

AUBURN UNIVERSITY
COLLEGE OF SCIENCES
AND MATHEMATICS

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Engaging More
Community Connections



Volume 5: Issue 4

Winter 2013



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January:

- 25th – High School Auburn Mathematical Puzzle Challenge
School-based competition- No space available
- 31st – Summer Science Institute Application Deadline
Competitive summer academy (free) for rising students in grades 11 – 12

February:

- 1st – The Alabama STEM Studio for After School Learning
Afterschool Educator Workshop – Registration opens in January
- 3rd – Science Matters Registration Opens
Summer enrichment for elementary students – Spots fill quickly
- 15th – Elementary Science Olympiad
School-based competition- No space available
- 18th – GUTS
Evening program for parents/elementary students – Registration opens in January

March:

- 1st – Middle School Science Olympiad
School-based competition- Limited space available
- 3rd – Robotics Academy Registration Opens
Summer program for middle school students – Spots fill quickly
- 20th – Greater East Alabama Regional Science and Engineering Fair
School-based competition for grades 6-12- Limited space available

April:

- 10th – GUTS
Evening program for parents/elementary students – Registration opens in January
- 25th – AU Explore
School-based event for grades 5-8- Registration opens in February



Upcoming Events and Programs (cont'd.)

Science Matters – Summer Dates

Registration Opens February 3rd, 2014
Space fills quickly!

Science Matters is a summer enrichment program for elementary students in rising grades 1-6 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, make-n'-take 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 to choose from and four weeks for rising 5th – 6th graders to enjoy. Parents may choose between the Regular Day option from 8am-3:30pm or the Extended Day option from 8am-5pm. Prices range from \$170 – \$240 per week/child. Multiple week discounts are available.

Course offerings will be online beginning in February at www.auburn.edu/cosam/sciencematters

Week 1 – May 27 – 30, 2014*

This week will feature classes for 1st – 4th graders.

Week 2 – June 2 – 6, 2014

This week will feature classes for 1st – 6th graders.

Week 3– June 16 - 20, 2014

This week will feature classes for 1st – 6th graders.

Week 4 – June 23 – 27, 2014*

This week will feature classes for 1st – 6th graders.

Week 5 – July 14 – 18, 2014*

This week will feature classes for 1st – 6th graders.

Week 6 – July 28 – August 1, 2014*

This week will feature classes for 1st – 4th graders.

*This four-day camp is offered at a reduced rate.

Summer Science Institute

Summer Academy for High School Students

Application Deadline: January 31, 2014

This summer science program 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, and 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 from www.auburn.edu/cosam/ssi.

Required documents include the following:

- Completed & signed Application Cover Page
- A 1-2 page essay
- A résumé detailing qualifications and extracurricular activities
- High School Math and Science Course Plan
- Standardized assessment scores (ACT, SAT, PLAN, PSAT)
- 2 completed recommendation forms
 - 1 form to be completed by a teacher (non-relative)
 - 1 form to be completed by an adult other than a teacher (non-relative)
- A headshot photograph



Outreach Calendar

January

- 25 H.S. AMP'd
- 31 SSI Applications Due

February

- 1 TASSAL
- 15 Elem. Science Olympiad
- 18 GUTS

March

- 1 M.S. Science Olympiad
- 20 GEARSEF

Activity of the Issue

Make Your Own Ice Cream

Materials:

- 4 thin metal mixing bowls, two small and two large for each group of students
- Coarse salt
- Crushed ice
- Ice cream mixture (below) for each group of students
- Cooking elements

Vanilla Ice Cream Recipe (for 10 students)

- 125 ml sugar
- 1.25 ml salt
- 250 ml milk
- 15 ml vanilla flavoring
- 500 ml chilled whipping cream

What to do:

1. Mix the first three Vanilla Ice Cream Recipe ingredients in a saucepan and stir constantly over a medium heat. Let the mixture cool to room temperature. Add the vanilla and the cream. Now the concoction is ready to be made into ice cream.
2. Place half of the ice cream mixture in one small bowl and the other half in the other small bowl.
3. Half-fill both large metal bowls with crushed ice.
4. Sprinkle coarse salt on the ice in only **one** of the two large bowls.
5. Place the two small bowls with the ice cream mixture into the large bowls, on top of the ice.
6. Stir the mixture in the bowls at the same time.
7. Continue to stir the mixture until it thickens to form ice cream.

What's Happening:

1. What differences did you notice as you made the two ice creams?

2. What may have caused these differences?
3. Discuss what happened to your classmates' mixtures when they made different flavors. What were the differences? What might have caused the changes?
4. What are some modern methods we use to prepare ice cream?

Extension:

Experiment with baking powder and show how chemicals can be used not only in the preparation of food but also as key ingredients in recipes. Corn bread is a simple food, easily prepared by students, that illustrates basic chemistry. It includes active chemicals such as baking powder (a combination of corn starch, monocalcium phosphate and sodium bicarbonate) and buttermilk (acetic acid). Students can watch the reaction between these ingredients take place. You can talk about how the chemical reaction creates tiny air bubbles in most cakes.

This activity was developed by Reach Out Michigan. For more science activities visit them at

<http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/other/un2.html>



Since the last issue

South's BEST Results

BEST Award

- 1st Place: Wetumpka High School (War Eagle BEST)
- 2nd Place: Fernbank LINKS (Georgia BEST)
- 3rd Place: Wicksburg High School (Tennessee Valley BEST)

Robotics

- 1st Place: DARC (Tennessee Valley BEST)
- 2nd Place: Merrol Hyde Magnet School (Music City BEST)
- 3rd Place: Evangel Christian School (Blazer BEST)
- Finalist: Holy Cross School (NOLA BEST)

For complete listing of all award winners, go to

www.southsbest.org.



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Volume 5: Issue 3

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

phone: 334-844-7449
fax: 334-844-5740
COSAM_Outreach@auburn.edu



For more information about
any of our programs visit:

www.auburn.edu/cosam/outreach

call us at: 334-844-7449



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