



AUBURN UNIVERSITY

COLLEGE OF SCIENCES  
AND MATHEMATICS

May/ June 2009

Volume 1, Issue 2

**E=mc<sup>2</sup>**

**Engaging More Community Connections**

*A Science and Math Outreach Newsletter*

## Inside this Issue

Upcoming Events for Parents	1
Upcoming Events for Teachers	2-3
Experiment of the Month	3
So far this Semester...	4

## Schedule of Events

- **April 30-** AU Explore
- **May 2-** G.U.T.S. Backyard Science Bash
- **June 17- 20-** BEST National Conference
- **July 6-9-** Summer Y.E.S. Cub Camp
- **July 13-16-** Summer Y.E.S. Tiger Camp
- **July 20-23-** Summer Y.E.S. Eagle Camp
- AP Summer Institute

Please visit our website for a complete listing of all our programs!

[www.auburn.edu/cosam/outreach](http://www.auburn.edu/cosam/outreach)



## Upcoming Events & Programs for Parents:

### Backyard Science Bash

In the fall of 2007, the College of Sciences and Mathematics embarked on a mission to promote scientific literacy throughout our community. The result... Getting Under The Surface (GUTS), a parent-child team approach to science education in which kids and their parents join together to participate in engaging, hands-on science courses taught at night throughout the school-year. Beginning with just fifteen parent/child pairs on September 4, 2007 in two short years the GUTS science program has impacted over 250 people in the community. In celebration of the huge success of the GUTS science program, we are hosting our first annual Backyard Science Bash on Saturday, May 2, 2009.



The bash, which will begin at 5:30pm, will open with a grilled hamburger and hotdog dinner, followed by a delicious science-inspired dessert, and a special presentation of the cRaZy ChEmIsTrY Show. The show which will be performed by organic chemist, Dr. Susanne Striegler, will be sure to delight all! For registration and further information please visit [www.auburn.edu/cosam/outreach](http://www.auburn.edu/cosam/outreach).

### Summer Y.E.S. Camps 2009

Summer YES (Youth Experiences in Science), now in its 9<sup>th</sup> year, is expanding! For the first time ever, summer camps will be offered both to elementary and middle school aged kids (rising 1<sup>st</sup>-9<sup>th</sup> graders). Summer YES Camps provide kids the opportunity to experience science through hands-on courses in a relaxed, enjoyable environment on the Auburn University campus. Camps are designed for kids who have high interest or aptitude in science, math, or technology-related subjects and feature courses such as Slimy Science, Forensic Investigators, LEGO Mania, Claymation Science, and much more!

- **Cub Camp** (rising 1<sup>st</sup>-3<sup>rd</sup> graders): July 6-9, 2009, 8:30am-3:00pm (extended childcare services available until 5:00pm)
- **Tiger Camp** (rising 4<sup>th</sup>-6<sup>th</sup> graders): July 13-16, 2009, 8:30am-3:00pm (extended childcare services available until 5:00pm)
- **Eagle Camp** (rising 7<sup>th</sup>-9<sup>th</sup> graders): July 20-23, 8:30am-4:45pm (residential stay begins on Sunday, July 19 2009 and 24-hour supervision is provided)

For more information about Summer YES including course descriptions and registration materials visit our website at [www.auburn.edu/cosam/outreach](http://www.auburn.edu/cosam/outreach) or contact us at [COSAM\\_Outreach@auburn.edu](mailto:COSAM_Outreach@auburn.edu).

## Upcoming Events & Programs for Teachers:

### BEST Robotics National Conference



From its humble beginnings in 1993, BEST has now grown across the nation and is the second largest educational robotics program in the United States. BEST actively engages over 10,000 students, thousands of industry sponsors and mentors, various school districts and state departments of education, and 19 colleges and universities. Hub representatives from all 32 BEST competition sites around the country will be present at the conference. Don't miss this opportunity to share your expertise or learn from the experts.

#### Conference Highlights

- *Hands-on workshops on SolidWorks, our BRAIN control system, mastering the Returnables Kit, and more...*
- *Pre-conference workshops*
- *BEST practices in the classroom*
- *Engineering/Pre-engineering/Technology education curricula*
- *Nationally recognized speakers*
- *Exhibitors and vendors with a focus on STEM education*
- *Networking Luncheon*
- *How to succeed in the BEST Award division*

- *Poster session and panel discussions*
- *Plenary session with the BEST Advisory Board*  
*And much, much more....*

#### Conference Schedule:

##### Wednesday, June 17th

- Pre-Conference Workshops

##### Thursday June 18th

- 8:00 am - 11:15 am      General Sessions
- 11:30 am - 1:15 pm      Networking Luncheon
- 1:30 pm - 5:00 pm      General Sessions
- 5:00 pm - 7:00 pm      Exhibitors Wine & Cheese Social and Poster Session

##### Friday June 19th

- 8:00 am - 11:30 am      General Sessions
- 2:00 pm - 5:00 pm      General Sessions
- 5:30 pm      Reception and Conference Banquet

##### Saturday June 20th

- 9:00 am - 10:30 am      Plenary Session
- 10:30 am - 11:00 am      Break
- 11:00 am - 12:00 pm      Teacher Forum/ Hub Council Meeting
- 12:00 pm      General Conference Concludes
- 12:00 pm - 2:00 pm      Hub Council Lunch and Break Out Sessions
- 2:00 pm      Conference Concludes

**Additional information as well as registration forms can be found at:**

[www.bestinc.org/best\\_national\\_conference](http://www.bestinc.org/best_national_conference)

## Advanced Placement Summer Institute (APSI)

The AP Summer Institute is designed for the professional development of teachers, counselors, and administrators involved in Advanced Placement (AP) courses as well as teachers and administrators who are involved in implementing vertically aligned curricula that prepare 6th-12th grade students for AP courses. Auburn University in cooperation with the College Board will host workshops in the following areas:

- *Biology & Advanced Biology*
- *Calculus AB*
- *Chemistry*
- *English Language & Composition*
- *English Literature & Composition*
- *Advanced English Literature & Composition*
- *U.S. History*
- *Pre-AP Vertical Team Training - English, Math, & History*

For more information, please visit

[www.auburn.edu/apsi](http://www.auburn.edu/apsi)

#### 2009 Dates

##### **June 22 - 26**

#### AP Summer Institute and Vertical Team Training

- Tuition: \$500 per workshop and \$50 lab fee for science workshops (includes instruction, breaks, & course materials)

##### **July 13 - 14**

#### AP Administrators and Counselors Summer Institute

- Tuition: \$325 (includes instruction, breaks, lunch, & course materials)

This AP Summer Institute has been endorsed by



## BEST Robotics

Registration is now open for BEST - Boosting Engineering, Science & Technology – in Alabama.

BEST is a middle and high school robotics competition held each fall at 35 different locations across the country. BEST is currently the second largest educational robotics program in the U.S., with over 12,000 students at 700+ schools participating. This fall, schools in Alabama can participate at one of five different competition sites. The program is FREE to schools, thanks to generous sponsorship from higher education institutions and industry in Alabama. If you are interested in signing up a team, please see below for the contact person for each location.



### Blazer BEST (Birmingham)

UAB School of Engineering  
Schools in Jefferson County, Shelby County, and  
outlying areas

To register: contact Paul George,  
[pgeorge@uab.edu](mailto:pgeorge@uab.edu)



### Tennessee Valley BEST (Decatur)

A Partnership between Calhoun Community Col-  
lege and Auburn University  
Schools in North Alabama

To register: contact Dr. Sue Mitchell,  
[sue@calhoun.edu](mailto:sue@calhoun.edu)



### Jubilee BEST (Mobile)

Exploreum Science Center  
Schools in South Alabama  
To register: contact Robin Fenton,  
[rffenton@comcast.net](mailto:rffenton@comcast.net)



### War Eagle BEST (Auburn)- formerly Alabama BEST

Auburn University's College of Sciences and  
Mathematics and Samuel Ginn College of Engi-  
neering

Schools in Central and Southeast Alabama  
To register: contact Mary Lou Ewald,  
[ewaldml@auburn.edu](mailto:ewaldml@auburn.edu)



### North Alabama BEST (Hanceville)

Wallace State Community College  
Schools in North Alabama

To register: contact Phillip Cleveland,  
[phillip.cleveland@wallacestate.edu](mailto:phillip.cleveland@wallacestate.edu)

Find out more about  
BEST at

[www.bestinc.org](http://www.bestinc.org)

## Experiment of the Month

### Human Conductor

#### What It 's All About...

*This experiment is great for scientists of any age! Get ready to see the power behind ordinary static electricity. Who knew it had so much potential?!*

#### Materials

- Fluorescent Bulb
- Balloon

#### Procedure

1. Darken the room.
2. Hold the balloon in one hand and the bulb in the other.

3. Rub the balloon vigorously on your hair.
4. Bring the balloon near the bulb and observe what happens!
5. Slowly touch the balloon to the bulb and see if a spark will jump between the two.

#### The Science Behind It...

*Negatively charged particles called electrons are relatively free to jump from the atoms of one object to the atoms of another. Some objects facilitate this transfer better than others due to the arrangement of their atoms. A balloon is an example one of these objects. Electrons easily jump from your hair to the balloon and stick there.*

*Inside the fluorescent bulb, electrons collide with mercury vapor that fills the glass tube. This causes the vapor to emit ultraviolet light which is invisible to the human eye. Coating the inside of the glass tube is a white substance that contains phosphors. When phosphors are bombarded with ultraviolet light, they give off visible light.*

*Electrons are usually supplied to the fluorescent bulb via electric current, but in this case they are carried from your hair to the bulb via the balloon.*



**AUBURN UNIVERSITY**  
COLLEGE OF SCIENCES  
AND MATHEMATICS

## So far this Semester...

### Greater East Alabama Regional Science and Engineering Fair (GEARSEF)

On March 12, 2009, over 80 6th-12th grade students from 12 schools around east Alabama converged on Auburn University's campus for the 1st annual Greater East Alabama Regional Science and Engineering Fair. Over 20 awards were given out including special awards sponsored by the U.S. Air Force, the Yale Science and Engineering Association, the National Oceanic & Atmospheric Association, as well as many, many others.

Three finalists were selected to represent our region at the Intel International Science & Engineering Fair in Reno, NV May 10-15, one of which is being sponsored by the Auburn University Women In Science and Engineering (WISE) Institute and the College of Sciences and Mathematics' Society of Women in Science and Mathematics (SWSM). The finalists are as follows:

#### Kelly Lynn

##### Wetumpka High School

- Gold Dust: An Alternative to Commercial Sunscreens, A Spectrometric & Ultraviolet Light Study Using *Lumbricus terrestris*

#### Nicholas Christensen

##### Wetumpka High School

- Do You 'Ear What I 'Ear? Lowering Voice Frequencies in Real Time to Revolutionize Hearing Assistance Technology

#### Parker Caviness & Todd Thrash

##### Wetumpka High School

- A Shocking Twist

### Spring Youth Experiences in Science (Y.E.S)

The annual Spring Y.E.S. occurred on Saturday, April 4th. Over 90 students from area elementary and middle schools had the opportunity to participate in 4 courses that were taught by some of the finest instructors Auburn University has to offer. Courses included:

#### Carnivorous Plants

- Instructors: Dr. Jennifer Trusty and Dr. Tug Kesler, AU College of Forestry and Wildlife Sciences

#### Earning Your Stripes

-Instructors: Evi Paemelaere and Linda Pastorello, AU Tigers for Tigers

#### Getting a Jolt out of Juice

- Instructors: Mary Lou Ewald and Erin Edmondson, COSAM Outreach

#### Kitchen Chemistry

- Instructor: Emily Newcomb, AU College of Education



*Intel finalist, Nicholas Christensen presents his project at GEARSEF 2009.*



*Students receive instruction in Getting a Jolt Out of Juice at Spring Y.E.S 2009.*

## College of Sciences and Mathematics K-12 Outreach

315 Roosevelt Concourse  
131 Science Center Classrooms  
Auburn University, AL 36849  
Phone: 334-844-5769  
Fax: 334-844-5740  
E-mail: [cosam\\_outreach@auburn.edu](mailto:cosam_outreach@auburn.edu)

Keep up to date with programs and information by visiting:  
[www.auburn.edu/cosam/outreach](http://www.auburn.edu/cosam/outreach)