

A STEM PROGRAM

SMILE

Science and Math Investigative
Learning Experiences

Newsletter

Volume 32, No. 3 May 2026

32 Years of Service!

The final SMILE newsletter is here! We're wrapping up a season full of engineering challenges, Ecology Day, and lots of hands-on fun. Check out the highlights from our clubs.



SCHOLARSHIP ANNOUNCEMENT

The Saul Nulman SMILE Program Scholarship

To Our SMILE Seniors

Every year, The SMILE Program recognizes the efforts and successes of Saul Nulman, a man whose dreams, determination, and discipline paved the way for his success. In honour of his legacy, the Saul Nulman SMILE Scholarship provides \$500 scholarships for some SMILE seniors pursuing higher education. Current enrolment in The SMILE Program is not required, however each applicant considered must have been in SMILE for at least 3 years—including attendance at 3 end-of-year Challenge events—and display academic merit amongst other criteria.

If you would like to be considered for a SMILE Scholarship during the 2026-2027 school year, you are welcome to visit our SMILE website where you can preview the application form. The SMILE Program announces this scholarship every year in early January, so keep on the lookout for our January Newsletter.

To access the application, talk to your school's guidance counsellor or visit the URI SMILE website at:
https://web.uri.edu/smile/wp-content/uploads/sites/910/SMILE-Scholarship-Application.docx_.pdf

MIDDLE SCHOOL ENGINEERING CHALLENGE



The SMILE Wind Turbine Engineering Challenge, held on April 7, 2026, was an exciting and engaging day of hands-on STEM learning and exploration.

Students designed, built, and tested their own wind turbines, experimenting with blade angles, speed, and power output as they worked to optimize performance. The challenge encouraged critical thinking, teamwork, and iterative problem-solving, with students refining their designs based on real-time results.

In addition to the engineering challenge, students had the opportunity to experience campus life at the University of Rhode Island. The day included a guided campus tour, lunch at Hope and Butterfield Dining Halls, and a spirited sail car competition that added an extra layer of fun and friendly competition.



A highlight of the day was the opportunity for students to connect with URI students, who shared their experiences studying engineering and the sciences. These conversations provided valuable insight and inspiration, helping participants envision future pathways in STEM fields.

Thank you to all of the students, educators, and volunteers who made this event such a meaningful and successful experience!



HIGH SCHOOL ENGINEERING CHALLENGE

On April 10th, around 92 SMILE students from Central Falls, Johnston, Newport, South Kingstown, West Warwick, Westerly, and Woonsocket gathered in URI's Memorial Union Ballroom for the 2026 High School Engineering Challenge Day! Each Spring, our high school SMILE students spend a Friday at URI's Kingston campus, working in mixed teams to design, build, and test their solutions to the year's given challenge.

This year, our young engineers were tasked with designing and building a soundproof submarine, addressing the need for soundproofing in US Navy vehicles to increase protection of sonar equipment and minimize the chance of detection. Within their teams, students assigned themselves different roles with the goal of optimizing the time in which it took to test different materials used in the project. Students met several checkpoints throughout the challenge, requiring them to test many materials, analyze data, and make the most effective and cost-efficient design that they could.

The day went as follows: Students arrived early in the morning, were greeted by SMILE office staff, and were directed to their assigned teams of 5-6 students. SMILE Program Executive Director Carol Englander welcomed our SMILE members and expressed gratitude to our SMILE districts. SMILE High School Coordinators Julia Hernandez, Emily Packer, and Connor Valdez introduced the challenge, walking the teams through their required steps and checkmarks. The morning had teams reviewing materials and distributing roles before they broke off to enjoy an all-you-can-eat lunch at URI's Mainfare Dining Hall.

Following an exceptional lunch, students broke into their respective schools to tour the URI campus. Freshman, Sophomore, and Junior students toured the Beaupre Center for Chemical and Forensic Sciences, the Center for Biotechnology and Life Sciences, and Fascitelli Engineering buildings. Senior SMILE students



HIGH SCHOOL ENGINEERING CHALLENGE

participated in a Discussion Panel with SMILE staff and alumni, where they got to hear about the college experience, pose questions, and receive advice.

Throughout the afternoon, students worked on testing their materials and building their submarine. Many groups found creative ways to optimize their industrial process. In addition, students had the opportunity to put their cell phones to use in three ways. One member used the phone as a timer. Plus, two other phones were used as a sound source and the way to measure the sound! Students learned how to calibrate and use the Phyphox app in order to measure the volume of sound emanating from their submarine.

Following dinner, students finalized their builds and recorded their results. Students gathered to discuss how different materials affected their sound suppression and what methods were able to best optimize their industrial process, while reflecting on challenges they overcame. This year, The SMILE Program proudly recognizes our 36 graduating seniors! To end the night, each senior was awarded a certificate in recognition of their dedication.



The SMILE Program sends a huge THANK YOU to all our teachers, students, staff, faculty members, student mentors, and sponsors who gave their all to make this challenge a wonderful experience! One of our sponsors, The UConn-URI Navy STEM Coalition, recognizes the critical support from the ANCHOR contract, managed by General Dynamics Electric Boat and funded by the U.S. Navy through the Maritime Industrial Base Program, which enables continued investment in workforce development and STEM education.

ELEMENTARY ECOLOGY FIELD DAY



On April 16th, 170 SMILE students in grades 4 and 5 from across Rhode Island participated in Ecology Field Day, hosted at the University of Rhode Island. The students represent ten elementary schools in six districts across the state. With the guidance of 24 dedicated URI mentors, staff from The Society for Women in Marine Science, SMILE teachers, staff and volunteers, these young explorers took part in a variety of hands-on activities across five habitats throughout the day.

The students explored forest, vernal pool, pond, greenhouse, and garden habitats. During the event, SMILE students engaged in fascinating activities like soil and water chemistry analysis and learning how to assess water quality through the presence of specific macroinvertebrates. They also embarked on a scavenger hunt for plant adaptations in the greenhouse, learned about soil permeability and texture, and used specialized tools to investigate the temperature of the pond and vernal pool, and the amount of dissolved oxygen in both.

The day's curriculum emphasized topics such as water quality diagnostics and biodiversity transects, allowing students to explore the unique animals and ecological zones of vernal pools, as well as the fascinating world of mosses and lichens. They even learned how to determine the age of a tree by measuring its circumference! SWMS staff led a series of activities on microbes and coastal food webs.

Students shared lunch in the college dining hall with their URI mentors and took some time to relax and have fun, rolling down a hill during the afternoon break. Weekly club activities focused on habitats, populations, and other environmental topics effectively prepared the students for this enriching experience. Mentors from URI prepared by completing a semester-long class learning about the biological aspects of each habitat and how to teach to the younger students.



ELEMENTARY ECOLOGY FIELD DAY

All in all, Ecology Field Day was an engaging blend of learning, exploration, and fun, fostering a deeper appreciation for the environment among Rhode Island's youth.



CLUB UPDATES

CENTRAL FALLS HIGH SCHOOL

Central Falls

Jeff Gilman

By: Central Falls High School SMILE Club

This year has been an incredibly exciting year for the Central Falls High SMILE club. New students have brought a great new energy to the club. When asked what they like about SMILE, one student said: "I like that everyone knows everyone, we are all a big group of friends." Our former coordinator, Mr. Charles Fisher, stepped away this year and allowed Mr. Jeff Gilman to take over! Gilman has worked on recruiting new students and facilitated the participation for all students in all the incredible SMILE activities.

With this new energy, we have been able to dive headfirst into new activities and opportunities. In our club this year, we have had the chance to explore all sorts of new activities. We loved all of the engineering challenges this year, especially getting to dive deeper into sound engineering. Students loved getting to be hands-on with the activities, and learn more about the engineering sound design process and soundproofing while having fun. Their favorite so far was the activity in which they demonstrated a cool scientific phenomenon called Chladni Patterns.

Our big event of the year, without a doubt, was our family science night! Thanks to the generosity of our district, we were able to provide meals for all parents and students, and the mayor and superintendent were recognized by SMILE! This was an incredibly memorable experience for our students, and we are eager to continue the community-building tradition in the coming years.



CLUB UPDATES

HORGAN ELEMENTARY SCHOOL West Warwick

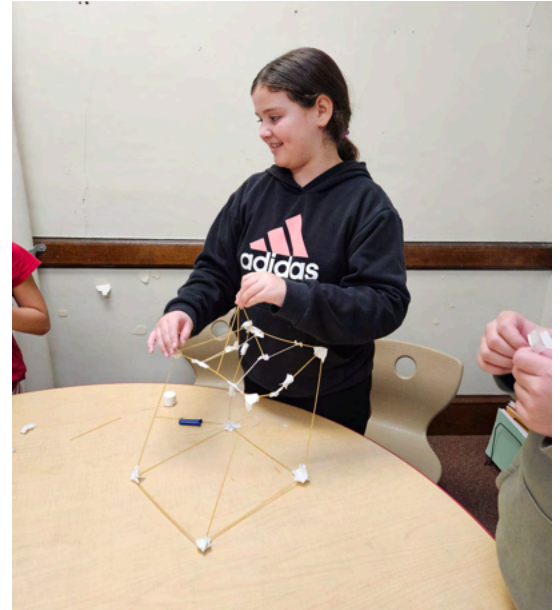
Maria Depalma, Tracy Thornbury

By: Horgan Elementary School SMILE Club

The West Warwick Elementary SMILE club has had great success this year learning new science concepts through hands-on activities. We started the year with our new group of 4th grade students by learning about the Engineering Design Process and building towers out of spaghetti. We continued with energy activities exploring magnetism with magnets and using potatoes to make a battery to light up small light bulbs.

At Family Science Night, in November, students shared their presentations and discoveries with family and friends. After which all attendees enjoyed a delicious spread of home cooked favorites for dinner.

We started the spring SMILE curriculum with mystery bags, to learn how scientists use observations to make discoveries. Students enjoyed guessing the different objects in the bags by using their five senses. Following this activity, we investigated heat and temperature, using thermometers to measure temperature. Students learned the difference between Fahrenheit and Celsius. Students were introduced to food web concepts and the food chain by creating a group web with a ball of yarn. Most recently, our focus has been on producers and learning how plants make their own food, through the celery experiment. As spring approaches, the students are excited about the upcoming visit to URI for the 4th Grade Ecology Day.

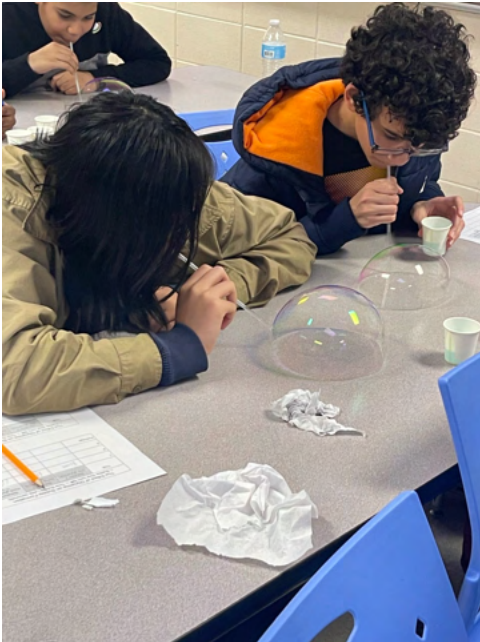


CLUB UPDATES

NICHOLAS A. FERRI MIDDLE SCHOOL Johnston

Karen Saul

By: Ferri Middle School SMILE Club



SMILE Club is full of building, testing, redesigning, and a lot of energy. Since Family Science Night in November, that energy has been focused on engineering challenges, along with a little science experimentation, as students figured things out along the way.

In these challenges, we explored key science concepts through hands-on design, investigation, and engineering. During the Basketball Challenge, teams designed a hoop and a throwing device, then combined them to learn how forces, angles, and motion affect accuracy. In the Bubble Challenge, we tested detergent and glycerin mixtures, focusing on variables and fair testing to see what made bubbles last longer. The Paper Roller Coaster Challenge brought energy concepts to life as we built marble tracks and observed how potential energy is converted to kinetic energy. When something didn't work, we iterated and tried again.

As we prepared for Engineering Day at URI, we explored wind energy and energy transfer by creating anemometers and measuring wind speed, building windmills to lift marbles, and building wind sail cars to measure speed and distance. We then designed turbines to generate electrical energy and investigated how blade design and gear systems affected performance. There was a lot of focused learning and excitement as we got ready for the field trip.

On April 7, we attended Engineering Day at URI, where we worked with peers from other schools to build wind turbines and measure the voltage they produced, exploring how blade design, angle, and number of blades made a difference. We tested our designs, made changes, and kept going throughout the day. We had a blast, made new friends, and really enjoyed spending the day on campus, including eating in the dining hall.

This is what SMILE Club is all about: improving designs through science and math with perseverance and teamwork, and you can see that in how we end each meeting. We take a group photo in the same spot each week, a simple way to look back and see how far we've come. We are a team. We are curious, engaged, supportive, and pretty funny, and we are becoming more confident problem solvers through SMILE.



CLUB UPDATES

PEACE DALE ELEMENTARY SCHOOL

South Kingstown

Jen Defeo, Susan Carr

By: Peace Dale Elementary School SMILE Club

Peacedale SMILE students have been busy exploring with Makey Makeys and creating Keyboards using different conducting materials such as gummy bears and classroom supplies. The highlight of the Makey Makeys was making banana keyboards where they composed their own songs and played for their peers! Peacedale SMILE students also have been learning about producers and decomposers. They especially enjoyed learning about macroinvertebrates and have created their own critters based on what they learned about features that help it survive. We ended the 2nd trimester with a celebration of all their hard work and positive behavior in school.



CLUB UPDATES

RAICES DUAL LANGUAGE ELEMENTARY SCHOOL Central Falls

Joan Morse, Amy Carney

By: Raices Elementary School SMILE Club

This spring, our SMILE Program at Raices Dual Language Academy has been buzzing with hands-on learning, creativity, and discovery! Our students explored important science concepts while engaging in fun, interactive activities that brought learning to life.

Students dove into the fascinating world of habitats by learning about producers and consumers. Through discussions and activities, they discovered how plants (producers) make their own food using sunlight, while animals (consumers) depend on plants or other animals for energy. We explored how these roles connect to form a balanced ecosystem. Students even created their own food chains, helping them understand how energy flows through nature! One of our favorite projects this season was building biodomes! Students designed and assembled their own miniature ecosystems. Through this activity, they learned:

- How living and non-living things interact
- The importance of water, sunlight, and air
- How ecosystems can sustain themselves

Watching their biodomes grow over time helped students see science in action right before their eyes!

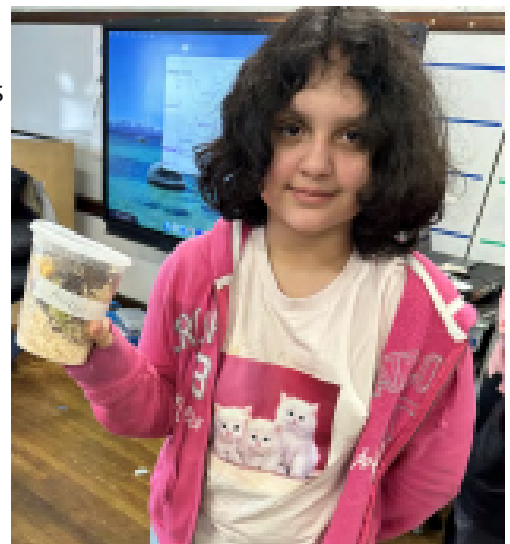


We also explored sustainability by learning about the parts of a compost. Students discovered how food scraps and natural materials break down to create nutrient-rich soil. They learned about:

- Greens (like fruit and vegetable scraps)
- Browns (like leaves and paper)
- The role of air, moisture, and microorganisms

This activity showed students how small actions can help reduce waste and support the environment.

As we move into the next season, we're excited to continue exploring science through hands-on learning and meaningful projects. Thank you to URI and our SMILE Program for supporting our students in becoming future scientists and environmental stewards!



CLUB UPDATES

SOUTH KINGSTOWN HIGH SCHOOL

South Kingstown

Michael Lobdell, Reed Fraser

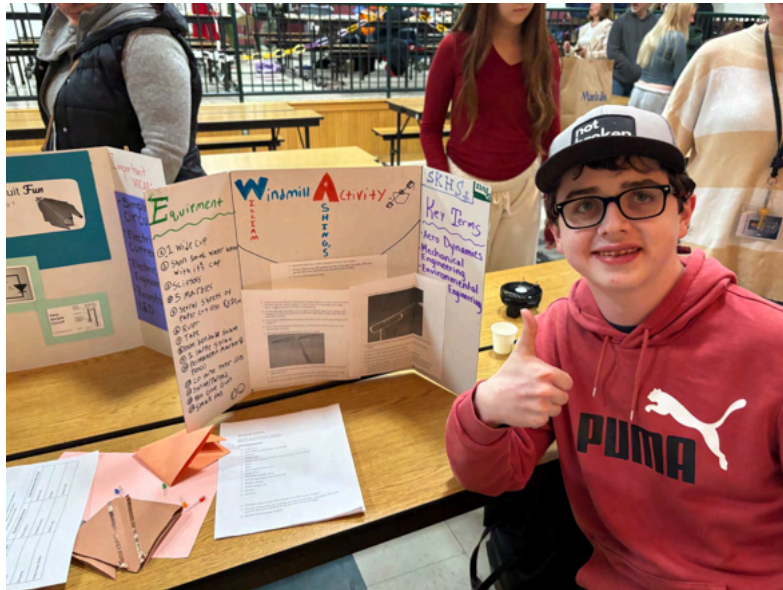
By: South Kingstown High School SMILE Club

South Kingstown High School SMILE - The

SKHS SMILE students have worked on activities throughout the year leading up to the culminating task during the Engineering Challenge Day. Students have learned about topics including series and parallel circuits, mechanical engineering, and sound waves.

Family Science Night - South Kingstown

SMILE schools held the annual Family Science Night on Tuesday, December 2nd, 2025. The SKHS SMILE members displayed and explained the windmill, firefly circuit, and mechanical hand activities. Family Science Night is always a great celebration!



High School Engineering Challenge Day - The SMILE Engineering Challenge day is a great experience for our students. In the past we have designed and built a submarine cooling system, tower building and testing, and solar vehicles testing. SKHS SMILE members are looking forward to this year's challenge.

What's next for SMILE? - South Kingstown High School SMILE members are planning their Stewardship Project.



CLUB UPDATES

WESTERLY MIDDLE SCHOOL

Westerly

Carolyn Michaud, Robert Brennan Jr.

By: Westerly Middle School SMILE Club

This year's WMS SMILE group has been full of outstanding contributors. With the many group activities being very successful, and some not so much, our SMILE members have stayed dedicated to the process of trying to find suitable answers to the challenging problems. This group may be the strongest team we have had at Westerly Middle School. All students have been putting forth a tremendous effort on this year's challenges.

Our students have really appreciated the new and fun activities, especially the Alka Seltzer Rockets and the Wind Sail Cars. They spent weeks getting prepared for the "Big Event" at URI in April by developing proper blade designs to capture the most wind to make the most energy. We recently completed the event and they really enjoyed meeting and working with different SMILE groups from around the state.

We hope to cap off the year by taking a field trip this Spring to Igus (a robotics and injection molding company in Rumford, RI) ... a shout out to Woonsocket for that great idea!

Sixteen of our members will be moving to the high school next year and we wish them the best of luck. Our four returning members have benefited from their guidance and are themselves a strong cohort to lead the next generation of SMILE members at Westerly Middle School with pride.



PARTNERSHIPS

We want to thank the following funders that have allowed SMILE to grow and continue to provide high-quality, after-school, STEM programming to our Rhode Island students:

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Veterans Memorial Elementary School
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 Susan Carr
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South Kingstown High School
 Michael Lobdell
 Reed Fraser
WESTERLY
Westerly Middle School
 Carolyn Michaud
 Robert Brennan Jr.
Westerly High School
 Stephanie Lenihan
 Pina Alfiero
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We also want to thank our Individual Supporters, who are vital in helping The SMILE Program to continue its mission.

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