

**AMERICAN CHEMICAL SOCIETY
SOUTH CAROLINA SECTION**



National Chemistry Week Mini-Grant Application Cover Sheet

PROJECT TITLE	Energy- Now and Forever!		
ORGANIZATION NAME	Francis Marion University's American Chemical Society		
CONTACT NAME	Jennifer Kelley		
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NAME FOR USE ON GRANT DISBURSEMENT CHECK IF DIFFERENT FROM ORGANIZATION NAME			
TOTAL BUDGET FOR PROJECT	\$664		
DOLLAR AMOUNT REQUESTED FROM SC-ACS	\$300		
DATE SUBMITTED	8/31/13		
SIGNATURE (if submitted electronically you may simply type your name)	Jennifer G. Kelley		

Please send cover sheet and proposal by September 1 by either email to deavorj@cofc.edu or send to
Dr. James Deavor
Department of Chemistry & Biochemistry
College of Charleston
Charleston, SC 29424-0001

Energy- Now and Forever!
Francis Marion University's American Chemical Society

Project Rationale: We would like to celebrate the NCW theme of "Energy-Now and Forever" by showing college students on our campus and local elementary and middle school students a variety of energy sources in the form of demonstrations and hands-on activities.

Target Audience: We will target students on our campus and students in elementary and middle schools that are in proximity to Francis Marion University with which we already have ties (North Vista Elementary and Hannah-Pamplico Middle School).

Project Description: We would like to provide demonstrations and activities that illustrate solar energy, fuel cells, combustion and electrochemistry. To illustrate solar energy we plan to make "blackberry solar cells" and we will set up a potato (may use a variety of fruits and veggies) clocks for an electrochemistry activity. We will use the fire syringe will illustrate pressure combustion and we will have on hand a miniature hydrogen fuel cell car. Members of our ACS student group will lead the activities and discussion of these different types of energy. We will set up a demonstration table on campus two afternoons during NCW to give students with a variety of different backgrounds a chance to explore these different sources of energy. We will also take these activities to the schools mentioned above, again with members leading the discussion and activities. Materials required for the blackberry solar cell include frozen blackberries, spatulas, TiO_2 , indium tin oxide slides, a multimeter, parafilm, binder clips and iodine solution. For the potato clock, we need 1.5v battery operated clocks, nails, wire and alligator clips. We will purchase a miniature fuel cell car kit and a fire syringe. We also plan to give away ACS nanomoles for Mole day and chemistry themed bumper stickers as promotional materials.

Safety: We will provide safety goggles for the blackberry solar cell activity.

Budget:	TiO ₂ (1kg)	\$89
	ITO slides 25 pack	\$229
	Potato clock kit(5)	\$47
	Fuel cell car kit	\$85
	2 Fire syringes	\$34
	<u>Nanomoles (\$45/50)</u>	<u>\$180</u>
	Total Cost	\$664

Items not included in the budget are things we already have available or can inexpensively purchase. We have available funding from selling lab manuals and goggles to supplement our project but would like to request the amount of \$300.