

The SMILE Program
University of Rhode Island
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FAMILY SCIENCE NIGHT



Students present hands-on activities from their Fall 2015 Ocean Curriculum



In October and November SMILE members 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. These activities are designed for the whole family to participate in, learn from, and enjoy. 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.

At Family Science Night SMILE students engage their family and community members as learners. Groups of parents and siblings rotate through a series of stations as the SMILE students present and teach hands-on activities. By the end of the evening, students have presented five or more times to their family and community members. This teaching experience helps build students confidence and self-esteem.

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. It is an evening where families begin to bond into a SMILE community and students impress everyone with their enthusiasm for science, math and teaching.

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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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Calendar

Weekly SMILE Club Meetings
Scientific and Career Exploration Field Trips

Family Science Nights
November 2015

Special Annual Events
High School
Engineering Challenge Weekend
April 29-30, 2016
URI Kingston Campus

Middle School
Engineering Challenge Weekend
March 11-12, 2016
URI Kingston Campus

Elementary School
5th Grade Outdoor Science Adventure
April 8-10, 2016
URI Alton Jones Campus
4th Grade Ecology Event
April 15, 2016
URI Kingston Campus

Teachers' Professional Development Workshops

August 19-20, 2015	Dec 2, 2015	May 26, 2016
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

This Fall, SMILE students participated in an Ocean Curriculum. Through this curriculum students learned about marine environments and conducted a series of hands-on activities that demonstrated how oceans influence us and how we influence the oceans.



Students from Calcutt Elementary School in Central Falls demonstrated the limited amount of freshwater and the immense amount of saltwater available on our planet.



Students from Curtis Corner Middle School in South Kingstown taught their community about the importance of plankton in our oceans.



Above: SMILE students presented information on the negative impact that pollution has on our environment. Participants inspected real albatross boluses and observed plastics that the birds ate because that is what is floating around in the ocean.

Right: SMILE students demonstrated the ocean's salinity and density in comparison to fresh water by challenging participants to float a golf ball.



This year's FSN focus was on educating the community on the importance of our Oceans.

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
- Anonymous Donors
- Arnold Lumber
- Connecting For Children and Families
- Constellation, an Exelon company
- Dominion
- Eaton Aerospace Foundation
- Graphic Expressions
- URI Graduate Students Association
- Holiday Inn South Kingstown
- Lloyd G. Balfour Foundation, Bank of America, N.A Trustee
- Nordson Corporation Foundation
- NOAA B-Wet Program
- Pawtucket COZ-21st Century
- Pfizer
- Ramsey McCluskey Family Foundation
- Rhode Island Foundation
- Schneider Electric
- Steere Engineering
- Toray Plastics, America, Inc.
- University of Rhode Island
- URI Transportation Center
- YMCA of Greater Providence
- Central Falls School Department
- Newport School Department
- South Kingstown School Department
- Pawtucket School Department
- West Warwick School Department
- Woonsocket School Department

We would also like to thank our Individual Supporters, who are vital in allowing The SMILE Program to continue its mission

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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.

The SMILE Program

SMILE High School Seniors



Keep your grades up

Take SAT Exam

Apply to colleges



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 scholarships.

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 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, 2016 and Feb 15, 2016 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.



Activities presented at this year’s Family Science Night included: ocean salinity; changes in ocean pH; ocean acidification and its effect on plankton; oceans affect on world climates; global ocean currents; indicators to detect CO2 and pH changes; photosynthesis by cabomba plants; biology and behavior of local marine life; and hurricanes (tracking and preparation).



Harris Elementary School, Woonsocket

Heather Neil, Mark Lebrun
By Harris SMILE Club

SMILE makes us smile because it teaches us about new things that we had never learned before. This year through research, experiments and activities we've learned a lot about oceans that we never knew. We had a ton of fun building houses to withstand the wind of a hurricane. We experimented all different ways with Mr. Lebrun's leaf blower to try to replicate hurricanes of different strengths. After seeing first-hand how destructive a hurricane can be we decided to create a storm survival kit to raffle off at Family Science Night.

Another thing we really enjoyed was going Kayaking. We got to see and hold tons of hermit crabs while exploring on the rocks and we were even scared by a fake alligator that floats in the water to scare away the birds. We learned that the ocean was not the alligator's natural habitat. We also were surprised to find snails while exploring the beach. We all love that we go on field trips to make connections to what we are learning. The two things we look forward to most are the URI Field Trip and the Alton Jones camping weekend. We make friends from all over Rhode Island while we are there. SMILE is a fun learning experience that keeps us smiling!



Goff Middle School, Pawtucket
Ann Marie Laroche, Jennifer Blanchard
By Jasmine Roque, Rachel Paquin, Trinity Goncalves, and Eva'diane Furtado

I like SMILE because of how fun it is. The ideas and topics are so fun. Each curriculum theme has its own fun activities, it has awesome projects and I've learned a lot about the ocean, plants and animals for this theme. This after school program is really cool, fun and helpful. -Jasmine Roque

I love SMILE! My favorite memory of SMILE is either when we went on the day cruise with Save the Bay this year or last year when we made bird houses! I am also very happy because thanks to SMILE I have met so many new people who have changed my life for the better. Finally, being in SMILE makes me want to smile because I can do something once a week that is fun and educational. -Rachel Paquin

My favorite thing that has happened in SMILE was Family Science Night. I was able to meet other SMILE members' families. Family Science Night made me feel like everyone in the room was family. -Trinity Goncalves

My favorite part of this year in SMILE was Family Science Night. All parents came, and we were able to meet and show families what we have been doing in SMILE. -Eva'diane Furtado



Goff SMILE club students learn about ocean pollution during a bolus dissection.

South Kingstown High School

Jeffrey Johnson, Christina Dube
By Gabriela Nieves

On November 29, 2015 the members of the South Kingstown High School SMILE Club organized a Global Climate Change March hosted by the Unitarian Universalist Congregation of South County. We purposely chose November 29th as our march date because it was just before the beginning of the international conference, COP21, which took place in Paris, France to discuss a treaty agreement on climate change. We first promoted this march at our SMILE Family Science Night. Then we posted information sheets in our town and school. Getting closer to the date we made posters that highlighted the consequences of not addressing climate change. The day of the march we gathered at the Unitarian Universalist Congregation of South County where we listened to inspirational speeches and songs including one speech from our very own high school SMILE member Jessica Ivon. After we walked from the Unitarian Universalist Congregation of South County to Dale Carlia Corner holding our posters and chanting songs of climate justice. The crowd gathered at Dale Carlia Corner trying to get spectators to think about climate change and justice. In conclusion, we plan to continue our efforts to increase awareness surrounding this issue and encourage everyone to actively participate in the decision making process.



Woonsocket Middle School at Hamlet
Paulette Metivier, Denise Fontaine
By Hamlet SMILE Club

I enjoyed learning about the ocean because I like the ocean and I like the animals that live there. -Jason
I enjoyed collecting samples from Mount Hope Bay and testing the levels of different things in the water. -Joyce
I learned that about 70% of the world is water. -Austin I learned that more than 70% of the Earth is ocean. -Natalia
We learned about ocean currents. -Nomar The most exciting thing I learned about was the different types of clownfish. -Brigitte
We learned a lot about salinity, convection currents and pollution and how they affect marine life. -James
My favorite thing that we did in SMILE was going to the Mount Hope Bay because it was a fun experience. -Joseph
I like all of the fun experiments we do. -Amaya
I learned about ocean conservation. -Melissa
I like Family Science Night because we got to show the parents all the things we do in SMILE. -Charles
I learned that the ocean covers 70% of the planet. -Janeida
I enjoyed making all the projects for Family Science Night. -Abigail
We go to the high school and see what other SMILE students learn. -Madison
I enjoyed the field trip because we learned about ocean conservation. -Marie
I learned that the ocean is an important place. -Jasson



Woonsocket Middle School SMILE Students visit Roger Williams University's Marine Biology Lab to work with college students in the lab and learn about the food chain in the ocean.

Horgan Elementary School, West Warwick

Maria Depalma, Amy Horne
By Horgan SMILE Club



Horgan SMILE club students become young oceanographers and marine biologists while exploring Narragansett Bay

This first half of our SMILE year has flown by! We have learned so much about our planet, especially our oceans. We began by learning how little of Earth’s water is available to us as clean, drinkable, fresh water. Over 97% of the water on Earth is salt water in our oceans. We learned ways we can conserve fresh water so it is not wasted. The water on our planet also helps to regulate our climate and allows humans to make Earth their home.

We spent some of our time learning all about hurricanes. We talked about Hurricane Sandy and saw lots of pictures of the aftermath in Westerly, RI. The area had a lot of damage from the storm, but has since come back to be better and safer than ever. People learn more with each storm and make improvements. We did a fun experiment where we built houses from paper, tape and glue, then tried to blow them apart with a leaf-blower. The leaf-blower represented a strong hurricane and showed how careful construction can save homes in a severe storm.



We also went on a super field trip on a boat from Save the Bay. It was a chilly day on the water, but we learned so much about zooplankton, salinity, dissolved oxygen and overall water quality. Some of us had never been on a boat before. It went really fast and we had a lot of fun! Here are some comments from some of our club members:

“I learned the blue crab is as a hard pincher!”

“One of my favorite parts was when we pulled the net out of the water and saw the different types of fish and crabs there were in the water!”

“I learned there are two different types of plankton-zooplankton (they’re so cool) and phytoplankton. Blue crabs snap at your fingers and grab onto each other!”

“Mantis shrimp can strike five times as fast as you can blink!”

“Blue crabs get aggressive with each other!”

Most recently, our Family Science Night was a huge success with lots of delicious foods from many countries and lots of great science and math exhibits! We did some experiments and showed a slide-show of our Save the Bay field trip. A very popular experiment showed the heat capacity of water by heating balloons over a candle flame, both with and without water inside, until they popped! We loved showing our parents the things we have learned and teaching them some science!

Calcutt Middle School, Central Falls

Karen Cardoza, Molly Macdonald
By Calcutt SMILE Club

SMILE is awesome and we love it! We’ve been learning about oceans and started our year off with a great field trip to Block Island. We took the ferry over to the island and it was the first time on a boat for many of us! Once there we spent time exploring the waters of Great Salt Pond in kayaks and harvested creatures like crabs, sea urchins and jellyfish off the docks. It was a beautiful day and we all had a great time!

During our club meetings we learned a lot about the oceans and we were able to teach our families about them at our Family Science Night in November. Some of our favorite activities were the Kahoot game, in which we used an app to play a game testing our knowledge of oceans. We loved it so much we want more Kahoots! We also really enjoyed a density straw

activity in which we created a column of colored water in a straw based on the density levels of each. We conducted experiments to teach us about ocean acidification using sea shells and vinegar and saw the effects of the CO2 in our breath by blowing into limewater and bromothymol blue to observe changes. We played a fun game using labeled Jenga pieces to learn about the impact of small changes in the ocean on creatures as large as a whale.

We also loved creating models of plankton and testing them out to see which were the best. We look forward to dissecting the albatross boluses and squid and are especially excited to attend the Engineering Challenge Weekend coming up!



Woonsocket High School

Julia Grassini, Ethel Locke
By Kyle Degre and Gabby Bessette



SMILE Clubs curriculum this year is focusing on oceans. We are learning about how pollution has affected our oceans and how this in turn has affected life in the ocean and on land. After we mapped the ratio of land to ocean through an activity of tossing around a world beach ball, we realized how much more water was on the planet than land. Next we learned about salinity. Salinity plays a major role in where creatures can live, such as fresh water, brackish water and salt water. If a creature, such as a fish, has too much salt or not enough it can cause them to die.

On the Save the Bay field trip in Narragansett Bay and Prudence Island we tested the salinity/density of the water, temperature and amount of phytoplankton in the water. This affects what can live in the water, why some

live at the top of the water or deeper in the water. We learned a lot about plankton, their role in the ecosystem and we were even able to catch some and look at them under a microscope.

It was interesting to learn the following. Rubber duckies that were washed off of the side of a boat during a storm were used to track ocean winds and currents which by chance showed the effects of global warming. Carbon dioxide, which can be absorbed into the ocean, can cause it to become very acidic. This was linked to the decay of ocean reefs and of animals with calcium carbonate shells.

We dissected the bolus of an albatross and found a lot of plastic and man-made things that shouldn’t have been there. There was so much plastic in the stomach of some of the baby albatross that they died because it blocked their digestive system, causing dehydration, starvation and malnutrition. This shows just how much pollution affects life on land and in the water. The dissection of the squid the week before gave us the knowledge to identify the corneas and the beaks of the squid found in the bolus.

SMILE WELCOMES NEWPORT

The SMILE Program is pleased to announce the addition of three new clubs in Newport this Fall. With generous financial support from the Rhode Island Foundation, SMILE established clubs at Claiborne Pell Elementary School, Thompson Middle School, and Rogers High School. We are excited about the increase in number of students that SMILE reaches and warmly welcome Newport SMILE teachers and students to the program. We are fortunate to have such dedicated SMILE teachers and are proud to introduce Lori Delemos, Mary Nordby, Candace Lewia, Elizabeth Gibbs, Beth Copeley, and June McGreavy to the SMILE family.

We are very pleased knowing that The SMILE Program has taken off wonderfully in Newport. Six teachers have recruited approximately 60 students (with waiting lists), gone on fieldtrips, and hosted the 1st Newport Family Science Night which was very well attended by parents and family members. Teachers attended two teacher workshop's in August and December where they received new curriculum, materials, and training to deliver the exciting new activities to their students planned for the winter and spring.

PROFESSIONAL DEVELOPMENT

August 2015 Teachers Workshop

The SMILE Program's Professional Development Summer Workshop for teachers took place on August 19th and 20th 2015 at the University of Rhode Island. At the August workshop, teachers were trained and provided materials for the Ocean curriculum theme. SMILE's Heather Hamilton, Carol Englander, and JoAnn Basel worked with teachers through a series of fun hands-on science, engineering, and math activities that covered a wide variety of ocean related topics. Here teachers conducted squid dissections, performed tests to demonstrate salinity, and dissected bolus among other activities. SMILE Curriculum Advisor and internationally renowned educator, Cathy Valentino also presented at the event. Teachers left the workshop with new knowledge, exciting curriculum and a huge box of science supplies for their club's Fall activities.



PROFESSIONAL DEVELOPMENT



December 2015 Teachers Workshop

The SMILE Program's Professional Development Winter Workshop for teachers took place on December 2nd 2015 at the University of Rhode Island. Elementary teachers received materials and activities on abiotic and biotic factors. Middle school teachers prepared for the Engineering Challenge by going over activities with materials that dealt with wind, energy, and wind turbines. High school teachers were engaged in pre-activities that involved flight, the theme for their new Engineering Challenge. All teachers left the workshop with materials and supplies to engage in inquiry-based activities with their students this winter and spring.

