

Family Science Nights

SMILE Communities Get Involved

Watershed Stewardship Theme

SMILE members from across the state look forward to Family Science Night, a community event that brings together students and their families, friends, teachers, school administrators, and community leaders for an evening of science and math interactive activities and friendship that the whole family can participate in, learn from, and enjoy. Each evening promotes community building as families get to greet old friends and make new ones while enjoying a wonderful ethnic potluck dinner and participating in different learning activities that all the SMILE students teach.



The SMILE students engage their parents and family members as learners. Groups of parents and siblings rotate through the stations as the SMILE students present and teach hands-on activities. Because parents are rotating, by the end of the activity, students often have presented five or more times. For many students, this is their first experience at teaching, and by the end of the evening after many presentations to strangers

they are definitely enjoying their teaching role, and have built up lots of confidence and self-esteem.

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Amgen Opens Its Doors to SMILE High School Students

A look inside at a growing industry

On November 9th, all SMILE high school students got to go on a very unique field trip to Amgen, a company that discovers, develops, manufactures, and delivers innovative human therapeutics. In their West Greenwich facility, they mainly manufacture Enbrel, which is used to relieve the symptoms of certain autoimmune disorders, including rheumatoid arthritis. As the students learned during their four hour stay, there is nothing casual about developing human therapeutics. In a facility that employs approximately 900 people, everyone plays a specific role to ensure that the highest quality product is produced 24 hours a day, 7 days a week.

When the students from six SMILE high schools from Central Falls, Shea (Pawtucket), West Warwick, Coventry, South

Kingstown, and North Kingstown arrived behind the gates of Amgen, they were greeted by many friendly and knowledgeable Amgen employees, including industrial, chemical, and biomedical engineers, drawing managers, safety specialists, microbiologists, and project managers. The 100 students were broken into three smaller groups. The first got to tour the manufacturing facility, where they saw first-hand where the cell culturing and protein purification takes place, which is a very large scale process.

Of course, all students had to cover up before the tour with safety glasses, lab coats, shoe covers, and hair nets. Cleanliness and safety are taken very seriously at Amgen. The second

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Family Science Nights

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Parents are very proud of their child's accomplishments. 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 and math and teaching.

SMILE students offered their guests a variety of interactive activities

As part of SMILE's Watershed Stewardship theme, students presented a wide variety of hands-on activities to their guests. Students used a model of a watershed to show what a watershed looks like and to demonstrate point and non-point source pollution. There were some creatively constructed models! All SMILE students have been going out into the field to a watershed site near their schools, collecting water quality data, identifying and taking macroinvertebrate counts, as well as photographing and later identifying plants and animals around their watershed sites. Students taught participants how to identify these plants and animals using different sources. Participants also learned the importance of conserving water, seeing that less than 1% is suitable for drinking. Students used apples and other methods to demonstrate this point. As usual, students did a superb job of teaching the hundreds of people who attended these events.

In each school district, SMILE staff presented College Awareness and Planning, including requirements and financial aid. This year, The SMILE Roll Call of Success, with photos of our SMILE high school and college graduates, and the colleges they attend, was popular. We even had a few SMILE alumni attend the events in several school districts! Alejandro Alvarez, a 2002 high school graduate and SMILE alumnus, spoke to participants about the impact SMILE had on his life and made them aware of the Talent Development program at URI – "I would have never gone to college had it not been for SMILE making me aware of the Talent Development program."

Family Science Night in each community is characterized by warm hospitality, a renewed sense of community, and a common purpose: to promote these children to continue to do well in school, stay in SMILE, and graduate from high school well prepared to enter college to pursue the career of their choice – and having the support of families helps this happen!



Students used a model to show what a watershed looks like and to demonstrate point and non-point source pollution. There were some creatively constructed models!



Energy Sources Matching Game



Family Science Night is an evening where families begin to bond into a SMILE community and students impress everyone with their knowledge and enthusiasm for science and math.



Watershed Stewardship



After a field study, students identified the flora found in the watershed

Showing the diverse fauna found at the students' watershed site



Water Consumption. Students showed the average use of gallons of water used per person per day



Presenting models of different kinds of bodies of water



Demonstrating the implications of water pH changes on living things



Wind Turbines. Measuring speed of the blades and determining the speed of the wind

Professional Development

SMILE Teachers' Workshop

July 20th and September 17th, 2011



Katie Schortman gave teachers an overview of watersheds and how they tie into our everyday lives.



Teachers created watershed models from scrap materials.

The SMILE Program's Professional Development Summer Workshop for teachers took place at the University of Rhode Island. The theme for the July workshop was streamlining the "Nuts and Bolts" of SMILE clubs almost all of which is now online at www.uri.edu/smile including the SMILE planning calendars, membership/health forms, logs/accountability, number of club meetings, tracking expenses now that reimbursement is through URI SMILE, newsletter article due dates, Family Science and Math Night activities, and the current curriculum. Building cohesive club peer groups to promote continued participation is very important to the "pipeline" aspect of SMILE. Students in SMILE for three or more years have a much greater chance of attending college according to data analyzed by the University of RI's Office of Institutional Research. Icebreaker activities, now on our webpage, were modeled and activities, including report card celebrations, student roles in club meetings, club event timelines, and high school four year plan worksheets, were introduced and discussed.

Elementary, middle and high school SMILE teachers had club, level, and district meetings in which they shared ideas, developed strategies for the start of their clubs, planned activities and field trips, and discussed Family Science Night arrangements. All levels of SMILE will continue healthy snacks in their clubs, mainly fresh fruit and cold water.

The September workshop theme was Watershed Stewardship curriculum training. Guest speaker Gina DeMarco, director of the Northern Rhode Island Conservation District, gave teachers an overview of watersheds and how they tie into our everyday lives. Teachers gained tremendous knowledge about all aspects of watersheds. Ultimately, she concludes, "Clean, healthy water affects everyone and is everyone's responsibility." A Watershed Model Training with the Enviroscope Model was presented to all three levels of SMILE teachers by Lisa Hollister, Kathryn Schortmann, and Vanessa Venturini from URI's Cooperative Extension. Teachers received The Watershed Stewardship Project Curriculum and participated in hands-on curricular activities and computer plant identification websites. The last activity, "Science as Inquiry" was presented by Cathy Valentino, SMILE Curriculum advisor, world-wide science speaker, and Houghton Mifflin science author. Teachers worked with and were given materials to bring back to their clubs that were challenging, thought provoking, and fun.

The 18th year of SMILE in Rhode Island has gotten off to another great start with enthusiastic teachers, new materials, ideas and activities.

South Kingstown Middle School Club

Gina Haberlin
Melissa Dushi

Although it's only November, we have established an exciting club that consists of a great bunch of kids. Each of them brings something unique to the club, but we all believe that learning and laughing together in SMILE is fun! Here are some words from our members:



Here are some of our SMILE students who attended the Alton Jones field trip in October.

The best part of SMILE is:

“...the SMILE Family Night because we get to show our parents what we know.”~Jacob

“...the interactive experiments.”

“...learning new things in the company of friends.”~Hunter

“...how everyone gets together and combines their minds to work on something that everyone around the world is interested in.”~Kate

“...fun field trips.”~Maleah

I enjoy SMILE because:

...let's you have time with your friends that you don't see during the week ~Callan

...it has a brand new challenge every time I come ~Trevor

...I learn something new ~Chris

...science and math are my favorite subjects in school and SMILE just makes them better since I get to do them with friends ~Kylie

...I of the fun activities and field trips ~Kailey

Clubs

West Warwick Elementary School

Amy Horne
Gerri Giroux

The West Warwick SMILERS enjoyed a fun filled Family Science Night with their family and friends. We even had a former SMILE student come to visit and talk with us from New York City where he is working and studying theater arts. Although he did not choose a career in science or math, he explained that his experiences in SMILE helped him to achieve his dream of the theater.

We have been learning much about our earth's limited amount of farm-able land and drinkable water. Using an apple as a model of the earth, we cut up the parts of the "earth" to demonstrate how much of the earth is usable for farming, for fishing, and for providing drinkable water. This knowledge makes us want to preserve what we have and prevent pollution and waste of these precious resources.



In order to see how well we conserved water, we did an experiment called "Down the Drain" and measured the amount of water that goes down the drain every time we get a drink at the school's water fountain. More goes down the drain than in our mouths!!! Students came up with a possible solution- paper cups at the fountain. Our families participated by tracking the daily use of water in their homes- baths, toilets, dishes, tooth brushing, cooking. We found that we used an average of 275 gallons of water per day per family. That's a lot of water down the drain!!

Using a topographical map of a water shed area we were able to trace pollution from a variety of sources including factories, farms, lawns, and cars. As we continue in our SMILE classes we will be tracking the condition of our own water shed area and testing the waters behind our school.

Central Falls Middle School

Karen Fiore
Katie Vespia

This year, the Calcutt Middle School SMILE program is off to a great start!

Club members were introduced to the new and exciting topic of watersheds. The students dove right in, not only researching the topic thoroughly, but also brainstorming ideas to help their community with pollution and how to conserve water. The SMILE students are looking very forward to testing the water in our watershed reservoir, documenting the life forms found, and eventually creating our own watershed model.

We look forward to have an amazing year with our incredible SMILE club members.



West Warwick High School Nelson DaSilva Eugene Gallo

Ahhh...the smell of sharpened pencils, the sound of new sneakers, and the hustle and bustle of a new school year has taken over in the halls of West Warwick High School! Despite the loss of many SMILE veterans the club at West Warwick is energetic and enthusiastic about engaging in this year's theme surrounding watersheds. To kick off the year students elected club leaders (Lisa Li, Danielle Woods, and Regina Hieap), all of which have helped to spear-head an attack on preparation for Family Science Night on October 26th. Our club is looking to present the themes of: non-point source pollution, point source pollution, conservation of watersheds, and invasive species all in a localized tone. It is a tight schedule that has to be maintained, but club members and instructors are confident that Family Science Night will go off without a hitch.

On October 2nd some club members (Matthew Villanueva, Jenna O'Connor, and Celina Carrerio) attended the SMILE field trip to Alton Jones. They all enjoyed the opportunity to canoe and learn more about watershed areas. It was a great chance to connect with nature and other clubs from around the state; we at West Warwick would like to extend a sincere thank you to SMILE leadership for organizing this educational and fun time!

Also started in West Warwick is the Watershed Stewardship Project. In late September SMILE students explored (for the first time together) the Pawtuxet River watershed. We recorded different plant and animal species, tested the water, and had some laughs as we urban dwellers braved mother nature in the name of science and learning! We look forward to discovering what species we discovered, and to venture out again during the different seasons for comparisons.

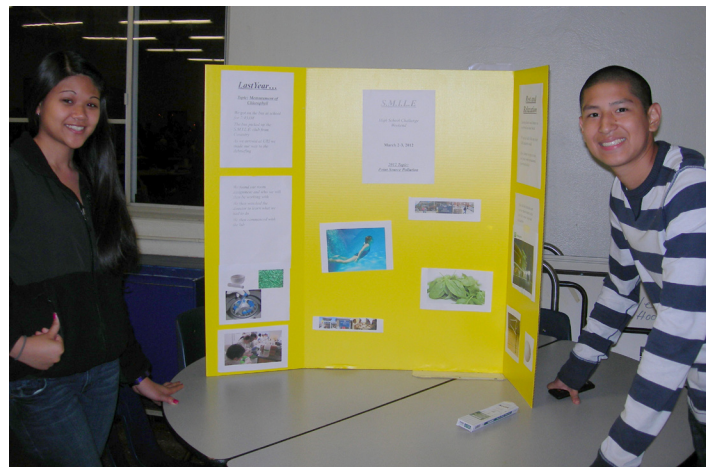
Suffice it to say, things are flowing well (pardon the pun) in West Warwick. Watersheds are a topic that connect to every human being and we embrace the chance to become informed. One question looms over us...what will challenge weekend bring?



Sources of non-point pollution

Conservation of watersheds

Invasive species



Clubs

Pawtucket Shea High School Ann Marie LaRoche Meg Battersby

By Rachel Harper

The SMILE program has shaped the mind of many Shea High School students. Many of our SMILE students are very dedicated to the program on a weekly basis. Currently, we are learning about watersheds and why watersheds are important. Watersheds are ridges of land that divide two drainage areas, usually rivers. We studied the characteristics of a watershed and how important it is to keep our water clean. We attended a trip to a watershed at Alton Jones in West Greenwich. While on the trip we did many activities in order to get a better understanding of the effect of pollution and keeping our water clean.

One of the most important things we did that day was the demonstration of what humans do to pollute the land around a watershed. We learned the different types of pollution and how those pollutants affect our ecosystem. After seeing the demonstration a number of times we got a better understanding of what we can do as high school students to help keep our land, and most importantly our watersheds clean of pollutants. The Shea High School students are ready to have our voices heard on cleaning up our land! We are ready to lend a helping hand!



"I like being in SMILE because SMILE has become a place where I can express my desire to do something involving Science and Math as I prepare to enter college. SMILE creates a place where I can be myself and enjoy the community around me!"

Amgen Fieldtrip

From page 1

group got to learn more about the Environmental, Health and Safety (EHS) Department from specialists and employees who work there. Since SMILE students are studying watershed stewardship this year, they got to learn a bit about how a large industry like Amgen handles this environmental responsibility. The third rotation was an engineering/teamwork challenge that the company even uses with their own employees. Students were put into groups of 3 or 4 to construct the tallest spaghetti structure possible in ten minutes. All groups were given the same materials: a set number of spaghetti, one piece of thread, a certain amount of masking tape, and one marshmallow. The catch was that the structure had to hold the marshmallow at the top. Students were incredibly innovative and worked together marvelously.

Jen Gangi and Narinder Sharma were the two Amgen International Network (AIN) community outreach leaders this year, and we thank them and all of the other employees who played a role very much for giving our students this experience. As usual, SMILE students were treated like kings and queens at Amgen as they learned more about a growing industry and the many career paths Amgen employees have taken.

Kick-off the Year Field Trip

SMILE Students from around Rhode Island Meet Each Other and Get Up Close and Personal with Watersheds

The SMILE theme this year is Watershed Stewardship. Students are learning about a watershed in their community, including flora and fauna, native and invasive species, water quality, point and non-point source pollution, and wetlands. On October 2nd, elementary, middle, and high school students took a kick-off-the-year field trip to meet each other and get up close and personal with watersheds.

Elementary students took traveled to the Kettle Pond Visitors Center, a US Fish and Wildlife Service National Wildlife Refuge in Charlestown. Staff from the Center presented students with hands-on activities, and they visited a watershed site on the refuge. In addition, elementary students from Central Falls, West Warwick, and Woonsocket got to meet each other and share this unique opportunity with each other. Right away, students began to realize the value of learning new knowledge and being in a peer group who values the same thing.



Middle and high school SMILE students went to the Nettie Marie Nature Preserve at URI's Alton Jones Campus in West Greenwich, the site of SMILE's annual Elementary Outdoor Science Adventure. We met at a beautiful site right on Lake Eisenhower where the students rotated around five stations. For many students, it was their first experience canoeing; this seemed to be the most popular station. The other stations included a wild plant tour with Karen Asher and Frances Topping, members of the Rhode Island Wild Plant Society (RIWPS); a geology hike with Carol and Larry Englander; a dissolved oxygen tutorial with Amanda Ziegler, Danielle Fournier, and Danielle Birmingham from URI's Watershed Watch; and an Enviroscope watershed model tutorial run by Brenda Dillmann and Jo Ann Basel, the two South Kingstown High School SMILE teacher leaders. The middle and high school students had a great experience. It was a fun way to kick off the SMILE year.



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Applying to college

The SMILE website has created a list of links to help students and their families easily navigate through the process of applying to college.

Please visit SMILE Web Site
uri.edu/smile

Link: Student Resources

College Preparation Information
College Planning Tools
Financial Aid and Scholarships



URI Application deadlines for Fall 2012

Early Action / Merit Scholarship: December 1, 2011 (received by)

Nursing and Pharmacy majors are encouraged to apply by December 1st

Freshman Application: February 1, 2012

Talent Development: December 15, 2011

Have you taken your SAT Test ?

Most students take the SAT during their junior or senior year in high school in the spring of their junior year and in the fall of their senior year.

Upcoming SAT Tests

December 3, 2011
January 28, 2012
March 10, 2012
May 5, 2012
June 2, 2012

SMILE Newsletter

University of Rhode Island
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Kingston, RI 02881

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Carol Englander, Editor
Maria-Gabriela Lizano, Publications Coordinator
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SMILE (Science and Math Investigative Learning Experiences) is an enrichment program for educationally disadvantaged students in grades 4-12 in four Rhode Island communities. SMILE's goal is to provide group activities for these students in math, science and computers. Generous gifts by participating donors make this program possible. The University of Rhode Island SMILE Update is published four times a year. We encourage your comments and ideas. Please share this newsletter with others who might be interested in SMILE.

CENTRAL FALLS

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Rosanne Gargano

Calcutt Middle School

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Central Falls High School

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URI Bruce Wallace Amgen Grant

URI College of Engineering

URI Transportation Center

Central Falls School Department
North Kingstown School Department
Pawtucket School Department
South Kingstown School Department
West Warwick School Department
Woonsocket School Department

Correction SMILE Newsletter May 2011



Sean Eden
South Kingstown High School Graduate
Drexel University, Pre-med



Kevin Mathews
South Kingstown High School Graduate
URI Electrical Engineering

Calendar

Weekly SMILE Clubs Meetings

Scientific and Career Exploration Field trips

Special Annual Events

High School
Challenge Weekend
March 2-3, 2012
URI Kingston Campus

Middle School
Engineering Challenge Weekend
March 30-31, 2012
URI Kingston Campus

Elementary School
Outdoor Science Adventure
April 27-29, 2012
URI Alton Jones Campus

Teachers' Professional Development Workshops

December 9, 2011	May 11, 2012	July 17-19, 2012
University of Rhode Island	University of Rhode Island	University of Rhode Island
Math and Science Curriculum.	Math and Science Curriculum.	Math and science Curriculum
Special events planning	End of year evaluation	Planning for the year

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