Program: Math-a-Thon

Date: Saturday, January 24, 2009; 8:00am- 3:30 pm

Description: Math Tournament including Individual Test, Ciphering, School Bowl, and Aubie Bowl (Interschool Competition)

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Bonnie Wilson, Tiffany Ostertag, Erin Edmondson, Emily Newcomb, Sallie Martin, Jesse Daniel, Laura Stubbs, Tyler Henderson, Andras Bezdek, Dean Hoffman, Krystyna Kuperberg, Edward Slaminka
- Non-AU: N/A

Schools Impacted: Auburn High, Grissom High, Hanceville High, Handley High, Homewood High, Hoover High, Minor High, Vestavia Hills High
- Total Number of Students: 130
- Age Range: 9th- 12th grade

Facilities: SCA, SCC, Parker Hall

School Statistics
- Auburn High School
  - Number of Students: 7
  - Age Range: 11th-12th grade
  - Individual Test Scores
    - Highest: 88; Lowest: 42 (Range of 46)
    - Average: 72.8
- Grissom High School
  - Number of Students: 33
  - Age Range: 9th-12th grade
  - Individual Test Scores
    - Highest: 100; Lowest: 15 (Range of 85)
    - Average: 62.7
- Hanceville High School
  - Number of Students: 7
  - Age Range: 12th grade
  - Individual Test Scores
    - Highest: 60; Lowest: 19 (Range of 33)
    - Average: 37
- Handley High School
  - Number of Students: 12
  - Age Range: 10th-12th grade
  - Individual Test Scores
    - Highest: 45; Lowest: 10 (Range of 35)
    - Average: 26.8
- Homewood High School
  - Number of Students: 18
  - Age Range: 10th-11th grade
  - Individual Test Scores
    - Highest: 102; Lowest: 37 (Range of 65)
    - Average: 68.0
- Hoover High School

Facilities: SCA, SCC, Parker Hall
• Number of Students: 17
• Age Range: 10th-12th grade
• Individual Test Scores
  ▪ Highest: 110; Lowest: 35 (Range of 75)
  ▪ Average: 70.7

• Minor High School
  o Number of Students: 2
  o Age Range: 12th grade
  o Individual Test Scores
    ▪ Highest: 23; Lowest: 21 (Range of 2)
    ▪ Average: 22

• Vestavia High School
  o Number of Students: 34
  o Age Range: 10th-12th grade
  o Individual Test Scores
    ▪ Highest: 110; Lowest: 33 (Range of 46)
    ▪ Average: 69.3

Individual Test
• 75 minute, multiple choice test
• 50% of Overall Team Score
• Results:
  o Division I
    ▪ 1st- Kyle Julian; Vestavia Hills
    ▪ 2nd- Eugene Wu; Hoover
    ▪ 3rd- Shushma Boppana; Vestavia Hills
    ▪ 4th- Xinke Guo; Hoover
    ▪ 5th- Suyoung Jang; Vestavia Hills
    ▪ 6th- Jimmy Nakamura; Homewood
    ▪ 7th- Patrick Voytek; Grissom
    ▪ 8th- Owen Scott; Vestavia Hills
    ▪ 9th- Nikhil Goel; Grissom
    ▪ 10th- Nitish Aggarwal; Vestavia
  o Division II
    ▪ 1st- Ben Burkhart; Hanceville
    ▪ 2nd- Audrey Quick; Hanceville
    ▪ 3rd- Rob Harper; Handley
    ▪ 4th- Jarrod Brown; Hanceville
    ▪ 5th- Cassie Tankersley; Hanceville

Ciphering
• Four rounds of 5 timed questions
• 25% of Overall Team Score
• Results:
  o Division I
    ▪ 1st- Grissom High School Team I
    ▪ 2nd- Vestavia Hills High School Team I
    ▪ 3rd- Vestavia Hills High School Team II
  o Division II
    ▪ 1st- Handley High School

School Bowl
• 75 minute, group question
• 25% of Overall Team Score

Aubie Bowl
• Optional full team test
• Results
  o 1st- Homewood High School Team 1
  o 2nd- Hoover High School
  o 3rd- Auburn High School
Overall Team Awards

• Results:
  o Division I
    ▪ 1st- Grissom High School Team I
    ▪ 2nd- Vestavia Hills High School Team I
    ▪ 3rd- Hoover High School
  o Division II
    ▪ 1st- Hanceville High School
Program: Auburn University Science Day at Eagle Ranch Children’s Home

Date: Saturday, February 7, 2009; 10:00 am - 1:30 pm EST

Description: 3 one hour courses, each offered twice

Personnel:
- **AU:** Mary Lou Ewald, Emma Seiler, Erin Edmondson, Emily Newcomb, Sallie Martin, Jesse Daniel, Lara Stubbs
- **Non-AU:** N/A

Schools Impacted: Eagle Ranch
- **Total Number of Students:** 38
- **Age Range:** 4th-10th grade

Facilities: Schoolhouse at Eagle Ranch

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**Genes in a Bottle**
- Instructed by: Erin Edmondson
- Number of Students: 24 total (23 reporting on survey)
- Student Satisfaction Ranking: 4.6 (out of 5)
- Age Range: 5th-10th grade
- Pre-Test: 66% Correct
- Post-Test: 71% Correct
- Top new concept learned: Structure of DNA
- Other new concepts learned: Facts about DNA; DNA extraction process

**Lemon Battery**
- Instructed by: Emily Newcomb
- Number of Students: 23 Total (18 Reporting)
- Student Satisfaction Ranking: 4.3 (out of 5)
- Age Range: 4th-8th Grade
- Pre-Test: 56% Correct
- Post-Test: 72% Correct
- Top new concept learned: Voltage can be created with a combination of fruit (electrolyte) and metal (electrodes)
- Other new concepts learned: Voltage facts; How voltage is measured

**Water Bugs**
- Instructed by: Jesse Daniel
- Number of Students: 22 Total (19 Reporting)
- Student Satisfaction Ranking: 4.1 (out of 5)
- Age Range: 4th-10th grade
- Pre-Test: 36% Correct
- Post-Test: 67% Correct
- Top new concept learned: The variety of microscopic organisms present in water samples
- Other new concepts learned: Ecosystem, Food Chain, and Food Web facts; How to use a dissecting microscope

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**Pursuit of a Scientific Career**
(from post program survey)

- **Maybe:** 35%
- **Yes:** 43%
- **No:** 17%
- **No Response:** 5%

Science Career Interests:
Animal Science, Biology, Electrical Engineering, Genetics
Program: Getting Under the Surface (G.U.T.S)

Date: Thursday, February 19, 2009; 6:00 pm - 8:00 pm

Description: Parent/Child teams act as lab partners in a 75-90 minute science activity.

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Sallie Martin, Lara Stubbs, Jesse Daniel, Cathy Miller, Paul Norgaard
- Non-AU: Chris McDuffie- Alabama State Dept. of Ed.

Schools Impacted: N/A
- Total Number of Students: 21
- Total Number of Parents: 22
- Age Range: K-6th Grade

Facilities: Parker Hall 307, SCL

Strawberry Genes
- Developed by: Erin Edmondson, Instructed by: Sallie Martin
- Number of Students: 11 total (11 reporting on survey)
- Student Satisfaction Ranking: 4.6 (out of 5)
- Parent Satisfaction Ranking: 4.5 (out of 5)
- Age Range: K-3rd Grade

Getting a Charge Out of Batteries
- Instructed by: Paul Norgaard, Cathy Miller, and Chris McDuffie
- Number of Students: 10 total (4 reporting on survey)
- Student Satisfaction Ranking: 4.75 (out of 5)
- Parent Satisfaction Ranking: 4.75 (out of 5)
- Age Range: 4th-6th Grade

How did you hear about G.U.T.S.?

- AU Daily: 36%
- University Employee: 7%
- Other E-mail: 7%
- Other: 7%
- No Response: 7%
- Other: 7%
Program: Tests of Engineering Aptitude, Mathematics, and Science (TEAMS) Competition

Date: Friday, February 27, 2009; 12:00 pm- 5:00 pm

Description: Tests provided by the Junior Engineering Technical Society (JETS)

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, George Blanks
- Non-AU: n/a

Schools Impacted: Carroll High School, Central Education Center, Columbus High School, Hewitt Trussville High School, Northside High School, Prattville High School, Priceville High School, Grissom High School, Zion Chapel
- Total Number of Students: 82
- Age Range: 10th – 12th grade

Facilities: AU Student Center Ballroom

Sponsorship: Southern Company ($1000)
Program: Science Olympiad- Middle School

Date: Saturday, February 28, 2009; 7:30 am - 4 pm

Description: 25th Anniversary Regional Middle School Olympiad

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, Dr. Steve Stuckwisch, Erin Edmondson, Sallie Martin, Jesse Daniel, Lara Stubbs, Craig Guyer, Chris Sunderman, Larissa Parsley, Maggie Han, Allen Landers, Cathy McVay, Ashraf Uddin, Brian Helms, Dimitry Glotov, Rik Blumenthal, Ron Lewis, Mike Fogle, JJ Dong, Holly Ellis, Doug Goodwin, Minseo Park, William Maddox, Josh Inwood, Stuart Loch, Virginia Davis, TY Tam, Huajan Huang, Erkan Nane, Yanzaho Cao, Mike Miller
- Non-AU: N/A

Schools Impacted: Auburn Junior High, Bagley Junior High, Baldwin Arts and Academic Magnet, Bottenfield Middle, Clanton Middle, Carver Magnet, Drake Middle School, Fultondale High, Girard Middle, Geneva Middle, Marion Academy, McAdory Middle, Opelika Middle, Zora Ellis Junior High

- Total Number of Students: approx. 450
- Age Range: 5th-8th grade

Facilities: Student Activities Center, Parker Hall, SCL, SCC, Rouse Life Sciences, Petrie Hall, Haley Center
**Program:** Greater East Alabama Regional Science and Engineering Fair

**Date:** Thursday, March 12, 2009; 8:00 am - 3:00 pm

**Description:**

**Personnel:**
- **AU:** Mary Lou Ewald, Emma Seiler, George Blanks, Kathy Feminella, Erin Edmondson, Sallie Martin, Jesse Daniel, Lara Stubbs, Major Hesterman - Marine ROTC, Navy ROTC Personnel, Marine ROTC Personnel, Air Force ROTC Personnel
- **Non-AU:** N/A

**Schools Impacted:** Capitol Heights Junior High School, East Memorial Christian Academy, Eastwood Presbyterian Church School, Eclectic Middle School, Elmore County High School, Glenwood School, Holtville Middle School, Millbrook Middle/Junior High School, Wetumpka High School, Wetumpka High School, Wetumpka Intermediate School, Wetumpka Junior High School

- **Total Number of Students:** 80
- **Age Range:** 6th-12th grade

**Facilities:** Student Center Ballroom A&B

**Special Awards**

- **US Air Force**
  - James Hendrix
  - Nicholas Christensen
  - Jesse Vahjen
  - Sarah Sumner
- **Yale Science & Engineering Association**
  - Nicholas Christensen
- **Intel Excellence in Computer Science**
  - Nicholas Christensen
- **National Society of Professional Engineers**
  - Nicholas Christensen
- **American Psychological Association**
  - Christian Gholson
- **Ricoh Sustainable Development Award**
  - Austin William
- **US Metric Association**
  - Sarah Sumner
- **Association of Women Geoscientists**
  - Jessie Hammett
- **Mu Alpha Theta**
  - Samuel Sumner
- **National Oceanic & Atmospheric Association**
  - Haviland Harden
- **Dauphin Island Sea Lab**
  - Austin Williams
  - Laine Kelly
  - Alec Boulware
  - Haviland Harden
ISEF Finalists - to represent the region at ISEF in Reno, NV

- Kelly Lynn, Wetumka High School
  - Gold Dust: An Alternative to Commercial Sunscreens, A Spectrometric & Ultraviolet Light Study Using *Lumbricus terrestris*

- Nicholas Christensen, Wetumpka High School
  - Do You ‘Ear What I ‘Ear? Lowering Voice Frequencies in Real Time to Revolutionize Hearing Assistance Technology

- Parker Caviness & Todd Thrash, Wetumpka High School
  - A Shocking Twist
Program: Getting Under the Surface (G.U.T.S)
Date: Thursday, March 26, 2009; 6:00 pm - 8:00 pm
Description: Parent/Child teams act as lab partners in a 75-90 minute science activity.
Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Sallie Martin, Lara Stubbs, Jesse Daniel,
- Non-AU: Gina Watkiss- The Heritage School; Newnan, GA
Schools Impacted: N/A
- Total Number of Students: 23
- Total Number of Parents: 23
- Age Range: 1st-6th Grade
Facilities: Parker Hall 307, SCL 310, SCL 302
Multiplying Microbes
- Instructed by: Erin Edmondson
- Number of Students: 9 total (9 reporting on survey)
- Student Satisfaction Ranking: 4.8 (out of 5)
- Parent Satisfaction Ranking: 4.8 (out of 5)
- Age Range: 4th-6th Grade
Slimy Science
- Instructed by: Gina Watkiss
- Number of Students: 14 total (9 reporting on survey)
- Student Satisfaction Ranking: 4.5 (out of 5)
- Parent Satisfaction Ranking: 4.7 (out of 5)
- Age Range: 1st-3rd Grade
How did you hear about G.U.T.S.?

- AU Daily: 33%
- Other E-mail: 39%
- University Employee: 6%
- Other: 22%
Program: Spring YES  
Date: Saturday, April 4th 2009; 8:00am- 12:00 pm  
Description: Each child will participate in hands-on, make-and-take activities related to specific fields of science and math in a half-day academy.  
Personnel:  
- AU: Mary Lou Ewald, Emma Seiler, Erin Edmondson, Sallie Martin, Jesse Daniel, Laura Stubbs, Emily Newcomb, Jennifer Trusty, Tug Kessler, Evi Paemelaere, Linda Pastorello  
- Non-AU: n/a  
- Total Number of Students: 91  
- Age Range: 3rd-6th Grade  
Facilities: Parker Hall  
Carnivorous Plants  
- Instructors: Dr. Jennifer Trusty and Dr. Tug Kessler, AU College of Forestry and Wildlife Sciences  
- Number of Students: 51  
  - Course 1-25 students  
  - Course 2- 26 students  
Earning Your Stripes  
- Instructors: Evi Paemelaere and Linda Pastorello, Tigers for Tigers  
- Number of Students: 47  
  - Course 1- 24 students  
  - Course 2- 23 students  
Kitchen Chemistry  
- Instructor: Emily Newcomb, AU College of Education  
- Number of Students: 52  
  - Course 1- 26 students  
  - Course 2- 26 students  
Getting a Jolt Out of Juice  
- Instructors: Mary Lou Ewald and Erin Edmondson, COSAM Outreach  
- Number of Students: 32  
  - Course 1- 16 students  
  - Course 2- 16 students
Program: Getting Under the Surface (G.U.T.S)

Date: Tuesday, April 14th 2009; 6:00 pm - 8:00 pm

Description: Parent/Child teams act as lab partners in a 75-90 minute science activity.

Personnel:

- AU: Mary Lou Ewald, Emma Seiler, Sallie Martin, Lara Stubbs, Jesse Daniel, Paul Norgaard, Cathy Miller, 5 Alpha Epsilon Delta volunteers
- Non-AU: Gina Watkiss - The Heritage School; Newnan, GA

Schools Impacted: N/A

- Total Number of Students: 36
- Total Number of Adults: 37
- Age Range: 1st-6th Grade

Facilities: Parker Hall 307, SCL 310, SCL 302, Parker 112

Buggin’ Out

- Instructed by: Sallie Martin
- Number of Students: 11 (8 reporting on survey)
- Student Satisfaction Ranking: 4.75
- Parent Satisfaction Ranking: 4.75
- Age Range: 1st-3rd Grade

Slimy Science

- Instructed by: Gina Watkiss
- Number of Students: 13
- Student Satisfaction Ranking: n/a
- Parent Satisfaction Ranking: n/a
- Age Range: K-3rd Grade

Edible Chemistry

- Instructed by: Paul Norgaard & Cathy Miller
- Number of Students: 12 (5 reporting on survey)
- Student Satisfaction Ranking: 4.8
- Parent Satisfaction Ranking: 5
- Age Range: 4th - 6th Grade
Program: AU Explore

Date: Thursday, April 30, 2009, 8:00 am- 3:00 pm

Description: The College of Sciences and Mathematics science open house

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, George Blanks, Erin Edmondson, Jesse Daniel, Sallie Martin, Lara Stubbs, Dan McDougall, Ed Slominka, Anne Gorden, Cathy Miller, Craig Guyer, Jennifer Cox, John Gorden, Pam Pearson, Paul Norgaard, Roy Crowe, Thomas Webb, Marlin Simon, Dave Patrick, Matt Jones, Stuart Loch, Wayne Strickland, Kristy Mann, Patrick Barrineau, Mack Martin, Wei Zhan, Wendall Sandlin, Bob Lishak, Mark Liles, Christine Sundermann, Laura Suh, Sang-Jin Suh, Tony Moss, Brian Helms, Molli Newman, Kat Milly West, Patrick Thompson, approx. 50 departmental graduate and undergraduate volunteers
- Non-AU: n/a

Schools Impacted: A2Z Homeschool, Bearcreek Christian School, Cary Woods Elementary, Community Fellowship School, Cornerstone Christian Academy, Dark Horse Station, Dixie Elementary, Eagle Ranch, Everest Academy (Birmingham), Everest Academy (Georgiana), Golden Acres Christian School, Golden Flower School, Hall of Literacy, J.F. Drake Middle School, Kean Homeschool, Kirkland Homeschool, Lee-Scott Academy, McGahey Homeschool, Montgomery Academy, Northside Intermediate, Outlook Academy, Phenix City Intermediate, Rainey Homeschool, South Girard School, Stewart Homeschool, The Little French Academy, West Forest Intermediate, Whitehouse Academy, Wooten Homeschool, Wrights Mill Road Elementary, Yarbrough Elementary
- Total Number of Students: approx. 1450
- Age Range: 5th - 8th grade

Facilities: Parker Hall, SCL, Chemistry Building, Rouse Life Sciences, Saunders Lawn

The EXPO- 9:00 - 12:00 - The EXPO is a series of dozens of interactive displays sponsored by each of the departments that comprise the College of Sciences and Mathematics (COSAM) at Auburn – Math/Statistics, Physics, Biology, Chemistry/Biochemistry, and Geology/Geography. Students are invited to browse the displays at their own pace and be prepared to see, touch, hear, and smell the many wonders of science and math! Don’t miss the Live animal displays, featuring snakes, lizards, turtles, spiders, insects, and many more fascinating creatures!
- SCL, Chemistry Building, Saunders Lawn

Science Fun Shops- 8:30 - 2:00- The “Science Fun Shops” are short, hands-on mini-courses focused on a particular topic. The courses typically last about 45 minutes and will have 25-40 participants. These courses will be ticketed courses and pre-registration is required. Tickets for unfilled courses will be available at the Information Tent.
• All About Eyeballs  
  o Instructed by: Bob Lishak  
  o 1, 45 minute course: capacity 36

• Build a Kaleidoscope  
  o Instructed by: Marllin Simon  
  o 3, 45 minute courses: capacity 26

• Build a Motor  
  o Instructed by: Matt Jones  
  o 3, 45 minute courses: capacity 26

• Cartesian Diver  
  o Instructed by: Dave Patrick  
  o 3, 45 minute courses: capacity 40

• Chemistry of Glass Blowing  
  o Instructed by: Wendall Sandlin  
  o 2, 45 minute courses: capacity 100

• Davis Arboretum  
  o Instructed by: Patrick Thompson  
  o 3, 45 minute courses: capacity 30

• Fly Over Alabama  
  o Instructed by: Mack Martin and Patrick Barrineau  
  o 4, 45 minute courses: capacity 44

• Genes in a Bottle  
  o Instructed by: Mark Liles  
  o 2, 45 minute courses: capacity 24

• The Great Race  
  o Instructed by: Wayne Strickland and Kristy Mann  
  o 2, 90 minute courses: capacity 40

• Invisible Chefs  
  o Instructed by: Laura and Sang-Jin Suh  
  o 1, 45 minute courses: capacity 30

• Medical Technology  
  o Instructed by: Kat Milly West  
  o 3, 45 minute courses: capacity 60

• Microscopic Wonders  
  o Instructed by: Christine Sundermann  
  o 2, 45 minute courses: capacity 24

• Palm Pipes  
  o Instructed by: Stuart Loch  
  o 3, 45 minute courses: capacity 75

• River Creatures  
  o Instructed by: Brian Helms and Mollie Newman  
  o 3, 45 minute courses: capacity 24

• The Science of Glow  
  o Instructed by: Wei Zhan  
  o 2, 45 minute courses: capacity 150

• Silly Cilia  
  o Instructed by: Tony Moss  
  o 3, 45 minute courses: capacity 30

Demo Shows- 9:00 - 1:30
  • Wet-n-Wild Science Show- 9:00, 11:00  
    o 1 hour sessions, Parker 307 – seating capacity 250  
    o Hosted by Auburn University Science in Motion

  • Stinky Science Show- 9:00, 10:00  
    o 30 minute sessions, Chemistry 151– seating capacity 200  
    o Dr. Thomas Webb, Professor Emeritus, Dept. of Chemistry/Biochemistry

  • Pyro-Mania Show- 9:30, 11:00  
    o 30 minute sessions, Graves Amphitheater – seating capacity approx. 500 (In case of rain, cancelled)  
    o Drs. Anne & John Gorden, Dept. of Chemistry/Biochemistry

  • Herps- Up Close with Snakes, Lizards, and More!- 10:15  
    o 30 minute session, Graves Amphitheater– seating capacity approx. 500 (In case of rain, moved to Chemistry 134)  
    o Dr. Craig Guyer, Dept. of Biological Sciences

  • Birds of Prey- 11:00, 11:45, 1:00  
    o 30 minute sessions, Chemistry 151– seating capacity 200  
    o Southeastern Raptor Center
Program: G.U.T.S. Backyard Bash

Date: Saturday, May 2, 2009, 5:30pm- 8:30pm

Description: End of the year celebration for all G.U.T.S. participants which included:

- Burger and hot dog dinner served on Saunders Lawn
- Liquid nitrogen ice cream demonstration
- Dr. Susanne Striegler’s 1 hour organic chemistry show

Personnel:

- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, Susanne Striegler, Erin Edmondson, Jesse Daniel, Sallie Martin, Paul Norgaard, Cathy Miller, Katie Prince
- Non-AU: Brandon Mayfield, Lauren Bailey

Schools Impacted: n/a

- Total Number of Participants: 140
  - 66 students
  - 74 adults
- Age Range: 3-13 years

Facilities: Saunders Lawn, Chemistry Building
Program: BEST National Conference 2009

Date: Wednesday, June 17- Saturday, June 20, 2009

Description: The first annual national conference for BEST Robotics, Inc.

Personnel:
- AU: Mary Lou Ewald, George Blanks, Emma Seiler, Kathy Feminella, Erin Edmondson, Emily Newcomb, Katy Prince, Jesse Daniel, Sallie Martin, Lara Stubbs, Stephen Haddock
- Non-AU: Workshop presenters and instructors from nation-wide BEST hubs (see attached schedule)

Facilities: Parker Hall, SCL, SCC, The Hotel at Auburn University & Dixon Conference Center

Impact:
- Attendees: approx. 180; including middle and high school students, teachers, mentors, heads of industry, and university faculty and staff.
- BEST actively engages over 10,000 students, thousands of industry sponsors and mentors, various school districts and state departments of education, and 19 colleges and universities from across the United States.
- Hubs Represented:
  - Alabama BEST-Auburn, AL
  - Bison BEST-Fargo, ND
  - Blazer BEST-Birmingham, AL
  - Brazos BEST-College Station, TX
  - Bulldog BEST-Starkville, MS
  - Capitol BEST-Austin, TX
  - Costal Bend BEST-Kingsville, TX
  - Collin County BEST-McKinney, TX
  - Connecticut BEST-New Britain, CT
  - Cowtown BEST-Fort Worth, TX
  - Crowley’s Ridge BEST-Jonesboro, AR
  - Dallas BEST-Dallas, TX
  - Denton County BEST-Denton, TX
  - Emerald Coast BEST-Pensacola, FL
  - Frontier Trails BEST Championship-Fort Smith, AR
  - Galveston BEST-Galveston, TX
  - Georgia BEST-Marietta, GA
  - Golden Lions BEST-Pine Bluff, AR
  - Heartland BEST-Alva, OK
  - Hot Springs BEST-Hot Springs, AR
  - Jubilee BEST-Mobile, AL
  - Kansas BEST-Wichita, KS
  - Little Rock BEST-Little Rock, AR
  - Mid-South BEST-West Memphis, AR
  - Music City BEST-Nashville, TN
  - New Mexico BEST-Las Cruces, NM
  - North Alabama BEST-Hanceville, AL
  - North Houston BEST-Houston, TX
  - North Texas BEST-Sherman, TX
  - Northark BEST-Harrison, OK
  - Philadelphia BEST-Philadelphia, PA
  - River Valley BEST-Fort Smith, AR
  - San Antonio BEST-San Antonio, TX
  - South’s BEST Championship-Auburn, AL
  - Space City BEST-Houston, TX
  - Tennessee Valley BEST-Decatur, AL
  - Texas BEST Championship-Sherman, TX
  - West Texas BEST-Lubbock, TX
### Schedule and Details
**Wednesday, June 17, 2009 - Pre-Conference Workshops**

<table>
<thead>
<tr>
<th>Time</th>
<th>Workshop</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:15 – 8:45</td>
<td><strong>Workshop Registration/Check-in – SCA Lobby</strong></td>
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<td>9:00 - 12:00</td>
<td><strong>Starting a BEST Hub</strong> (Paul George, Blazer BEST &amp; Nancy Rossland, Bison BEST)</td>
<td>SCL 231</td>
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<td><strong>New BEST Teachers</strong> (Robin Fenton, Jubilee BEST)</td>
<td>SCL 310</td>
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<td><strong>Intro to SolidWorks</strong> (Jeremy Standlee, Technical Training Aids)</td>
<td>Parker Hall 126</td>
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<td>12:00 - 1:00</td>
<td><strong>LUNCH BREAK</strong></td>
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<td>1:00 - 4:00</td>
<td><strong>Starting a BEST Hub (cont.)</strong> (Paul George, Blazer BEST &amp; Nancy Rossland, Bison BEST)</td>
<td>SCL 231</td>
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<td><strong>Advanced BEST Teachers</strong> (Robin Fenton, Jubilee BEST)</td>
<td>SCL 231</td>
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<td><strong>Advanced SolidWorks</strong> (Bobby Conrad, Technical Training Aids)</td>
<td>Parker Hall (TBA)</td>
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<td><strong>BRAIN Workshop</strong> (Greg Young, Capitol BEST; Terry Grimley, San Antonio BEST; Paul Bilke, Brazos BEST)</td>
<td>SCC 129</td>
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<td><strong>NOTE:</strong> Workshop ends at 5:00pm</td>
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<td>4:00 – 6:00</td>
<td><strong>Conference Registration (AUHCC Pre-function Foyer)</strong></td>
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**Thursday, June 18, 2009**

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 – 5:00</td>
<td>Conference Registration Open (AUHCC Pre-Function Foyer)</td>
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<td>Continental Breakfast provided</td>
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<tr>
<td>8:00 – 12:00</td>
<td><strong>BRAIN Workshop (SCC 129)</strong></td>
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<td>8:00 – 9:00</td>
<td>Cultivating Community Partners for Your BEST Team (R. Fenton)</td>
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<td>Seminar Room</td>
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<td>9:15 – 10:15</td>
<td>First Steps to an Engineering Academy (M. Fletcher)</td>
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<td>Governor’s Room</td>
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<td>10:30 – 11:30</td>
<td>Care and Feeding of Rechargeable Batteries (S. Marum)</td>
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<td></td>
<td>BEST Return Kit Basics (W. Cutshall &amp; J. Cutshall)</td>
</tr>
<tr>
<td>10:30 – 11:30</td>
<td>Organizing Large Teams for Successful Student Involvement (L. Matheson)</td>
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<td></td>
<td>Advantages and Disadvantages of a Large Multi-Discipline Technical Center-Based BEST Robotics Team (D. Goodson)</td>
</tr>
<tr>
<td></td>
<td>Governor’s Room</td>
</tr>
<tr>
<td>11:30 – 1:30</td>
<td>Using Participatory Design Techniques to Analyze the BEST Game (T. Powell)</td>
</tr>
<tr>
<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>12:30 – 4:30</td>
<td><strong>Hyundai Plant Tour (Assemble at Registration)</strong></td>
</tr>
<tr>
<td>1:30 – 2:30</td>
<td>BRAIN Basics (B. Rosenstiel)</td>
</tr>
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<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>2:30 – 3:00</td>
<td>Networking Break (PF)</td>
</tr>
<tr>
<td>3:00 – 4:30</td>
<td>BEST Award Panel Discussion (Moderator: J. Martini)</td>
</tr>
<tr>
<td></td>
<td>Ballroom A-Left</td>
</tr>
<tr>
<td>5:00 – 6:30</td>
<td>Wine and Cheese Reception (followed by dinner on your own) AUHCC Pre-Function Foyer</td>
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</tbody>
</table>

**Friday, June 19, 2009**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 – 5:00</td>
<td>Conference Registration Open (AUHCC Pre-Function Foyer)</td>
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<tr>
<td></td>
<td>Continental Breakfast provided</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
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<td>------------</td>
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</tr>
<tr>
<td>8:00 - 9:00</td>
<td>Managing the BEST Return Kit (J. Cutshall &amp; W. Cutshall)</td>
</tr>
<tr>
<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>8:00 - 9:00</td>
<td>BEST and Workforce Development: Finding Funding in Your State (G. Blanks)</td>
</tr>
<tr>
<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Large Companies as Sponsors (G. Ackerman)</td>
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<td></td>
<td>Ballroom B-Right</td>
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<td></td>
<td>Sublimation and the BEST Award (D. Gross)</td>
</tr>
<tr>
<td></td>
<td>Governor’s Room</td>
</tr>
<tr>
<td>9:15 - 10:15</td>
<td>An Overview of BEST Game Scoring Software (T. Grimley)</td>
</tr>
<tr>
<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>9:15 - 10:15</td>
<td>Judging Compliance and Resources for Hubs (M.L. Ewald, J. Ackerman, G. Young)</td>
</tr>
<tr>
<td></td>
<td>Ballroom B-Right</td>
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<tr>
<td>10:30 - 11:30</td>
<td>Building a BEST Focused Community (R. Fenton)</td>
</tr>
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<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>10:30 - 11:30</td>
<td>The BEST Advantage to Social Media (G. Young)</td>
</tr>
<tr>
<td></td>
<td>Ballroom B-Right</td>
</tr>
<tr>
<td></td>
<td>A Project and Design Oriented Innovative Electrical Engineering Program (M. Varanasi, O. Garcia, T. Fitzmaurice)</td>
</tr>
<tr>
<td></td>
<td>Gov. Room</td>
</tr>
<tr>
<td>11:30 - 1:30</td>
<td>Networking Luncheon and Guest Speaker, Dr. Ken Berry (Ballroom A)</td>
</tr>
<tr>
<td>1:30 - 2:30</td>
<td>Engineering Design Process (M. Conner)</td>
</tr>
<tr>
<td></td>
<td>Seminar Room</td>
</tr>
<tr>
<td>1:30 - 2:30</td>
<td>Educational Partnerships and Programs: Cultivating the Engineering Workforce (S. Custer, J. Coleman &amp; M. Teller)</td>
</tr>
<tr>
<td></td>
<td>Ballroom B-Right</td>
</tr>
<tr>
<td>2:30 - 3:30</td>
<td>Event Management and Compliance (Moderator: T. Grimley)</td>
</tr>
<tr>
<td></td>
<td>Ballroom B-Right</td>
</tr>
<tr>
<td>3:00 - 4:00</td>
<td>BRAIN Basics (B. Rosenstiel)</td>
</tr>
<tr>
<td></td>
<td>Ballroom B-Left</td>
</tr>
<tr>
<td>3:00 - 4:00</td>
<td>Building Robots with LEGO Mindstorm Kits: Hands-on Session (S. Mitchell)</td>
</tr>
<tr>
<td>3:00 - 4:00</td>
<td>Governor’s Room</td>
</tr>
<tr>
<td>3:00 - 4:00</td>
<td>Advisory Council &amp; Board of Directors Meeting (Seminar Room)</td>
</tr>
<tr>
<td>5:00 - 6:00</td>
<td>Reception (PF)</td>
</tr>
<tr>
<td>6:00 - 8:00</td>
<td>Banquet and Guest Speaker, Celeste Baine (Ballroom A)</td>
</tr>
</tbody>
</table>

**Saturday, June 20, 2009**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 – 2:00</td>
<td>Conference Registration Open (AUHCC Pre-Function Foyer)</td>
</tr>
<tr>
<td></td>
<td>Coffee Service Provided</td>
</tr>
<tr>
<td>8:30 - 10:00</td>
<td>Plenary Session</td>
</tr>
<tr>
<td></td>
<td>Insights from BEST Advisory Council members followed by an opportunity for Q &amp; A</td>
</tr>
<tr>
<td></td>
<td>Ballroom A</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10:00 - 10:15</td>
<td><strong>BREAK</strong></td>
</tr>
<tr>
<td>10:15 - 11:45</td>
<td><strong>Break Out Sessions</strong></td>
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<tr>
<td></td>
<td><strong>Collaborating on BEST Grants</strong> Facilitator: T. Fitzmaurice</td>
</tr>
<tr>
<td></td>
<td><strong>Teacher Training Initiative</strong> Facilitator: R. Fenton</td>
</tr>
<tr>
<td></td>
<td><strong>BEST as a K-12 Pipeline Program</strong> Facilitator: G. Blanks</td>
</tr>
<tr>
<td></td>
<td><strong>Building on our uniqueness: Establishing a National K-12 STEM Education Presence for BEST</strong> Facilitators: P. George and N. Rossland</td>
</tr>
<tr>
<td></td>
<td><strong>Ballroom A Right</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Ballroom A Left</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Governor’s Room</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Ballroom B Right</strong></td>
</tr>
<tr>
<td>12:00</td>
<td><strong>Conference concludes for teachers and other non-hub personnel</strong></td>
</tr>
<tr>
<td>12:00 - 2:00</td>
<td><strong>Lunch and Hub Council Meeting</strong> Facilitator: Ballroom A</td>
</tr>
</tbody>
</table>

**Conference concludes at 2:00pm**
Program: Summer Youth Experiences in Science (Y.E.S.) Cub Camp

Date: Monday, July 6th - Thursday July 9th 2009

Description:

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, Erin Edmondson, Jesse Daniel, Sallie Martin, Emily Newcomb, Lara Stubbs, Kat West, Lara Adams, Emily Davis, Katherine Glynn, Shane Lake, Doyeon Lim, Kate Roberts, Morgan Wallis, Brenda Wood
- Non-AU: Rebecca Balkcom- Auburn Junior High School; Gina Watkiss- The Heritage School; Brandon Mayfield- Lee Scott Academy

Schools Impacted: N/A

Total Number of Students: 54
- Age Range: rising 1st-3rd grade
  - Turtle Group: 18 students in 1st and 2nd grade
  - Butterfly Group: 18 students in 2nd and 3rd grade
  - Frog Group: 18 students in 3rd grade

Facilities: SCL, Parker Hall

Courses

Clue Seekers
- Instructed by: Kat Milly West
- Number of Students: 54 total in 3 courses
- Age Range: 1st – 3rd grade

Mysterious Mixtures
- Instructed by: Rebecca Balkcom
- Number of Students: 54 total in 3 courses
- Age Range: 1st – 3rd grade

Slimy Science
- Instructed by: Gina Watkiss
- Number of Students: 54 total in 3 courses
- Age Range: 1st – 3rd grade
Program: Summer Youth Experiences in Science (Y.E.S.) Tiger Camp

Date: Monday, July 13th - Thursday, July 16th 2009

Description: Each child will participate in hands-on, make-and-take activities related to specific fields of science and math in this 4 day academy.

Personnel:
- **AU:** Mary Lou Ewald, Emma Seiler, Kathy Feminella, Erin Edmondson, Jesse Daniel, Sallie Martin, Emily Newcomb, Lara Stubbs, Kat West, Lara Adams, Matthew Baccus, Kate Roberts, Morgan Wallis, Brenda Wood
- **Non-AU:** Rebecca Balkcom- Auburn Junior High School; Gina Watkiss- The Heritage School; Frank Ware- Samford Middle School; Brandon Mayfield- Lee-Scott Academy

Schools Impacted: The Baylor School, Cary Woods Elementary, Dean Road Elementary, Drake Middle School, Lee Scott Academy, Northside Elementary, Ogletree Elementary, Pryor Middle School, Richland Elementary, Village Montessori School, Wright’s Mill Road Elementary, Yarbrough Elementary

- **Total Number of Students:** 67
- **Age Range:** rising 4th-6th grade

Facilities: SCL, Parker Hall

**CHAOS**
- Instructed by: Gina Watkiss
- Number of Students: 50 (26 surveys)
- Average Student Satisfaction Ranking: 1.88 (out of 3: 1 being the best)
- Age Range: 4th-6th grade

**Forensic Investigators**
- Instructed by: Kat Milly West
- Number of Students: 39 Total (21 surveys)
- Average Student Satisfaction Ranking: 1.38 (out of 3: 1 being the best)
- Age Range: 4th-6th Grade

**LEGO Mania**
- Instructed by: Frank Ware
- Number of Students: 48 Total (22 surveys)
- Average Student Satisfaction Ranking: 1.72 (out of 3: 1 being the best)
- Age Range: 4th-6th Grade

**Soda Pop Science**
- Instructed by: Rebecca Balkcom
- Number of Students: 62 Total (31 surveys)
- Average Student Satisfaction Ranking: 2.58 (out of 3: 1 being the best)
- Age Range: 4th-6th Grade
Program: Summer Youth Experiences in Science (Y.E.S.) Eagle Camp

Date: Sunday, July 19th - Thursday July 23rd 2009

Description: Each child will participate in hands-on, make-and-take activities related to specific fields of science and math in this 4 day academy. 12 students took advantage of the residential option that included overnight stays in AU dorms and nightly activities.

Personnel:

- **AU:** Mary Lou Ewald, Emma Seiler, Kathy Feminella, Erin Edmondson, Jesse Daniel, Sallie Martin, Emily Newcomb, Lara Stubbs, Brian Helms, Virginia Davis, Mollie Newman, Shane Lake, Brenda Wood, Katerine Glynn, Emily Davis, John Kidd, Doyeon Lim
- **Non-AU:** Mike Smith - Auburn Junior High School; Gina Watkiss - The Heritage School; Brandon Mayfield - Lee-Scott Academy

Schools Impacted: Auburn Junior High School, Bragg Middle School, Dauphin Junior High School, Drake Middle School, Greenville Middle School, Lilburn Middle School, Lithonia Middle School, Mint Hill Middle School, Morgan Academy, Northview High School, Opelika Middle School, Sanford Middle School, Smith’s Station High School, Tallassee School System, Woodham Middle School, Zora Ellis Junior High School

- **Total Number of Students:** 41
- **Age Range:** rising 7th-9th grade

Facilities: SCL, Parker Hall

**Claymation Science**

- Instructed by: Mike Smith
- Number of Students: 23 total (21 reporting on survey)
- Student Satisfaction Ranking: 4.19 (out of 5)
- Age Range: 7th-9th grade
- New concepts learned (student reported): How to use Movie Maker© software
- New vocabulary learned (student reported): Claymation

**Nano-Nonsense**

- Instructed by: Virginia Davis
- Number of Students: 16 Total (15 Reporting)
- Student Satisfaction Ranking: 3.86 (out of 5)
- Age Range: 7th-9th Grade
- New concepts learned (student reported): Understanding static electricity and nano and pico measurement
- New vocabulary learned (student reported): Picometer, Particle Accelerator, Carbon Nano Tubes, Electron Microscope

**Physics of Toys**

- Instructed by: Gina Watkiss
- Number of Students: 24 Total (Reporting)
- Student Satisfaction Ranking: 4.36 (out of 5)
- Age Range: 7th-9th grade
- New concepts learned (student reported): How to make polymers and how to carry out scientific experiments
New vocabulary learned (student reported): Liquid Crystal, Polymer, Friction, Fusion

River Creatures
- Instructed by: Brian Helms and Molli Newman
- Number of Students: 14 Total (14 Reporting)
- Student Satisfaction Ranking: 4.64 (out of 5)
- Age Range: 7th - 9th grade
- New concepts learned (student reported): Methods of identifying of aquatic organisms and determining turbidity of water samples
- New vocabulary learned (student reported): Hellgrammite, Riparian, Watershed
Program: Getting Under the Surface (G.U.T.S)

Date: Tuesday, September 15, 2009; 6:00 pm - 8:00 pm

Description: Parent/Child teams act as lab partners in a 75-90 minute science activity.

Personnel:

- **AU:** Mary Lou Ewald, Emma Seiler, Lara Stubbs, Jesse Daniel, Paul Norgaard, TJ Nguyen, Ken Halanych, Kevin Fielman, Scott Santos, Sallie Martin
- **Non-AU:** Mark Jones, Erin Edmondson
- **Schools Impacted:** N/A
- **Total Number of Students:** 36
- **Total Number of Parents:** 37
- **Age Range:** K-6th Grade

Facilities: Parker Hall 112 & 307, SCL 231 & 310

Buggin’ Out

- **Instructor:** Sallie Martin
- **Number of Students:** 5 total (3 reporting on survey)
- **Student Satisfaction Ranking:** 4.6 (out of 5)
- **Parent Satisfaction Ranking:** 4.6 (out of 5)
- **Age Range:** 2nd - 3rd Grade

Fossil Frenzy

- **Instructor:** Mark Jones
- **Number of Students:** 12 total (7 reporting on survey)
- **Student Satisfaction Ranking:** 5 (out of 5)
- **Parent Satisfaction Ranking:** 5 (out of 5)
- **Age Range:** 1st - 3rd Grade

Getting a Charge Out of Batteries

- **Instructor:** Paul Norgaard
- **Number of Students:** 7 total (3 reporting on survey)
- **Student Satisfaction Ranking:** 4.6 (out of 5)
- **Parent Satisfaction Ranking:** 5 (out of 5)
- **Age Range:** 4th - 6th Grade


- **Instructors:** Dr. Ken Halanych, Dr. Kevin Fielman, Dr. Scott Santos, and Erin Edmondson
- **Number of Students:** 12 total (8 reporting on survey)
- **Student Satisfaction Ranking:** 4.75 (out of 5)
- **Parent Satisfaction Ranking:** 4.56 (out of 5)
- **Age Range:** 4th - 6th Grade
Program: War Eagle BEST

Date: Saturday, August 29, 2009- Kick Off
      Sunday, September 27, 2009- Mall Day
      Thursday, October 8- Saturday October 10, 2009- Judging and Gameday

Description: A middle and high school robotics competition, open to teams in the East Alabama region.

Personnel:

- **Co-Directors**- Dr. George Blanks and Mary Lou Ewald
- **Awards & Judging/Schools Coordination**- Mary Lou Ewald, Emma Seiler, Jesse Daniel
- **Coordination Assistants**- Katy Prince, TJ Nguyen
- **General Coordination**- George Blanks
- **Floor Boss**- Sid Stubbs (Huntingdon College)
- **Head Judge**- Peter Jones
- **Head Referee**- Zach Lamb
- **Hospitality (Food and Facilities)**- Kathy Feminella
- **Media/Communication**- Tim Meeks, Cheryl Cobb
- **Pit Boss**- Joey Giuliano (Honda Manufacturing of Alabama)
- **Pit Crew (student organization members)**- Cupola Engineering Society, Alpha Epsilon Delta, Tau Beta Pi, Society of Women Engineers
- **Registration**- Kathy Feminella, Lara Stubbs
- **Scoring**- Stephen Haddock, Brian McMeen
- **Signage/Graphics**- Aileen Broadus, Wally Ridgway
- **Staging**- Paul Norgaard, Roger Birkhead
- **Technical Crew (The “A” Team)**- Michael Carroll, Stephen Haddock, William Woodall, Zach Lamb, Alabama Power Employees: Beth Suttle, Brian Mitchell, Clint Foster, James White, John Cook, Kevin Wiley, Mike McCrane, T.J. Pruitt
- **Volunteers**- Jesse Daniel
- **Webmaster**- Tyler Patterson

**Schools Impacted:** Auburn High School, Benjamin Russell High School, Beulah High School, Beverlye Magnet School, Brewbaker Technology Magnet High School, Chambers County Career Technology Center, Dothan Technology Center, East Memorial Christian Academy, Eastwood Schools, Episcopal Day School, First Baptist Opelika Christian, Holtville High School, LAMP High School, Lee-Scott High School, Loachapoka High School, Millbrook Middle Jr. High School, Northside High School, Opelika High School, Opelika Middle School, Randolph County Schools, Southside Middle School, Stanhope Elmore High School, Wetumpka High School, Zion Chapel School

- **Total Number of Students:** approx. 600
- **Age Range:** K-12th grade

**Facilities:** AU Student Center Ballroom, Ross Hall Conference Rooms, Student Activities Center, Auburn/Opelika Colonial University Mall
2009 Game Description

- **Goal:** Create a robot that is able to produce hydrocarbon fuels by collecting the following constituent game pieces:
  - **Water**- represented by a blue racket ball
  - **Catalyst**- represented by a yellow tennis ball
  - **Energy**- represented by a small metal can
  - **Carbon Dioxide**- represented by a small beach ball

2009 Game Winners

**BEST Award**
- 1st: Wetumpka H.S. – 25
- 2nd: Episcopal Day School – 11
- 3rd: Stanhope Elmore H.S. - 24

**Best Oral Presentation Award**
- 1st: Episcopal Day School - 11
- 2nd: Eastwood Schools - 10
- 3rd: Lee Scott Academy - 15

**Best Table Display and Interview Award**
- 1st: Wetumpka H.S. - 25
- 2nd: Eastwood Schools - 10
- 3rd: Stanhope Elmore H.S. - 24

**Best Project Engineering Notebook Award**
- 1st: Brewbaker Technology Magnet H.S. - 5
- 2nd: Wetumpka H.S. - 25
- 3rd: Eastwood Schools - 10

**Best Spirit and Sportsmanship Award**
- 1st: Wetumpka H.S. - 25
- 2nd: Loachapoka H.S. - 16
- 3rd: Stanhope Elmore H.S. - 24

**Founders Award for Creative Design:** (given in honor of the two founders of BEST, Steve Marum and Ted Mahler)
- 1st: Stanhope Elmore H.S. - 24
- 2nd: Lee Scott Academy - 15
- 3rd: Chambers Co. Career Technology Center - 7

**Most Elegant Robot:** (the machine that makes you say “Wow”!)
- 1st: Stanhope Elmore H.S. - 24
- 2nd: Episcopal Day School - 11
- 3rd: Southside Middle School - 23

**Most Robust Robot:** (needed the least amount of repairs)
- 1st: Lee Scott Academy - 15
- 2nd: Millbrook Jr. High School - 17
- 3rd: Stanhope Elmore H.S. - 24

**Most Photogenic Robot:** (the beauty contest)
- 1st: Chambers Co. Career Technology Center - 7
- 2nd: Millbrook Jr. High School - 17
- 3rd: Benjamin Russell High School - 2
SPONSOR’S CHOICE AWARDS: The Alabama Power Teacher Leadership Award - As the primary sponsor of War Eagle BEST program, Alabama Power will present this award to the teacher that has consistently shown leadership, teamwork, respect for humanity and continuous improvement, and has truly boosted engineering, science and technology education with their students.
- Mr. Steve Ballard – Brewbaker Technology Magnet High School

The 2009 War Eagle BEST Mentor Award
- Mr. Bob Bryan – Wetumpka High School

Best Web Page Design
- 1st: Episcopal Day School – 11
- 2nd: Wetumpka H.S. - 25
- 3rd: Brewbaker Technology Magnet H.S. - 3

Best T-shirt design
- 1st: Chambers Co. Career Technology Center – 7
- 2nd: Stanhope Elmore High School - 24
- 3rd: Beverlye Magnet School - 4

igus Top Gun Award
- Lee Scott Academy - 15

Solid Works CAD Design Award
- Eastwood Schools - 10

Table Display Design and Construction Award
- Stanhope Elmore High School - 24

Blood, Sweat, and Duct Tape Award
- Beulah H.S. - 3

Team Demographics

### Participant Breakdown

<table>
<thead>
<tr>
<th>Gender</th>
<th>% Male</th>
<th>% Female</th>
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</thead>
<tbody>
<tr>
<td>Total Team Members</td>
<td>61.5</td>
<td>38.5</td>
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<tr>
<td>BEST Award Team Members</td>
<td>49</td>
<td>51</td>
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<tr>
<td>Robotic Team Members</td>
<td>23</td>
<td>77</td>
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<tr>
<td>Number to Pursue STEM Careers</td>
<td>66.8</td>
<td>33.2</td>
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### Participant Breakdown

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>K-5th Grade</td>
<td>17%</td>
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<tr>
<td>6th Grade</td>
<td>19%</td>
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<td>7th Grade</td>
<td>14%</td>
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<tr>
<td>8th Grade</td>
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<tr>
<td>10th Grade</td>
<td>20%</td>
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<tr>
<td>11th Grade</td>
<td>9%</td>
</tr>
<tr>
<td>12th Grade</td>
<td>9%</td>
</tr>
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</table>
Program: Tennessee Valley BEST

Date: October 23rd and 24th, 2009

Description: A middle and high school robotics competition, open to teams in the North Alabama/Tennessee Valley region.

Personnel:
- **Co-Directors** - Sue Mitchell, Dr. George Blanks, and Mary Lou Ewald
- **Head Judges** - LaRonda Conley-Missile Defense Agency, Lanny Upton-NASA, and Allen Wooten-Dynetics
- **Head Referee** - Ed Green-Hexcel
- **Hospitality** - Lynn Lamb-FPC of Huntsville
- **Photographer** - Don Morgan-MITRE
- **Pit Boss** - Joey Giuliano (Honda Manufacturing of Alabama)
- **Scoring** - Stephen Haddock-AU, Courtney Spivey-ADT-IT, William Gephart-Radiance Technology

Schools Impacted: Academy for the Arts and Sciences, Athens Bible School, Athens Middle School, Bob Jones High School, Buckhorn High School, Covenant Christian Academy/Excalibur Christian School, Decatur Austin Robotic Coalition, Faith Christian Academy, Huntsville Middle School, Life Christian Academy, Madison Academy, Oak Park Middle School, Priceville High School, Redstone Robotics, Riverside Christian Academy, Russellville Middle School, Sparkman High School, Sparkman Middle School, Virgil I. Grissom High School
- **Total Number of Students:** approx. 600
- **Age Range:** K-12th grade

Facilities: Noble Russell Building and Kelley Gym-Calhoun Community College

2009 Game Description
- **Goal:** Create a robot that is able to produce hydrocarbon fuels by collecting the following constituent game pieces:
  - **Water**- represented by a blue raquet ball
  - **Catalyst**-represented by a yellow tennis ball
  - **Energy**-represented by a small metal can
  - **Carbon Dioxide**- represented by a small beach ball

2009 Game Winners

**BEST Award**
- **1st:** Decatur Austin Robotics Coalition- 217
- **2nd:** Priceville High School- 224
- **3rd:** Redstone Robotics- 225
Robotics
- 1st: Life Christian Academy - 221
- 2nd: Riverside Christian Academy - 226
- 3rd: Decatur Austin Robotics Coalition – 217

Table Displays
- 1st: Priceville High School - 224
- 2nd: Redstone Robotics - 225
- 3rd: Decatur Austin Robotics Coalition – 217

Spirit and Sportsmanship
- 1st: Decatur Austin Robotics Coalition – 217
- 2nd: Redstone Robotics - 225
- 3rd: Fatih Christian Academy - 218

Oral Presentations
- 1st: Decatur Austin Robotics Coalition – 217
- 2nd: Priceville High School - 224
- 3rd: Redstone Robotics - 225

Engineering Notebooks
- 1st: Priceville High School - 224
- 2nd: Athens Bible School - 212
- 3rd: Decatur Austin Robotics Coalition – 217
Program: Getting Under the Surface (G.U.T.S)

Date: Tuesday, October 27 2009; 6:00 pm - 8:00 pm

Description: Parent/ Child teams act as lab partners in a 75-90 minute science activity.

Personnel:

- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, Lara Stubbs, Jesse Daniel, Ken Halanych, Kevin Fielman, Scott Santos
- Non-AU: Erin Edmondson, Gina Watkiss, Mark Jones, Rebecca Balkcom

Schools Impacted: N/A

- Total Number of Students: 50
- Total Number of Parents: 50
- Age Range: K-8th Grade

Facilities: Parker Hall 305 & 104, SCL 231, 310, &232

The GUTS of the Deep Sea: Part II

- Instructors: Dr. Ken Halanych, Dr. Kevin Fielman, Dr. Scott Santos, Erin Edmondson
- Number of Students: 10 total (6 reporting on survey)
- Student Satisfaction Ranking: 4.6 (out of 5)
- Parent Satisfaction Ranking: 4.6 (out of 5)
- Age Range: 4th-6th Grade

The GUTS of Halloween

- Instructor: Gina Watkiss
- Number of Students: 13 total (7 reporting on survey)
- Student Satisfaction Ranking: 4.7 (out of 5)
- Parent Satisfaction Ranking: 4.7 (out of 5)
- Age Range: 4th-6th Grade

The Blood of Life

- Instructor: Dr. Mark Jones
- Number of Students: 5 total (5 reporting on survey)
- Student Satisfaction Ranking: 4.6 (out of 5)
- Parent Satisfaction Ranking: 4.6 (out of 5)
- Age Range: 6th-8th Grade

Mystifying Mixtures

- Instructor: Rebecca Balkcom
- Number of Students: 22 total (5 reporting on survey)
- Student Satisfaction Ranking: 4.6 (out of 5)
- Parent Satisfaction Ranking: 4.4 (out of 5)
- Age Range: K-3rd Grade
Program: Daughters and Mothers Exploring Science (DAMES)

Date: Saturday, November 14, 2009; 8:00 am - 2:00 pm

Description: A series of hands on mini courses in science and math followed by a luncheon and keynote speakers. Sponsored by the Society of Women in Science & Math

Personnel:
- AU: Mary Lou Ewald, Emma Seiler, Kathy Feminella, Sallie Martin, Lara Stubbs, Katy Prince, Beth Hickman, Jessica Williams, Lesley de Souza, AWIS
- Non-AU: Erin Edmondson- Drake Middle School, Dr. Patricia Wade, MD- East Alabama Internal Medicine
- Schools Impacted: N/A
- Total Number of Students: 24
- Total Number of Parents: 22
- Age Range: 5th - 8th grade

Facilities: SCL 102, 105, & 310; SCC 115; Student Center Ballroom

Overall Student Satisfaction Ranking: 4.75
Overall Parent Satisfaction Ranking: 4.7
Good Value for Cost: 100% Yes ($10 per student, adults free)

Buggin’ Out- 9:50 am
- Instructor: Sallie Martin
- Number of Participants: 14

DNA Jewelry- 8:50 am & 11:00 am
- Instructor: Erin Edmondson
- Number of Participants: 30

Explore the Amazon Basin- 11:00 am
- Instructors: Lesley de Souza
- Number of Participants: 30

Glamour Girl Chemistry- 8:50 am & 9:50 am
- Instructor: AWIS
- Number of Participants: 40

Shrinky Dinkin’- 8:50 am & 9:50 am
- Instructor: Beth Hickman
- Number of Participants: 32
Program: Getting Under the Surface (G.U.T.S)

Date: Tuesday, November 17, 2009; 6:00 pm - 8:00 pm

Description: Parent/Child teams act as lab partners in a 75-90 minute science activity.

Personnel:
- **AU:** Emma Seiler, Kathy Feminella, Jesse Daniel, Lara Stubbs, Katy Prince, TJ Nguyen, Paul Norgaard, Matt Obley, Linda Pastorello, Evi Paemelaere
- **Non-AU:** Mark Jones- Auburn High School, Erin Edmondson-Drake Middle School

Schools Impacted: N/A
- **Total Number of Students:** 41
- **Total Number of Parents:** 41
- **Age Range:** 1st-6th Grade

Facilities: Parker Hall 305,120, &122, SCL 310 & 231

Edible Science
- Instructed by: Paul Norgaard and Matt Obley
- **Number of Students:** 13 total (10 reporting on survey)
- **Student Satisfaction Ranking:** 4.9 (out of 5)
- **Parent Satisfaction Ranking:** 5 (out of 5)
- **Age Range:** 1st-3rd Grade

The G.U.T.S. of DNA
- Instructed by: Erin Edmondson
- **Number of Students:** 11 total (10 reporting on survey)
- **Student Satisfaction Ranking:** 4.9 (out of 5)
- **Parent Satisfaction Ranking:** 4.8 (out of 5)
- **Age Range:** 4th-6th Grade

Microscopic Wonders
- Instructed by: Mark Jones
- **Number of Students:** 6 total (4 reporting on survey)
- **Student Satisfaction Ranking:** 5 (out of 5)
- **Parent Satisfaction Ranking:** 5 (out of 5)
- **Age Range:** 4th-6th Grade

Tiggers for Tigers
- Instructed by: Linda Pastorello and Evi Paemelaere
- **Number of Students:** 11 total (3 reporting on survey)
- **Student Satisfaction Ranking:** 5 (out of 5)
- **Parent Satisfaction Ranking:** 5 (out of 5)
- **Age Range:** 1st-3rd Grade
Program: The South’s BEST

Date: December 11-12, 2009

Description: A middle and high school robotics competition open to winning teams from other hubs in the region.

Personnel:
- **Co-Directors** - Dr. George Blanks and Mary Lou Ewald
- **Awards & Judging/Schools Coordination** - Mary Lou Ewald, Jesse Daniel
- **Coordination Assistants** - Katy Prince, TJ Nguyen
- **General Coordination** - George Blanks
- **Floor Boss** - Sid Stubbs (Huntingdon College)
- **Head Judge** - Peter Jones
- **Head Referee** - Zach Lamb
- **Hospitality (Food and Facilities)** - Kathy Feminella
- **Media/Communication** - Tim Meeks, Cheryl Cobb
- **Pit Boss** - Joey Giuliano (Honda Manufacturing of Alabama)
- **Pit Crew (student organization members)** - Cupola Engineering Society, Alpha Epsilon Delta, Tau Beta Pi, Society of Women Engineers
- **Registration/Sales** - Emma Seiler, Lara Stubbs, Sallie Martin
- **Scoring** - Stephen Haddock, Brian McMeen
- **Signage/Graphics** - Aileen Broadus, Wally Ridgway
- **Staging** - Paul Norgaard, Roger Birkhead, Matt Obley
- **Volunteers** - Jesse Daniel
- **Webmaster** - Tyler Patterson
- **Women’s Luncheon** – Bonnie Wilson, Speaker – Kathy Black, SABIC Innovative Plastics

Special Guest Speaker: Alabama Governor Bob Riley


Total Number of Students: approx. 2500
- **Age Range**: K-12th grade
Facilities: AU Student Center, Ross Hall Conference Rooms, Beard-Eaves Memorial Coliseum

2009 Game Description
- **Goal:** Create a robot that is able to produce hydrocarbon fuels by collecting the following constituent game pieces:
  - **Water** - represented by a blue raquet ball
  - **Catalyst** - represented by a yellow tennis ball
  - **Energy** - represented by a small metal can
  - **Carbon Dioxide** - represented by a small beach ball

2009 Championship Winners

BEST Award
- **1st:** Wetumpka H.S. – War Eagle
- **2nd:** W.P. Davidson H.S. - Jubilee
- **3rd:** Wheeler H.S. - Georgia

Game Winners
- **1st:** McFadden School of Excellence – Music City
- **2nd:** Milton H.S. – Music City
- **3rd:** Decatur Austin Robotic Coalition – TN Valley
- **4th:** Life Christian Academy – TN Valley

Best Oral Presentation Award
- **1st:** Wetumpka H.S. – War Eagle
- **2nd:** W.P. Davidson H.S. - Jubilee
- **3rd:** Lee Scott Academy – War Eagle

Best Table Display and Interview Award
- **1st:** W.P. Davidson H.S. - Jubilee
- **2nd:** Wetumpka H.S. – War Eagle
- **3rd:** Merrol Hyde Magnet School – Music City

Best Project Engineering Notebook Award
- **1st:** Wheeler H.S. - Georgia
- **2nd:** W.P. Davidson H.S. - Jubilee
- **3rd:** Episcopal Day School – War Eagle
- **3rd:** Priceville High School – TN Valley

Best Spirit and Sportsmanship Award
- **1st:** Wheeler H.S. - Georgia
- **2nd:** Wetumpka H.S. – War Eagle
- **3rd:** West Forsyth H.S. – Georgia

Founders Award for Creative Design: (given in honor of the two founders of BEST, Steve Marum and Ted Mahler)
- **1st:** Stanhope Elmore H.S. – War Eagle
- **2nd:** Avalon Middle School – Emerald Coast
- **3rd:** McFadden School of Excellence – Music City

Most Elegant Robot: (the machine that makes you say “Wow”!)
- **1st:** Life Christian Academy – TN Valley
- **2nd:** Merrol Hyde Magnet School – Music City
- **3rd:** St. Vincent de Paul Catholic School - Jubilee

Most Robust Robot: (needed the least amount of repairs)
- **1st:** St. Vincent de Paul Catholic School - Jubilee
- **2nd:** Milton High School – Emerald Coast
- **3rd:** W.P. Davidson H.S. - Jubilee
Most Photogenic Robot:  (the beauty contest)
- 1st: McFadden School of Excellence – Music City
- 2nd: Merrol Hyde Magnet School – Music City
- 3rd: Woodlawn Beach Middle School – Emerald Coast

Best Web Page Design
- 1st: W.P. Davidson H.S. - Jubilee
- 2nd: Decatur Austin Robotic Coalition – TN Valley
- 3rd: Oak Mtn H.S. - Blazer

Best T-shirt design
- 1st: St. Vincent de Paul Catholic School - Jubilee
- 2nd: Redstone Robotics – TN Valley
- 3rd: Mt. Juliet M.S. – Music City

igus Top Gun Award
- McFadden School of Excellence – Music City

Solid Works CAD Design Award
- 1st: W.P. Davidson H.S. – Jubilee
- 2nd: Praise Christian School – Jubilee
- 3rd: Wetumpka H.S. – War Eagle

Table Display Design and Construction Award
- 1st: Shades Valley Technical Academies – Blazer
- 2nd: Stanhope Elmore H.S. – War Eagle
- 3rd: W.P. Davidson H.S. - Jubilee

Middle School BEST Award
- Mt. Juliet Middle School – Music City

Middle School Robotics Award
- McFadden School of Excellence – Music City

Southern Company “Southern Style” Award – determined by ballot and through consultation with Southern Co. employees who were present. Awarded to the team who exhibits the qualities of the Southern Company – honesty, respect, fairness, integrity, safety, teamwork, and diversity.
- Wetumpka High School – War Eagle