

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
- Amgen Biotech Experience
- Amica
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- Graphic Expressions
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- Newport School Department
- South Kingstown School Department
- Pawtucket School Department
- 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			
SMILE STAFF	URI RESOURCE FACULTY	COLLEGE OF ENVIRONMENT & LIFE SCIENCES	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 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.
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Ella Risk Elementary, Central Falls
Peg Boyer, Sheryl Wilson
By Ella Risk SMILE Club

SMILE is the best club. At the beginning of this year we learned about engineering. We loved building a roller coaster, satellites in the wind tunnel, quick builds, building with dowels and elastics, bobsleds racing, domino challenges, robots and gum drops and toothpicks. Yum! We even tasted vomit flavored jelly beans! Yuck! We learned that engineering solves problems and engineering is involved in almost everything we do and use. We were able to share our new knowledge about engineering with our families at Family Science night.

Another great thing about SMILE were the fieldtrips. They were awesome and extremely amazing. We went kayaking on the Wood River! Thanks again to all the volunteers. For most of us it was our first time! We are hoping to kayak again this spring. We also went to the Boston Science Museum in January. None of us wanted to leave there! We saw a phenomenal movie about extreme weather at the Omni Theater. We went up and down musical steps, and played with science in the playground, engineered trampolines and so many more things that we felt we wanted to stay the whole weekend! Hey wouldn't that be a great idea for a fieldtrip.

Lately, we have been learning about ecology and food chains in different habitats. We learned there are producers, consumers, and decomposers. Some of them are omnivores, carnivores and herbivores and we now realize how everything is connected. We are looking forward to the URI Ecology Day! Last but not least, "Don't forget to SMILE."



Westerly Middle School
Robert Brennan, Carolyn Michaud
By Westerly MS SMILE Club



As first year members of the SMILE program, our Westerly Middle School students offered reflections on the experiences they will take away from their participation this year. Here is a sampling of the impact SMILE had on our students.
-“The URI Weekend was a challenge for us because we interacted with minds from different schools, which was pretty amazing.”

-“I enjoyed Family Science Night the most because we got to showcase to our family the benefits of SMILE. I look forward to continuing throughout high school.”

-“As a first time SMILE member, I came in not expecting much. I was in previous engineering programs after all. However, I was finding myself with a lot of pride, thinking outside the box, and

challenging myself. SMILE made us all dream high. We were meant for Mars, or meant to cure cancer, or make history in general. We were determined to become leaders, not followers, and to one day outsmart the old and challenge the new.”

**SMILE students
rotated through four
different field study
locations on URI's W.
Alton Jones
outdoor
environmental
campus**



At the vernal pool, students had the opportunity to see egg masses of both salamanders and wood frogs. URI mentors taught the SMILE students about the life cycles of both species and spent some time exploring the area for juvenile and adult salamanders and wood frogs. Students observed two different types of lichen and learned the significance of the unique organisms.



Deep in the woods at one of the streams, URI mentors had the students determine if the stream was healthy by calculating its flow rate and looking for macroinvertebrates that are indicators of a healthy stream. The SMILE students carefully examined rotting logs and stumps for organisms that are essential for decomposition and the recycling of nutrients. At the stream, students saw how live and dead trees are microhabitats for species that range in size from microscopic to larger animals such as birds, squirrels and owls.

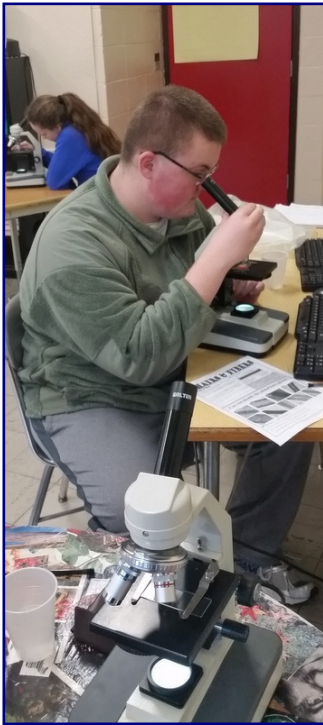


Rogers High School, Newport
June McGreavy, Beth Stump
By Lucas Machado & Jack Garfourth

From the start of the year, we’ve been hard at work at SMILE. Our curriculum, for the first half of our school year, focused on several types of engineering, such as civil and biomedical. We participated in the “Family Science Night” with the local SMILE clubs at Thompson Middle School, and we then transitioned into the latter part of our curriculum, forensics and crime scene investigation (CSI), rounded out by our high school challenge weekend at URI, which focused on solving a crime.

We conducted hands-on engineering experiments that included making a paper bridge, spaghetti tower, prosthetic hand, and silly putty all requiring us to follow the Engineering Design Process: a 7-point matrix used by all engineers to solve world problems. We learned that engineering is all about trial and error, and that materials must be used wisely so that we can efficiently and effectively solve a problem.

In preparation for the URI Weekend Challenge our new focus was forensic science. We learned how to analyze trace evidence, such as hairs and fibers, as well as the skills required in fingerprint identification. At the Weekend Challenge, we participated in several labs, such as fingerprint and shoeprint identification, trace evidence analysis, as well as an electrophoresis lab, in order to solve the crime of the missing Chrysanthemum bonsai plant.



Coleman Elementary, Woonsocket
Jennifer Paolozzi, Anissa Hoard
By Coleman SMILE Club



This year in SMILE, we have done so many amazing activities! We started the year by learning about engineering. It was challenging to build a tower of cards that could withstand a strong wind. We also experimented to create the best solution to make bubbles with and even built roller coasters!

It’s always fun to prepare for the Elementary Outdoor Science Adventure and the Fourth grade Ecology Field day. We LOVE to visit URI and experience college life. We also took a kayaking trip on the Wood River that was incredible. It was so peaceful and beautiful. WE LOVE SMILE!



Kassandra Do Rosario
Shea High School
Roger Williams, Criminal Justice



Karina Hernandez
West Warwick High School
URI, Kinesiology



Aiden Chen
Westerly High School
Rensselaer Polytechnic,
Computer Science



Rosalind Lucier
South Kingstown High School
Willesley College, Biochemistry



Minandira Silva Da Cruz
Shea High School
Undecided, Accounting



Scott DeBoer
South Kingstown High School
CCRI, Cyber Security



Anita Koala
Shea High School
RIC, Physician Assistant



Daoule Mariko
Shea High School
Undecided

SMILE Seniors Not Pictured:

Chris Nadeau, South Kingstown High School
Eva Coutinho, Shea High School
Diogo Paulino, South Kingstown High School

Congratulations SMILE Seniors Class of 2017



Gabriela Nieves
South Kingstown High School
URI, Pharmacy



Lucas Machado
Rogers High School
Stony Brook, Computer Science



Aleida Gomes
Shea High School
Undecided, Psychology



Cindy Rodriquez
Central Falls High School
RIC, Biology



Kate DeBoer
South Kingstown High School
URI, Pharmacy



Eva Tash
Rogers High School
Undecided, Biology



Stephanie Aldana
Central Falls High School
Roger Williams, Biology



Ololade Iyanda
Shea High School
Undecided, Pharmacy

Deering Middle School, West Warwick
Christopher Baccei, Eugene Gallo
By Deering SMILE Club

SMILE, otherwise known as the Science and Math Investigative Learning Experiences Program, is a program that allows its members insight of math and science. In earlier years, we have worked on topics such as cranes, planes, maglev trains, and bridges. The first half of the year we engaged in multiple engineering activities exposing our group to the engineering design process. This lent itself conveniently to the second half of the year when we engaged in bridge building. No matter what task is given to us, we take it and work with enthusiasm and a desire to learn.

Throughout our second semester, we began studying bridges with a focus on truss bridges. The weekly activities culminated in our group constructing small balsa wood bridges that were tested to see how much of a load they could handle. From this point, we determined two bridges to take to our challenge weekend at the University of Rhode Island to test on the shake table. Our SMILE club attacked the bridge curriculum with great enthusiasm and were very excited to attend our challenge weekend.

Challenge weekend, the main event of SMILE, is a unique engineering experience held at the University of Rhode Island. Our activities and experiments throughout the year all prepare us for these two days, where we collaborate with several different schools. Students are put into mixed-school groups and are faced with an engineering challenge to finalize in a certain amount of time. This particular challenge forced students to work together in order to create the most cost efficient and structurally sound bridge. At the end of the challenge there is a closing ceremony focused on key points of the weekend and a discussion with the University's admissions team. Information is also available for everyone about the scholarships, different careers in science, math, and engineering, and the path to get there.



Tolman High School, Pawtucket
Kevin Collard, Nicole Ellis
By Opeyemi Olagunju

For the past semester, the SMILE curriculum was focusing on Forensic Science which is the use of scientific means to analyze physical crime evidence. This science deals with hair samples, fingerprints, DNA, and making detailed observations. In order for us to expose ourselves to forensics, we staged crime scenes and tried to figure out what happened. Fake blood was splattered throughout the room in order to make the scene more realistic. This activity was extremely fun and forced us to analyze all the small details in the room. Currently, we are building our own model of DNA of different suspects of a murder so that we can compare to the DNA that we found on the sight. Creating the double helix shape is very interesting since the structure cannot be seen with just the human eye.

My experience at the SMILE Program at Tolman High School has been great. This is my first year in the program and I regret not taking it sooner. It has opened me to many different sciences that I would have never done on my own. My favorite field of science is biology but being exposed to forensics showed me how a lot of the sciences are interconnected. SMILE has helped me reach my goals by getting me involved with more science besides what I learn in class. Therefore, this whole experience has been great for me and I can't wait to do it again next year.



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, and looked at plankton under a microscope.



Mentors also led activities in the greenhouse. There, 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 find was spotting a red-backed salamander, a common salamander found in woodlands. At North Woods, they also explored a vernal pool and counted wood frog egg masses. They also learned about dissolved oxygen and pH.



As the day started to wind down, SMILE students returned to the science quad and sat down with an undergraduate student. For about thirty minutes, students took turns asking questions. Mentors talked about what it was like to apply to college and shared their own academic journey. SMILE students also learned about a few different types of environmental scientists including, horticulturalist, soil scientist, herpetologist, ecologist, and marine scientist.



After the mentor interviews, students shared posters created in their clubs showcasing activities at Family Science Night and stewardship projects. SMILE students said farewell to the URI mentors and headed to the buses with 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!

"Science is a great way to connect to nature."
-SMILE 4th grade student