



AUBURN UNIVERSITY

COLLEGE OF SCIENCES
AND MATHEMATICS

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Engaging More
Community Connections



Volume 7: Issue 5



COSAM Outreach Newsletter
November/December 2015



Upcoming Events & Programs

Summer Science Institute

Application Deadline: February 12, 2016

The Summer Science Institute is for outstanding students who are currently in the 10th or 11th grades and are interested in science and mathematics. Students engage in real-world applications of science, perform experiments using cutting edge research equipment, & partner with COSAM researchers to gain lab skills not taught in high school.

The program is offered at no cost to accepted students. Interested students will need to download the full application and recommendation forms online. **For these forms and further information, please visit our website at www.auburn.edu/cosam/ssi.**

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Upcoming Events



High School AMP'd

January 23, 2016

Only a few spots remaining!

Registration is still open for our annual High School AMP'd (Auburn Mathematical Puzzle Challenge) Competition. Participation is limited to the first 20 registered teams and costs \$100 for the first team and \$75 for the second. The deadline to register is Friday, December 4, 2015 though our maximum numbers may be reached before that date. For more information or to register, visit www.auburn.edu/cosam/ampd. Below is a current list of participating schools:

2016 Competing Schools

Saint James School – Montgomery, AL
Central Educational Center – Newnan, GA
Montgomery Catholic Preparatory School – Montgomery, AL
Northgate High School – Newnan, GA
East Coweta High School – Sharpsburg, GA
Lakeview Christian School – Auburn, AL
Beulah High School – Valley, AL
Newnan High School – Newnan, GA
Hoover High School – Hoover, AL

Middle School Science Olympiad

February 27, 2016

Spaces still available!

Science Olympiad is a one-day sports-like science competition involving approximately 2,000 Alabama K-8 students each year. Auburn hosts two separate Olympiad events each year – one for middle school students and a separate event for elementary students. For more information, contact Kristen Bond at Kristen.bond@auburn.edu or by phone at 334-844-5769, or go to www.auburn.edu/cosam/scienceolympiad.

Visit <http://www.alabamaso.org> to register!

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Outreach Calendar

November

10 PLTW State Conference

December

4 HS AMP'd Registration Deadline

5 South's BEST – Day 1

6 South's BEST – Day 2

11 GEARSEF Registration Deadline

January

23 High School AMP'd



Greater East Alabama Regional Science and Engineering Fair

School Registration Deadline Quickly Approaching!

GEARSEF is a regional affiliate fair of the Intel International Science and Engineering Fair (Intel ISEF), the world's largest international pre-college science competition. GEARSEF is open to all students in grades 6-12 who have advanced from their local science fair (school, county, district, or community fair) and reside within the following Alabama counties: Autauga, Barbour, Bullock, Butler, Chambers, Coffee, Crenshaw, Dale, Elmore, Geneva, Henry, Houston, Lee, Lowndes, Macon, Montgomery, Pike, Russell, and Tallapoosa.

Students should present their projects at a school or county science fair and only top winners should advance to GEARSEF. Schools (or school systems) planning to send their winning students to GEARSEF on March 3 (middle school, grades 6-8) or March 10 (high school, grades 9-12) 2016, should register by Friday, December 11, 2015. School registration is free. In February, schools will submit a list of participating students and a \$15 entry fee/project.

For more information about GEARSEF, visit our website at www.auburn.edu/cosam/gearsef or contact the fair coordinator Josh King at josh.king@auburn.edu

Activity of the Issue

Candy Corn Science*

(Sweet Science Methodology)

Materials:

- Candy corn
- Small glass bowls or juice glasses
- Water & 3 other liquids to test (ex: vinegar, vegetable oil, soda, or rubbing alcohol)
- Paper, pen, and pencil

What to do:

1. **Explain** to your young scientists that they will be using the methods of science to determine which liquid dissolves candy corn the fastest. Make sure they know what each liquid is.
2. Have your scientist **make predictions** about the effects of the liquids (Will the candy corn float? Change colors? How fast will they dissolve?). Be sure to **record** those predictions.
3. Help your child pour about 1 inch of each liquid into a separate bowl or glass.
4. Next, add two pieces of candy to each container of liquid. Be careful not to splash or spill.
5. **Observe** what happens to the candy in each liquid (Does it change shape? Color? Does it dissolve or form bubbles?) What does it look like in 10 minutes? In 15 minutes? Your child should **record** these observations.
6. Remove the candy from the various liquids. Compare them to each other as well as to candy that was not placed in one of the liquids. What new changes can be seen? Why does your young learner believe that these changes took place?

Extension

Expand the activity by asking your learner to form a **hypothesis** about types of liquids and their effect on candy corn (for instance, that liquids with oils in them may dissolve the candy corn). You can then craft new **experiments** using other household liquids and candies to **test** your scientist's hypothesis.



*This activity was developed by Sue Bradford Edwards and adapted for this publication. For more experiment ideas visit:

www.education.com/activity/science

Since the last issue:

Middle School AMP'd Winners

In September, the Middle School AMP'd (Auburn Mathematical Puzzle) Challenge hosted 20 teams from Alabama and Georgia. Winning teams included:

- 1st Place – Saint James School
- 2nd Place – Lee Middle School
- 3rd Place – Sanford Middle School
- 5 Star Award Winner – Smokey Road Middle School
- Black Market Barter Winner – Evans Middle School
- Ready, Set, Go Winner – Sanford Middle School

GUTS

Getting Under the Surface (GUTS) is an evening program for 1st-6th grade students and their parents or grandparents. The mission of GUTS is to enhance science literacy and engagement within our community by providing relevant science activities to students and their parents.

This fall, COSAM's October GUTS featured the science of the spooky and gross. The courses offered were:

- The GUTS of Blood and Disease (Grades 1-3)
- Pumpkin Mania (Grades 1-3)
- Magic Investigators (Grades 4-6)
- Along Came a Spider (Grades 4-6)

With a student enjoyment rate of over 4.88/5 and 100% of students learning something new (survey data), we feel the program continues to be a success! Look to our website (www.auburn.edu/cosam/guts) and this newsletter in the Spring for news of the next GUTS!

Since the last issue (cont.)

War Eagle BEST Winners

The War Eagle BEST (Boosting Engineering Science and Technology) Competition occurred on October 10, 2015. The event, co-hosted by the College of Sciences and Mathematics and the Samuel Ginn College of Engineering was a huge success. Middle and High school teams worked to extract materials and repair parts in abandoned mines accessible only by robots.

Over 800 students participated in the event. Winners are listed below:

- 1st Place BEST Award – Wetumpka High School
- 2nd Place BEST Award – Eastwood/Cornerstone Schools
- 3rd Place BEST Award – Saint James School

- 1st Place Robotics – Southside Middle School
- 2nd Place Robotics – Tallassee High School
- 3rd Place Robotics – Eastwood/Cornerstone Schools
- Robotics Finalist – Wetumpka High School

*All of the above teams advanced to the regional South's BEST Championship (www.southsbest.org) also hosted by Auburn University on December 5 – 6.

For more information about War Eagle BEST visit www.wareaglebest.org



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131 Sciences Center Classrooms Bldg.
315 Roosevelt Concourse
Auburn University, AL 36849

auburn.edu/cosam/outreach
facebook.com/cosamoutreach
twitter.com/cosamoutreach
instagram.com/cosamoutreach



Phone: 334-844-7449
Fax: 334-844-5740

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www.auburn.edu/cosam/outreach

Or call us at 334-844-7449

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