



AUBURN UNIVERSITY

COLLEGE OF SCIENCES
AND MATHEMATICS

March/ April 2009

Volume 1, Issue 1

E=mc²

Engaging More Community Connections

A Science and Math Outreach Newsletter

Upcoming Events & Programs for Parents

Spring Y.E.S. 2009

Spring Youth Experiences in Science (Y.E.S.) is a Saturday science camp offered free to 100-200 students in grades 3-6. Students have the opportunity to explore hands-on, minds-on activities in mini-courses like Astronomy, Kitchen Chemistry, Geometry of Puzzles and Games, and Carnivorous Plants.

This year's program is slated for **Saturday, April 4th** from 9:00am -12:00pm, with sign-in beginning at 8:00am. To register for the camp, participants must submit a registration form to the COSAM Outreach office before March 13th. During the week of March 23rd, participants will be notified of ac-

ceptance and will receive specific information on the courses offered. Registration for camp course assignments will begin at 8:30 on the morning of April 4th.

Courses will include:

Earning Your Stripes

-Tigers for Tigers

Kitchen Chemistry

-Emily Newcomb, Master's student in the College of Education

Soda Pop Science

-Miss Gina Watkiss, Heritage School of Newnan, GA

Carnivorous Plants

-Dr. Jen Trusty and Dr. Tug Kessler, Forestry and Wildlife Sciences.

Registration forms and further information can be found at www.auburn.edu/cosam/outreach.



Students participate in hands-on, minds-on activities at Spring Y.E.S.

Inside this Issue

Spring YES 2009	1
AU Explore	1
G.U.T.S	1
Experiment of the Month	2
So far this Semester...	2

Schedule of Events

- **March 12**- Greater Eastern Alabama Regional Science and Engineering Fair (GEARSEF)
- **March 26**-Getting Under the Surface (G.U.T.S.)
- **March 28**-Elementary Science Olympiad
- **April 4**- Spring Y.E.S.
- **April 14**-G.U.T.S.
- **April 30**- AU Explore
- **May 2**- G.U.T.S. Finale

Getting Under the Surface- G.U.T.S.

G.U.T.S. is a great way for parents and their kids to learn something new about the world together. Parents and children team up as lab partners to "get under the surface" of the everyday objects. The evening begins at 6:00 pm with a quick dessert and introduction followed by a 1.5 hour science activity. Activity topics range from demystifying DNA to tangling with toasters. This semester, sessions will be held on March 26, April 14, and May 2 (Grand Finale).

Summer Y.E.S. 2009

Updated course information, schedules, and registration can be found by following the Summer YES link at www.auburn.edu/cosam/outreach.

For Teachers:

AU Explore



AU Explore is the COSAM Open House Day. Approximately 1500 5th- 8th grade students from all over Alabama are invited to Auburn's campus on April 30th to participate.

Students will have the opportunity to experience live birds of prey, reptiles, and insects up close, as well as interact with University faculty and students at the Science Expo. Make-n-Take Science Fun Shops and Demo Shows presented by Auburn's finest will also be occurring throughout the day. Also, students may catch a glimpse of the lovable Aubie while here on AU's campus.

Registration forms can be downloaded at www.auexplore.auburn.edu. E-mail, fax, or mail the completed form to the Outreach office to receive further information.



AUBURN UNIVERSITY
COLLEGE OF SCIENCES
AND MATHEMATICS

Experiment of the month: Density Lava Lamp

What 's It About...

This experiment is perfect for 3rd-5th grade students. The main idea for kids in this experiment is density. Particularly the idea that things with a higher density than a surrounding liquid will sink and things with a lower density than a surrounding liquid will float.

Materials

- Alka-Seltzer tablets
- Vegetable Oil
- Water
- Tall clear plastic container (1 or 2 liter bottle)
- Food Coloring (neon works well!)

Procedure

1. **Fill the bottle 2/3 full with oil.**
2. **Add 4-5 drops of food coloring to the top of the oil.**
3. **Fill the rest of the bottle with water (but not to the brim!)**
4. **Add 1 Alka-Seltzer tablet to the bottle and observe what happens!**



Students get a visit from Aubie at the Math-a-thon awards ceremony.

The Chemistry Behind It...

Initially, the oil will float on the colored water because it is less dense. Oil and water don't mix because the molecules are not attracted.

When the Alka-Seltzer is dropped in, it sinks to the bottom because it is more dense than both the oil and water. Once it reaches the water layer, the chemicals inside react with the water to produce carbon dioxide gas. As the gas increases, the combination of water and gas becomes less dense than the surrounding water and oil causing it to float to the top. As the bubble reaches the surface, the carbon dioxide escapes and the water returns to its normal density, thus descending back through the oil and into the water.

So far this Semester...

Math-a-thon

130 students from 8 different high schools across Alabama descended upon Auburn's campus on January 24th to take part in the annual Math Tournament sponsored by COSAM. Students took part in individual tests, ciphering, and group tests as well as the ever popular Aubie Bowl. The overall winners for each division were Grissom High School (1st place, Division I), Vestavia Hills High School (2nd place, Division I), Hoover High School (3rd place, Division I), and Hanceville High School (1st place, Division II).

Eagle Ranch

The COSAM Outreach staff traveled to the Eagle Ranch Children's Home north of Atlanta, GA on Saturday,

February 7, 2009. Around 40 resident's of the home took part in a mini-camp similar to camps offered on Auburn's campus. Courses were taught by exceptional COSAM students and included: Genes in a Bottle, instructed by Erin Edmondson; Lemon Battery, instructed by Emily Newcomb; and Water Bugs, instructed by Jesse Daniel.

G.U.T.S.

February 19th's Getting Under the Surface served 21 student parent teams. A dessert was followed by two courses taught by the Science in Motion Specialists and our very own Sallie Martin. Course content included building a battery to take home and DNA extraction from strawberries.

Middle School Science Olympiad

Despite battling extreme weather conditions including early morning torrential rain and tornado warnings, the 2009 Middle School Science Olympiad was considered a great success. 27 teams of approximately 15 students each participated in the 25th anniversary Olympiad on February 28th. University faculty and students administered 23 events for the competition that covered topics ranging from Anatomy to Robo-Cross and everything in between. Teams from Auburn Jr. High School, Drake Middle School, and Carver Magnet School will be advancing to the state finals in Montgomery, AL.



A student participates in the Lemon Battery course at Eagle's Ranch Children's Home.

COSAM Outreach

315 Roosevelt Concourse
131 Science Center Classrooms

Phone: 334-844-5769
Fax: 334-844-5740

E-mail: cosam_outreach@auburn.edu

Keep up to date with programs and information by visiting:

www.auburn.edu/cosam/outreach