



AUBURN UNIVERSITY

COLLEGE OF SCIENCES  
AND MATHEMATICS

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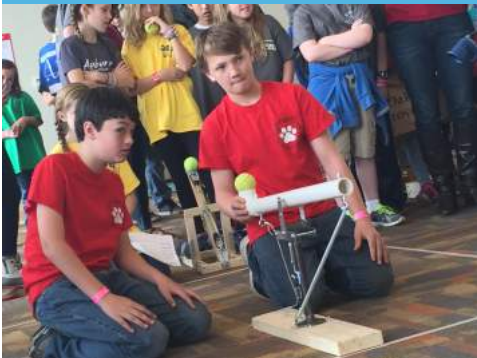
Engaging More  
Community Connections



Volume 8: Issue 2



COSAM Outreach Newsletter  
March/April 2016



## Upcoming Events & Programs

### High School AMP'd!

May 7<sup>th</sup>, 2016

Registration now open!

Due to wintery weather conditions in January, we will be offering a second High School Auburn Mathematical Puzzle Challenge (AMP'd) for schools who did not compete in the January event. AMP'd is a problem solving challenge in which teams of 5 to 7 students work together while answering real mathematical puzzles. The focus of AMP'd is for students of all math ability levels to engage in math in a way that is fun, interesting, and different from a traditional math class. Participation is limited to the first 20 registered teams and costs \$100 for the first team and \$75 for the second. Homeschools able to form a team may also participate. The deadline to register is Friday April 8, 2016 though our maximum numbers may be reached before that date.

**For more information or to register your team:**

Please contact Josh King (334-734-1182 or [josh.king@auburn.edu](mailto:josh.king@auburn.edu)) or visit us online at [www.auburn.edu/cosam/ampd](http://www.auburn.edu/cosam/ampd).

## Inside

### Upcoming Events and Programs

High School AMP'd

GUTS

Nano Days

PLTW Core Training

Science Matters

### Activity of the Issue

Make "Plastic" Milk

### Since Last Issue...

Elementary Science Olympiad

# Upcoming Events



## G.U.T.S.

Getting Under the Surface

March 29<sup>th</sup> and April 11<sup>th</sup>

Registration now open!

G.U.T.S. is an evening program for **1<sup>st</sup>-6<sup>th</sup> grade students and their parents or grandparents**. Each evening session includes snacks followed by a **hands-on 90-minute science activity** featuring a “Getting Under the Surface” theme designed to demystify science topics—such as Madness (March 29<sup>th</sup>) and World Health (April 11<sup>th</sup>). The mission of G.U.T.S. is to enhance science literacy and engagement within our community by providing relevant science activities to students and their parents. **The cost of attendance is \$10 per parent/child team per event.** Slots fill on a first-come-first-serve basis, so don’t delay!

### March 29<sup>th</sup> – March Madness Course Offerings

Kooky Craniums	(1 <sup>st</sup> – 3 <sup>rd</sup> )
Mecha Madness	(1 <sup>st</sup> – 3 <sup>rd</sup> )
Rollercoaster Rally	(4 <sup>th</sup> - 6 <sup>th</sup> )
Trick Shot	(4 <sup>th</sup> - 6 <sup>th</sup> )

### April 11<sup>th</sup> – World Health Course Offerings

Brains vs Zombies	(1 <sup>st</sup> – 3 <sup>rd</sup> )
The GUTS of Blood and Diseases	(1 <sup>st</sup> – 3 <sup>rd</sup> )
Starch Wars: The Fork Awakens	(4 <sup>th</sup> - 6 <sup>th</sup> )
Dangerous Decibels	(4 <sup>th</sup> - 6 <sup>th</sup> )

**For more information, including full course descriptions, or to register:** Please contact Josh King ([josh.king@auburn.edu](mailto:josh.king@auburn.edu) or 334-844-8123) or visit us online at <http://auburn.edu/cosam/guts>.

Volume 8: Issue 2

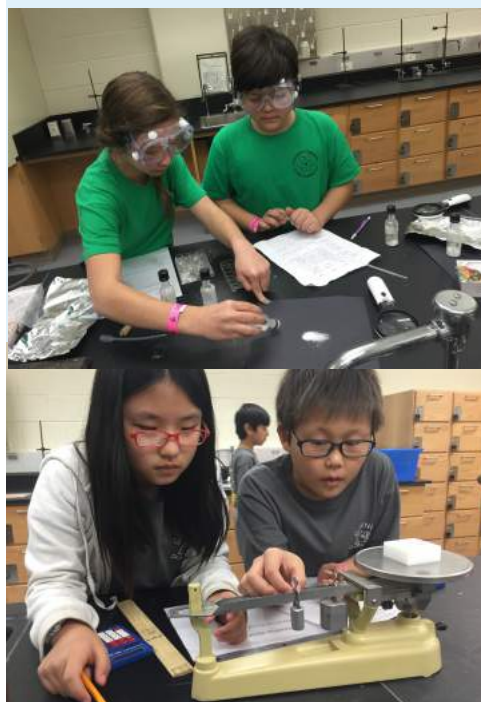
## Outreach Calendar

### March

- 3 Junior Division GEARSEF
- 10 Senior Division GEARSEF
- 29 March Madness GUTS

### April

- 6 Nano Days
- 11 World Health Day GUTS



## Nano Days

Join us for hands-on experiments and activities that demonstrate science at the nanoscale for grades 2-10!

Wednesday, April 6, 2016

5:00 - 7:30 P.M.

Agricultural Heritage Park Pavilion

620 N. Donahue Drive, Auburn, AL 36832

This is a national event. To register, please visit the Auburn Nano Days website at <http://tinyurl.com/NanoDays2016>. There is no fee to attend the Auburn event but registration is required. Children must be accompanied by an adult at all times.

For additional questions, please contact [AuburnNanodays@gmail.com](mailto:AuburnNanodays@gmail.com)

Hope to see you there!



## 2016 Core Teacher Training

Registration Now Open

Each summer, Auburn University offers core training for Project Lead The Way (PLTW) Engineering, Biomedical Science, Gateway, and Launch programs to train teachers how to effectively use PLTW curricula with their students. According to the PLTW network agreement, only trained PLTW teachers may teach the curriculum.

Core training provides teachers with the knowledge to utilize the PLTW technology, software and associated curriculum. Classes are taught by master teachers and affiliate professors who bring hands-on teaching experience to the classroom. PLTW pays significant attention to assessing the teachers' readiness for the intensive two-week training. PLTW training courses at Auburn University this summer include:

- June 6 - June 17: Engineering Design and Development (EDD)
- June 6 - June 17: Principles of Engineering (POE)
- June 6 - June 17: Digital Electronics (DE)
- June 6 - June 17: Computer Integrated Manufacturing (CIM)
- June 6 - June 10: Design and Modeling (DM)
- June 13 - June 17: Automation & Robotics (AR)
- June 20 - June 24: Medical Detectives (MD)
- June 20 - July 1: Introduction to Engineering Design (IED)
- June 20 - July 1: Principles of Biomedical Sciences (PBS)
- June 20 - July 1: Human Body Systems (HBS)
- July 11 - July 22: Medical Interventions (MI)
- July 11 - July 22: Biomedical Innovations (BI)

**For further information visit us at**

**<http://www.pltw.org/core-training-course-offerings>**

For more information or to join the Alabama PTLW email list, contact:

<http://auburn.edu/pltw>

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# Upcoming Events and Programs (Cont'd.)

# Upcoming Events



Volume 8: Issue 2

## Upcoming Events and Programs (Cont'd.)

Space still available for rising 5<sup>th</sup>- 8<sup>th</sup> grade students!

**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!

There are still spaces available for rising 5<sup>th</sup>-8<sup>th</sup> graders. For more information or to download our registration form, please click on:

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

### Available Course Offerings by Grade

Week	1st - 2nd Grade	3rd - 4th Grade	5th - 6th Grade	7th - 8th Grade
June 6-10	FULL	FULL	Minute to Win It	No Offering
June 13 - 17	FULL	FULL	Amusement Park Adventure	Back to the Future I
June 20 - 24	FULL	FULL	Grocery Games	Back to the Future II
June 27 - July 1	FULL	FULL	Let's Take a Selfie	No Offering
July 18 - 22	FULL	FULL	Circle of Life	No Offering
July 25 - 29	FULL	FULL	Toying with Physics	No Offering

If you'd like to add your child to our waiting list for our 1<sup>st</sup>-4<sup>th</sup> grade classes, please click on:

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

Need more information? Contact Kristen Bond at 334-844-5769 or

[Kristen.Bond@auburn.edu](mailto:Kristen.Bond@auburn.edu)



## Activity of the Issue

### Make “Plastic” Milk\*

(The hidden proteins of dairy)

#### Materials:

- One cup of milk
- 4 teaspoons of white vinegar
- A bowl
- A strainer
- Adult help

#### What to do:

1. Ask your friendly adult to heat up the milk until it is hot, but not boiling.
2. Now ask the adult to carefully pour the milk into the bowl.
3. Add the vinegar to the milk and stir it with a spoon for about a minute.
4. Now the fun part, pour the milk through the strainer into the sink – careful it may be hot! Left behind in the strainer is a mass of lumpy blobs.
5. When it is cool enough, you can rinse the blobs off in water while you press them together.
6. Now just mold it into a shape and it will harden in a few days. – Cool!

#### How Does It Work?

Plastic? In milk? Well, sort of. You made a substance called **CASEIN**. It’s from the Latin word meaning “cheese.” Casein occurs when the **protein** in the milk meets the acid in the vinegar. The casein in milk does not mix with the acid and so it forms blobs. True plastics, called polymers, are a little different. If you want to make a true plastic and learn more about polymers, try the Homemade Slime experiment (<https://sciencebob.com/make-some-starch-slime-today>). Have fun!

#### Make It An Experiment

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. Will more vinegar make more casein?
2. Will you get the same results with low-fat milk, soy milk?
3. Do all types of vinegar work?
4. Will other acids, such as lemon juice and orange juice work?



*\*This activity and accompanying graphics were developed by “Science Bob” and adapted for this publication. For more experiment ideas visit:*

<http://www.sciencebob.com>

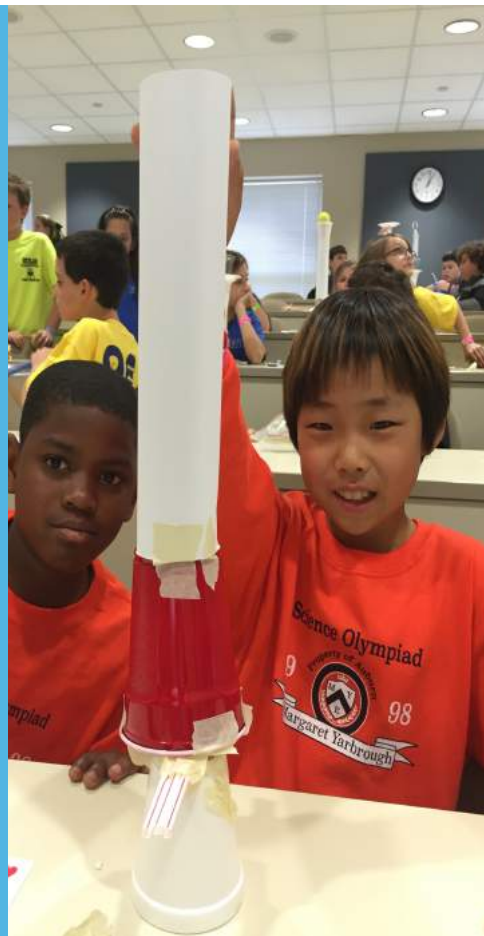
# Since the last issue (cont.)

## Elementary Science Olympiad

### Overall Winners

- 1st – Team # 9 – Ogletree Elementary School A
- 2nd – Team # 22 – Pick Elementary School
- 3rd – Team # 28 – Mountain Gap Elementary School
- 4th – Team # 12 – Wrights Mill Road Elementary School A
- 5th – Team # 15 – Fairhope Intermediate School
- 6th – Team # 11 – St. Luke's Episcopal School A
- 7th – Team # 24 – Thompson Intermediate School
- 8th – Team # 23 – St. Luke's Episcopal School B
- 9th – Team # 21 – Ogletree Elementary School B
- 10th – Team # 16 – Highlands Elementary School B

For more information about Science Olympiad visit our webpage  
[www.auburn.edu/cosam/scienceolympiad](http://www.auburn.edu/cosam/scienceolympiad)



Volume 8: Issue 2

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

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

## For more information about any of our programs visit:

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

Or call us at 334-844-7449

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