

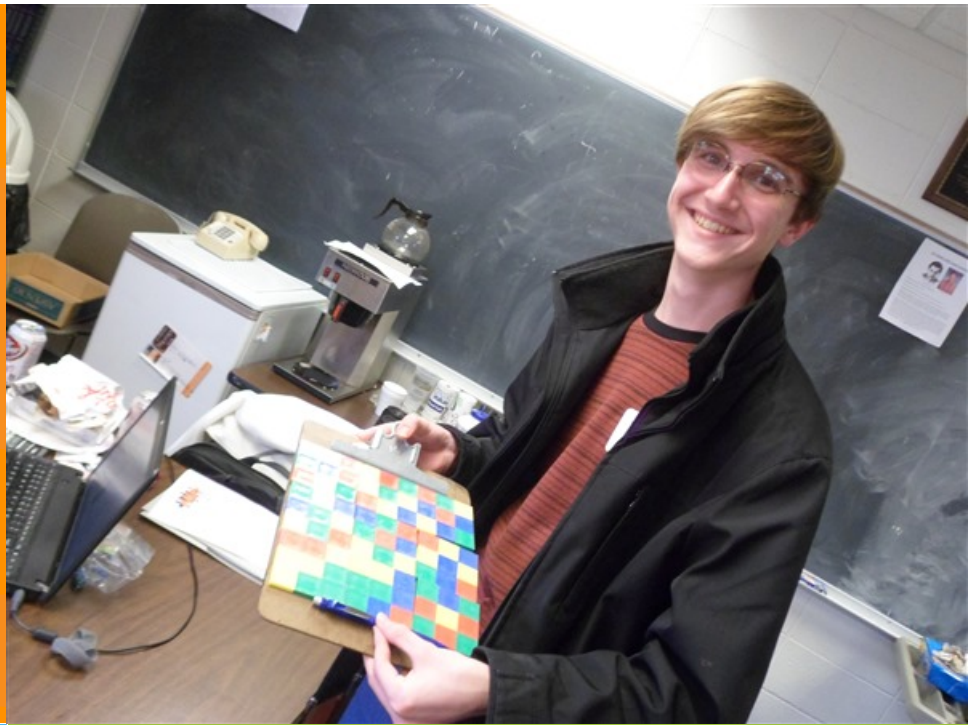


AUBURN UNIVERSITY

COLLEGE OF SCIENCES
AND MATHEMATICS

$E=mc^2$

Engaging More
Community Connections



Volume 7: Issue 1

January/February 2015



Upcoming Events & Programs:

Greater East Alabama Regional Science and Engineering Fair Project Registration Deadline 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, Covington, Crenshaw, Dallas, Dale, Elmore, Geneva, Henry, Houston, Lee, Lowndes, Macon, Montgomery, Pike, Russell, and Tallapoosa. Students can be enrolled in public or private schools in the region or affiliated with a home school cover school.

Students should present their projects at a school or county science fair and only top winners should advance to GEARSEF. Local winners planning to attend GEARSEF on March 19, 2015, should register by **Friday, February 20, 2015**. The cost to participate is \$10 entry fee/project.

For more information about GEARSEF or to register, visit our website at www.auburn.edu/cosam/gearsef. Further questions can be directed to Allison Tjelmeland at 334-844-7449 or by e-mail at altooo8@auburn.edu.

Inside

Upcoming Events and Programs

Science and Engineering Fair

Science Matters Summer Academy

Science Olympiad

AU Explore

1

Activity of the Issue

"Can" You Stand The Pressure

5

Since Last Issue...

South's BEST

High School AMP'd

5



Registration Opens February 9th

Science Matters is a summer enrichment program for students in rising grades 1 – 8 offering youngsters a supercharged science experience. The program allows participants to explore the world of science through **real experiments**, technology and **art projects**, and hands-on, **project-based activities**. During this action-packed program, kids can design and build, **dabble in the art of chemistry**, “become a flight specialist”, **see amazing critters**, and more!

Science Matters offers six different science-themed weeks for rising 1st – 4th graders, five weeks for students in rising grades 5 – 6, and two special courses offered through the Biodiversity Learning Center for students in rising 7th and 8th graders.

All programs operate between 8am-4pm daily. Prices range from \$180 – \$230 per week/child. Multiple week discounts are available. Courses fill on a first-come-first-serve basis.

Upcoming Events and Programs (Cont'd.)

2015 Course Offerings by Grade (Fall 2015 grade)

Week	1 st – 2 nd grade	3 rd -4 th grade	5 th -6 th grade	7 th – 8 th grade
June 1 – 5	Engineered For Fun	Slip and Slime	Catch Phrase	No Offering
June 15 – 19	Wonder of Weather	It's Electric!	What's Your IQ?	The Phenomenon of Fish and Ferns
June 22 – 26	LEGO, LEGO, It's off to Play I Go!	School of Law	Off the Grid	No Offering
July 6 – 10	Science Stew	Super Sleuth	Balloon Poppers	No Offering
July 13 – 17	Space is the Place	LEGO Mania	Totally Cellular	Snakes & Lizards & Insects... Oh My!
July 27 – 31	Kitchen Chemistry	Up in the Air	No Offering	No Offering

For more information or to register visit www.auburn.edu/cosam/sciencematters.

Further questions can be directed to Kristen Bond at Kristen.bond@auburn.edu or by phone at 334-844-5769.



Elementary Science Olympiad

February 21, 2015

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 students and a separate event for elementary students. This year's Elementary School Science Olympiad features 22 teams from across Alabama. Below is a list of this year's competing teams.

2015 Competing Teams

Auburn Classical Academy – Auburn
 Beulah Elementary School – Valley
 Geneva Middle School – Geneva
 Highlands Elementary School – Dothan
 Eastside Elementary School – LaFayette
 Mt. Gap Elementary School – Huntsville
 Oak Grove Elementary School – Bessemer
 Ogletree Elementary School – Auburn
 Pick Elementary School – Auburn
 Springwood School – Lanett
 St. Luke's Episcopal School – Mobile
 W.O. Lance Elementary School – Lanett
 Wrights Mill Road Elementary School – Auburn
 W.S. Neal Elementary School – East Brewton
 Yarbrough Elementary School – Auburn

For more information about Science Olympiad visit
www.auburn.edu/cosam/scienceolympiad.

Outreach Calendar

January

- 17 TASSAL – Auburn
- 24 High School AMP'd
- 31 AJAS Contest

February

- 21 Elementary Sci. Olympiad
- 28 TASSAL – Baldwin County

AU Explore

Friday, May 1

Registration Opens Monday, February 16

AU Explore is a science and math invitational sponsored by the College of Sciences and Mathematics at Auburn University. Each spring over 1,000 students in grades 5-8 from across Alabama are invited to experience raptors, snakes, and other live animals up close, participate in mini-workshops at the "Make-n-Take Science Fun Shop", visit with Auburn faculty and students at the Science and Math EXPOs, and much more!

Due to the high demand of AU Explore, registration will be limited in the following way:

- Registration will occur on a first-come first-serve basis.
- A waiting list will be established after all slots are filled.
- School districts within Lee County may bring up to 300 students.
- School districts outside of Lee County may bring up to 150 students.
- If your school system registers more than the maximum number of students:
 - Priority will be given to the students in lower grades.
 - Additional students/schools will be put on the waiting list and allowed to attend if space is available.
- Twenty spots will be open to homeschool students.
 - Homeschool students will be grouped together and follow the same schedule as a cohort.

For more information visit

www.auburn.edu/cosam/auexplore.

To request an invitation to the event, please contact Erin Percival at erin.percival@auburn.edu or by phone at 334-844-7449.



Activity of the Issue

“Can” You Stand the Pressure

Materials:

- 1 undamaged, pre-rinsed, empty soda can
- Large bowl of cool tap water
- Stove
- Potholder
- Frying pan or hot plate
- A responsible adult

What to do:

1. With the supervision of an adult, place the frying pan on a burner near the front of the stove
2. Turn the handle towards the inside so it won't get caught on anything. Set the heat to low or medium low.
3. Place 2 tablespoons of water in the can. Put the can into the frying pan. While the can is heating, fill the bowl 2/3 full with tap water and set it on your work area.
4. When you see steam coming out of the can, you are ready to perform the experiment.
5. An adult should wear oven mitts and carefully set the frying pan on the potholder next to the bowl of water.
6. Quickly pick up the soda can and turn it upside down into the bowl of water. What happens? Lift the can out of the water. What do you notice?

What's Happening?

Matter is all around us. It is anything that takes up space and has mass (that means weight). Normally matter exists in one of four forms called states or phases of matter. They are: solid, liquid, gas, and plasma. When you bring the water in the frying pan to a boil, you are changing the water from a liquid state to a gaseous state. As a gas, the water takes up more space, filling the can with water vapor, and pushing the air out of the can. When you turn the soda can upside down in the cold water, the lower temperature forces the water vapor in the can to turn back into a liquid state. Since the liquid water takes up less space than the gaseous water, much of the

can is now empty of matter — creating a vacuum. Air (and water from the bowl) rush in to fill the space, crushing the can.

Think About It:

What does this mean about air? How might this information be applicable to something in the “real world”?

This activity is from the Center for Science and Industry. To check out more great activities visit their website at www.cosi.org.

Since the last issue:

South's BEST 2014

South's BEST is a Regional Robotics Championship held each December. This year the top 56 teams competed from 17 BEST hubs in six states. Below are the overall winners.

BEST Award Winners:

- 1st Place:** Central Magnet School (Music City BEST)
2nd Place: Wetumpka High School (War Eagle BEST)
3rd Place: Brooks High School (Northwest AL BEST)

Robotics Winners:

- 1st Place:** Merrol Hyde Magnet School (Music City BEST)
2nd Place: Evangel Christian School (Blazer BEST)
3rd Place: MACH Robotics (Jubilee BEST)
Finalist: Central Magnet School (Music City BEST)

Middle School Winners:

BEST Award: Brindlee Mountain Middle School
 (Northeast AL BEST)

Robotics: Academy for Science and Foreign Language
 (Tennessee Valley BEST)

More information about South's BEST including a full listing of event winners can be found at
www.southsbest.org.

High School AMP'd Winners

The AMP'd Challenge occurred on January 24, 2015. Teams of 5 – 7 high school students competed against each other by completing a series of 12 puzzles. Puzzles ranged from crosswords, to logic puzzles and complex math challenges. This year's event featured 19 high schools from across Alabama. Over 150 students participated and 100% reported that AMP'd was an enjoyable experience.

Varsity Division: 11th – 12th grade students

- 1st Place – Saint James School (Team Bravo)
- 2nd Place – Hoover High School (Team Romeo)
- 3rd Place – Central Educational Center (Team Foxtrot)

Junior Varsity: 9th – 10th grade students

- 1st Place – Montgomery Catholic Preparatory School (Team Delta)
- 2nd Place – W.P. Davidson High School (Team Papa)
- 3rd Place – Beulah High School (Team Lima)



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