

A STEM PROGRAM

SMILE

Science and Math Investigative
Learning Experiences

Newsletter
Volume 30, No 1. January
2024

30 Years of Service *

An exciting 30th year has begun for the SMILE Program! On top of the weekly meetings, there were some very big and exciting field trips. As the Educational Outreach partner with Dr. Evan Preisser's NSF Grant, students have gone on field trips to study the interactions between herbivores and plants at East Farm Demonstration Garden and Apple Orchard, Block Island, Roger Williams Zoo, and Norman Bird Sanctuary. On top of that there were also a series of Teacher Workshops & Science Nights where teachers, students, and parents alike all had fun learning and partaking in scientific activities.





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 scholarship

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, 2024 and Feb 15, 2024 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

SMILE Scholarship & Job Opportunities

ATTENTION SMILE SENIORS

Now is the time to start working on a SMILE scholarship! Every year the Saul Nulman Scholarship can provide up to six \$500 scholarships to SMILE seniors headed off to college. The criteria for the scholarship are listed below.

1. At least 3 years in SMILE
2. Attendance at
 - a. SMILE Challenge Weekends
3. Acceptance at a post-secondary educational institution by April 26 Academic merit: C or better average
4. Quality of essay to be determined by SMILE director and SMILE staff 5. SMILE Teacher Letter of Recommendation
5. Application deadline: April 26

Link

<https://web.uri.edu/smile/wp-content/uploads/sites/910/SMILE-Scholarship-Application-Final.pdf>

Job Opportunities

Below is a link to the careers page of KVH. It will provide a list of job opportunities to anyone interested. KVH is a corporation located in Middletown Rhode Island. KVH is a corporation that builds Satellites for boats and recreational vehicles and a proud sponsor of the SMILE Program.

<https://www.kvh.com/about/careers/>

CLUB UPDATES

PEACEDALE ELEMENTARY SCHOOL South Kingstown

Jen Defeo, Susan Carr
By Peacedale SMILE Club

Activity One: The Longest Chain. Groups of 3 had 1 sheet of construction paper, a glue stick and scissors and needed to create the longest chain. Students learned about engineers and then began a plan to create the longest chain. Just like engineers, this involved planning, imagining, creating and revising. The largest chain was 461 cm and the smallest chain was 20cm. Activity Two: Making ice cream was a group favorite. Activity Three: Fingerprints! Students learned about the 3 types of fingerprints and got to investigate which ones they had. We had some extra time after fingerprinting so rocket making and launching was next! Students designed, tried out and revised their rockets to see which could go the furthest and then the highest. Activity Four - leaf chromatography. Students loved seeing the change in the vinegar from leaf pigments. Activity Five: Structural Engineering - constructing geodomes. Using candy and toothpicks, students created geodomes to study the way shape is important in building structures. Continuing with the structural engineering theme - using one piece of 8x11 paper and 3 small pieces of tape, they had to build a support system to hold science textbooks. The winning shape was circular and held 12 science books. When asked how they would describe the SMILE program to someone who was not familiar with it, these are some responses: Brooklyn said, "SMILE is a place that you get to meet new friends and learn science." "A fun program about science, engineering and math", answered Sam. Kennedy responded, "SMILE is a fun way of learning with friends and teachers." Kendall said, "A place where you have fun but work hard." We are looking forward to our future investigations.



CLUB UPDATES

CLAIBORNE PELL ELEMENTARY SCHOOL Newport

Kevin Bolano, Jeannine Walsh
By Claiborne Pell SMILE Club

Pell Elementary School students have been extremely busy and having a great time with club activities, two field trips and our SMILE family science night. Our field trips were to the Norman Bird Sanctuary and the URI apple orchard/Community Garden. At the Norman Bird Sanctuary the students hiked through 4 diverse habitats and ecosystems. They explored rock formations while learning about Pangea and the continental shift. The URI apple orchard was a favorite stop. Students picked and collected apples for our local food pantry and school to share with friends and family. The Newport SMILE Family Science night was a huge success with over 200 people enjoying the hands on activities explained by very knowledgeable students and a wonderful potluck dinner. Comments from the students and parents have been positive. A student remarked, "I love the SMILE afterschool program. The projects are fun and we learn a lot in a different way then I do in class." From one of the parents, "Owen loves the different projects and he's quite good at retelling the steps. We think it is a fantastic program and a great way to engage the kids with science and math."



CLUB UPDATES

WESTERLY MIDDLE SCHOOL Westerly

Carolyn Michaud, Robert Brennan
By Westerly SMILE Club

The WHS SMILE Club took a risk scheduling a trip to Norman Bird Sanctuary in December but the risk certainly paid off! The weather was crisp and clear and the views that day were spectacular and made us proud to live in RI.

It was a long ride from Westerly to the opposite side of the state and students were not sure what to expect going to a “bird sanctuary”. Some students were definitely out of their comfort zone when the guides, Elijah and Emma, started us on our walk. Some students bounded on the path and up the hills but others were unsure that they wanted to go on as the path went deeper into the woods and grew steeper. And at one point we heard a noise and looked up just in time to see a buck bound through the forest within 20 feet of us. All the students were rewarded for their efforts, however, when we got to our destination at the top of the hill. The views were spectacular.

Although Westerly students are very familiar with water and coastlines, the eastern coast of RI has a very different landscape. Elijah explained the geology, including the “pudding stone”, that dominated the area. He explained how it formed and how the glaciers exposed it. This conglomerate looked like figgy pudding to the early settlers and that’s how it got its name. He also pointed out juniper berries as food for over-wintering birds and that they can be used for fragrance in your house or for making tea.

The only birds we really saw were a large flock of robins so we all agreed that we should make another trip back in the spring or early fall to see more birds and to see how the landscape changes from season to season. Many students said they would use the complimentary passes with their families to explore some more.

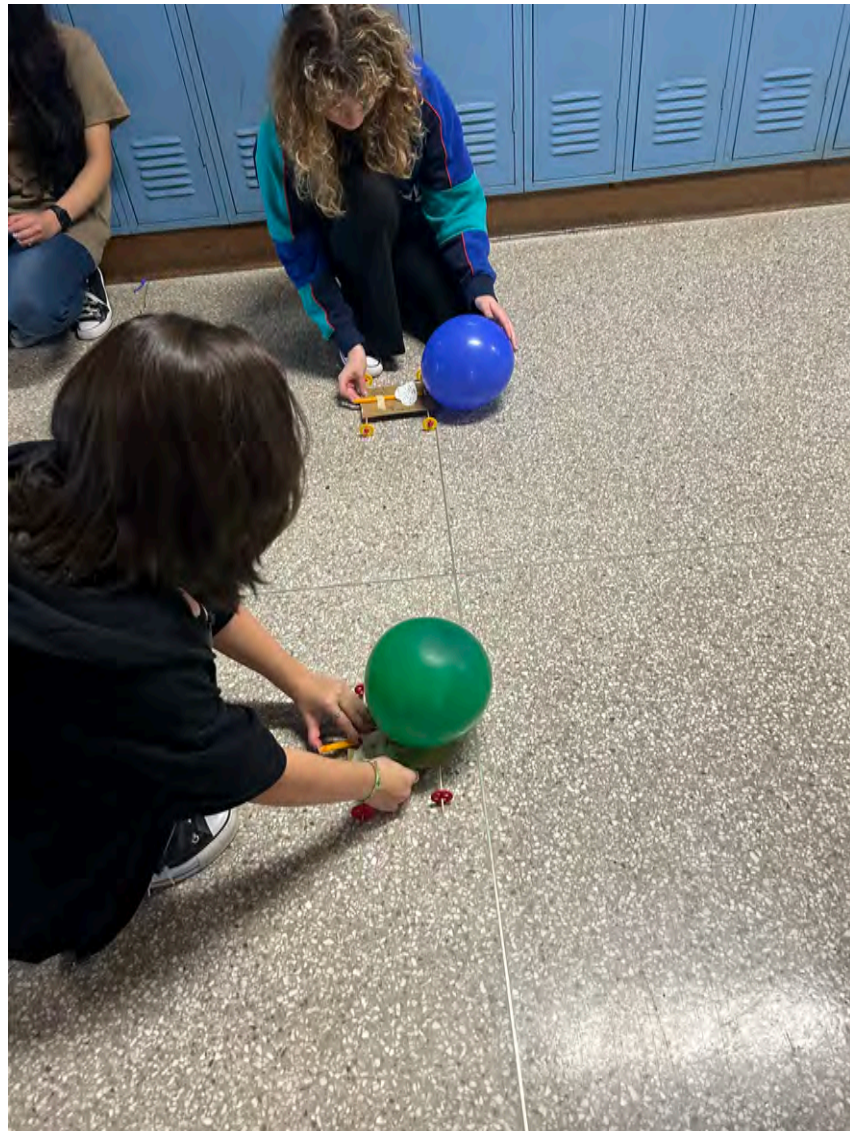


CLUB UPDATES

DEERING MIDDLE SCHOOL West Warwick

Christopoher Baccei, James Owen
By Deering SMILE Club

We started this SMILE year off with a blast with our cotton ball launcher and engineering pictionary activities. To refresh our memory on what SMILE is all about we played pictionary using different words and ideas of what an engineer was. Although, looking at everyone's drawings, it was clear this was not an art club! We then created cotton ball launchers and did several tests to see ways we could improve the distance of the cotton balls. We learned all about potential and kinetic energy from the elastic band used in this project. My personal favorite project was the balloon powered cars where we were given limited materials to create a car that could move when you let a balloon go. We judged the cars on distance and speed. We also did an activity called fizzy nano where we figured out how materials can change because of their surface area. All of the things we learned from these experiments got us excited for family science night! We all split off into several groups to better explain these experiments to our friends and family. Looking at all the poster boards and ideas, it was obvious that everyone was enthusiastic about presenting. Some groups even made their posters light up! With all of the fun learning experiences we had, I can't wait to see what projects we do next.

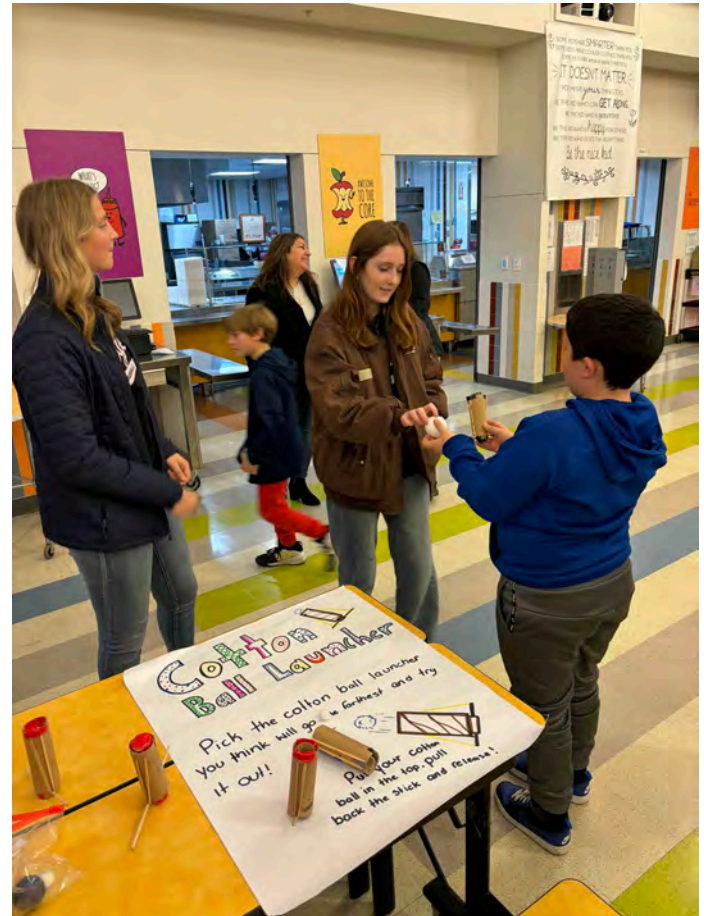


CLUB UPDATES

ROGERS HIGH SCHOOL Newport

Elizabeth Letourneau, Brooke Anderson
By Rogers SMILE Club

SMILE Club at Rogers High School in Newport has been really fun so far this year! We started the year off with the Fizzy Nano Challenge to see if changing the surface area with Alka-Seltzer tablets affected how quickly they react in water to dissolve. Next we made Cotton Ball Launchers with rubber-bands and toilet paper rolls. This was a fun challenge as we competed to see who could launch their object the farthest. Our first field trip was to East Farm where we learned about many of the research URI students are doing with plant and insect interactions. The best part of all was picking and bringing home several pounds of apples. The students in need at Rogers greatly benefited from the apples we brought back (and we got to eat some, too). The first Student Activities Fair was held this year at the end of September, which brought in several new members so our club has doubled in size! The new members have brought some great ideas and we were able to have 10 different groups build balloon cars in the next challenge. The cars each group made were very creative and different, but in the end, the simplest design worked the best. Our week before Thanksgiving was packed full of excitement as we went to the Roger Williams Park Zoo with Thompson Middle School and then had a very successful Family Science Night with all the Newport schools. We plan to finish the maze building challenge next week and then we are off for winter break. SMILE Club at Rogers High School has been an adventure so far this year and we are ready for the next challenges that await!



CLUB UPDATES

CENTRAL FALLS HIGH SCHOOL Central Falls

Charlie Fisher
By Central Falls SMILE Club

This year has been an incredibly exciting year for the Central Falls SMILE club. Our club has doubled in size, and the 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." In addition to adding many new members, we have also added a new teacher to help support the club, Mr. Jeff Gilman! Gilman stated that he can't wait to get to know this amazing group of students, and participate in all the incredible activities SMILE has in store.

With this new energy, we have been able to dive head first 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, the cotton ball launcher and balloon cars were huge hits. Students loved getting to be hands on with the activities, and learn more about the engineering design process while having fun.



Our big event of the year, without a doubt, was our trip to Block Island. Thanks to the generosity of SMILE, we were able to travel to Block Island for an overnight trip, where we learned so much about the ecosystem and environment of Block Island. In partnership with the Block Island Maritime Institute, our students had a chance to go kayaking, hike around the island, catch and count small marine creatures, observe a seal colony, and understand how humans impact the environment. This was an incredibly memorable experience for our students, and we are eager to have the chance to go back!

SUMMER TEACHERS WORKSHOP

August 2023



The SMILE Program's Professional Development Summer Workshop for teachers took place, in person, on August 15th, 2023 at the University of Rhode Island. At the August workshop, all teachers were given lists of field trips sponsored by Dr. Evan Preissers 'NSF grant. SMILE's Claudia Hodderson, Elementary Coordinator, Jo Ann Basel, Middle School Coordinator, Eddie Perez, High School Coordinator, and Carol Englander worked with teachers through a series of fun hands-on science and math activities that covered a wide variety of engineering related topics.

The SMILE elementary teachers had an exciting time doing the engineering activities developed by Claudia Hodderson and presented by Amy Horne and Maria DePalma from WW Horgan Elementary. Activities included the construction of paper chains in a race that involved supply chain issues, learning about the chemistry of ice cream while making it in a plastic bag, forensic details of finger printing, fingerprint patterns and characteristics, paper chromatography of leaf colors, introduction to structural engineering through building geodomes, creating a marble run from cardboard, and designing and building a mechanical hand that opens and closes.

The Middle School teachers learned to develop teamwork, problem solving, and communications through a variety of STEM activities that they will present to their weekly club meetings. These activities include making tetrahedral kites, mentos fountains, and spool racers. Through these activities, students will learn about the scientific method, kinetic and potential energy, testing variables, and more. The teachers were very excited about the upcoming curriculum and, as always, their expertise will only enhance what we have provided.

The High School workshop was led by Eddie Perez, a 4th year computer engineering student at URI. He developed and presented a variety of engineering activities for the high school SMILE teachers. The activities included constructing a cotton ball launcher to review concepts regarding potential and kinetic energies, building a balloon powered car, learning about nanotechnology by dropping alka-seltzer tablets into water, observing how the size of the tablet affects the respective reaction with the water, and learning more about biomedical engineering and the engineering design process principles. They did this by creating a surgical device using the materials provided, and testing their device by playing a makeshift "surgery" game where they had to grasp small objects from a container without knocking over nearby dominos. Other activities included learning about encoding systems, barcodes and encryption, algorithm design, and using algorithms for sorting

Teachers did all the activities, shared their ideas about the new curriculum and were excited to bring these activities back to their students. They were given bins of materials to bring back to their clubs that were challenging, thought provoking, and fun.

WINTER TEACHER WORKSHOP January 2024

WINTER TEACHER SMILE teachers from across Rhode Island came to the University of Rhode Island to attend the annual Teachers' Workshop on January 10th. It was packed with learning and planning as teachers prepared for the Elementary Ecology field day the Middle School Engineering Challenge, and the High School Engineering Challenge. The Elementary session theme was presented by SMILE Elementary Curriculum Coordinator and Ecology Field Day Co-coordinator Brenda Dillmann and focused on the theme of Abiotic and Biotic Factors. The teachers investigated food webs, making inferences, biotic vs. abiotic, habitat and Vernal pools, pH, amphibian life cycles, population quadrat studies, macroinvertebrates, and measuring temperature. The Middle School session was presented by Jo Ann Basel, Middle School curriculum coordinator, Ecology Field Day Co-coordinator and SMILE director. The teachers learned about magnetism, hydraulics, cranes, friction, magnetically levitated trains. The High School session was presented by Eddie Perez, URI 4th year computer engineering student and High School curriculum coordinator, and SMILE executive director Carol Englander. Teachers learned about insulation materials, swamp coolers, heat transfer by radiation and convection, buoyancy and supercooling. Teacher investigated potential field trips to sites of plant and herbivore interactions as part of the Dr. Evan Preisser NSF grant of which SMILE is the Educational Outreach partner. They started to plan stewardship projects. Teachers left with additional equipment to bring to their clubs and a sense of excitement about upcoming Annual events.



FAMILY SCIENCE NIGHT

Newport



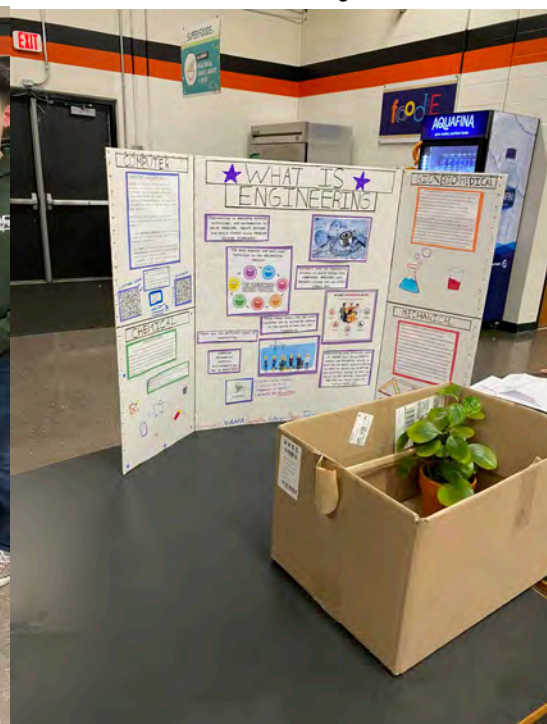
In November and December SMILE clubs from across the state participated in district wide Family Science Nights. SMILE students look forward to this community event that brings together students and their families, friends, teachers, school administrators, and community leaders for an evening of interactive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

Thank you to the National Institute for Undersea Vehicle Technology (NIUVT) at both URI and UConn, and the National Defense Education Program (NDEP) under the leadership of Professor Valerie Maier Sperdelozzi, for participating in SMILE Family Science Nights as part of their K-12 Educational Outreach.

West Warwick

West Warwick

South Kingstown



FAMILY SCIENCE NIGHT

Central Falls



West Warwick



Woonsocket



South Kingstown



CENTRAL FALLS

Ella Risk Elementary School

Shena Tremblay
Kristin Debalsi

Calcutt Middle School

Kate Tolman
Kelly Sierra

Central Falls High School

Charles Fisher

NEWPORT

Claiborne Pell Elementary School

Kevin Bolano
Jeannine Walsh

Thompson Middle School

Candace Lewia

Rogers High School

Elizabeth Letourneau
Brooke Anderson

SOUTH KINGSTOWN

Peacedale Elementary

Jen Defeo
Susan Carr

Broadrock Middle School

Valerie Light
Anna Stuart-Vieira

S.Kingstown High School

Reed Fraser
Michael Lobdell

WESTERLY

Westerly Middle School

Carolyn Michaud
Robert Brennan

Westerly High School

Lesley Fastovsky

WEST WARWICK

Horgan Elementary School

Maria DePalma
Amy Horne

Deering Middle School

James Owen
Christopher Baccei

West Warwick High School

James Owen
Christopher Baccei

WOONSOCKET

Globe Elementary

Brittney Pysczynski
Mckenzie Brissette

Coleman Elementary

EMILY CARTIER
DANIELLE GRANATA

Citizens Elementary

Amanda Ward
Michaela Nunes

Woonsocket Middle School (2 clubs)

Jenn Hardy
Michelle Morin
Ian Chernasky
Michaela Gormley

Woonsocket High School

Brigette Hernandez
Ethel Locke

PARTNERSHIPS

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:

AAUW

Anonymous

Amgen Foundation

American Honda Foundation

Arnold Lumber

The Champlin Foundations

Connecting For
Children and Families

Constellation, an Exelon company

Cox Charities Trust

Dominion

Dassault Systemes

The Gerald Claude Kirby Trust

Graphic Expressions

Holiday Inn South Kingstown

June Rockwell Levy Foundation

KVH

Nordson Corporation Foundation

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

van Beuren Charitable Foundation

Verizon Foundation

YMCA of Greater
Providence

Central Falls School Department

Newport 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

SMILE STAFF

Carol Englander
Director

Brenda Dillmann
Curriculum
Specialist

Jo Ann Basel
Assistant Director

Cheryl Swartz
Accountant

Bailey Krause
Publications Coordinator

Eddie Perez
HS Coordinator

URI RESOURCE FACULTY

Ellen Reynolds,
Vice President for
Student Affairs

ENGINEERING

Manbir Sodhi

George Tsiatis

COLLEGE OF ENVIRONMENT & LIFE SCIENCES

Larry Englander
CELS, Plant
Sciences ret.
Evan Preisser
CELS-BIO
Tolani
Olagundoye
CELS NRS

BOARD OF DIRECTORS

John Peterson, President
Bill Koonis Vice President
Ruth Jarrett, Treasurer
Fran Alexacos, Secretary
Malcolm Spaulding, Board Member
John Cooney Jr., Board Member
Glenda Kirby, Board Member
Zachary Pimentel, Board Member
Augusto Gomes, Board Member
Michaela Cashman Board Member

The SMILE Program

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.