



U.S. ARMY MATERIEL COMMAND

MG Keith L. Ware Public Affairs Competition
Category C: Community Relations Special Event
Submission: **Girls' Science and Engineering Day**





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Girls' Science and Engineering Day

Girls' Science and Engineering Day began in 2009 as a way to inspire and attract third, fourth, and fifth grade girls from Madison County, Alabama to Science, Technology, Engineering and Math (STEM) disciplines through hands-on activities and experiences. The program is sponsored by the Women's Leadership Council at the University of Alabama in Huntsville. The Army Materiel Command (AMC) partners with the Women's Leadership Council to provide guest speakers, activities, displays, demonstrations and volunteers.

More than 400 girls are divided into groups and browse an exhibit area then attend four, 40-minute workshops on a variety of topics from living things, to space and rockets, medicine, the solar system, experiments, and robots.

The 2010 Girls' Science and Engineering Day won a Bronze Medal for program excellence from the Council for Advancement and Support of Education (CASE) in a national competition with 94 other schools in the category of special events. In 2013, the event won the Civic/Community STEM Award from the Union Chapel Christian Academy Foundation, Inc.



Organization

AMC is the Army's premier provider of materiel readiness – technology, acquisition support, materiel development, logistics power projection, and sustainment – to the total force, across the spectrum of joint military operations. If a Soldier shoots it, drives it, flies it, wears it, eats it or communicates with it, AMC provides it.

AMC is headquartered at Redstone Arsenal, Alabama, and impacts or has a presence in all 50 states and 144 countries. Manning these organizations is a work force of more than 65,000 dedicated military and civilian employees, many with highly developed specialties in weapons development, manufacturing and logistics.

The 2005 Base Realignment and Closure decision relocated AMC headquarters to Redstone Arsenal. Personnel began relocating to Redstone in 2006 and the command was completely relocated by the summer of 2011.

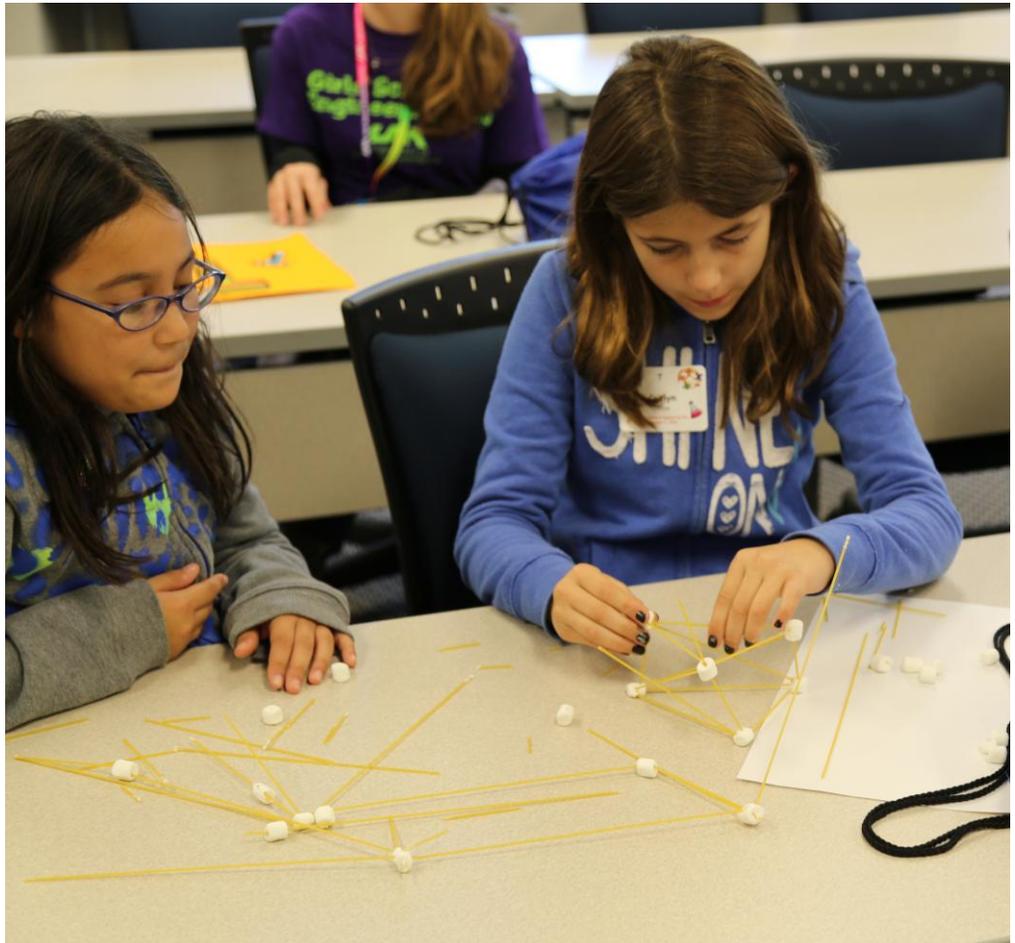
The Women's Leadership Council was created in 2009 in response to the Base Realignment and Closure expansion at Redstone Arsenal. With rapid growth, the council in partnership with the Army and other local community partners saw a need to form a well-trained and interested local future workforce. A strategy was developed to ensure that this future workforce included females in science and engineering fields. The council is made up of seven female community leaders representing science and engineering, medicine, management, politics, education, civil service and Army life.



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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
4400 Martin Road
REDSTONE ARSENAL, AL 35898-5000

AMCCS

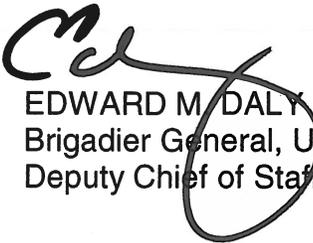
30 January 2015

MEMORANDUM FOR Office of the Chief of Public Affairs, Headquarters, U.S. Army,
The Pentagon, Washington, DC 22202-3905

SUBJECT: Keith L. Ware Award Nomination for AMC Public Affairs Special Event

1. I am exceptionally proud to provide my strongest endorsement of this nomination for HQ, Army Materiel Command in the 2014 Keith L. Ware Public Affairs Competition, Community Relations Event Category for Girls' Science and Engineering Day.
2. Girls' Science and Engineering Day provided a unique venue to promote Army key messaging to its potential future workforce. The end result was a broader understanding of the expanding Science, Technology, Engineering and Math (STEM) career opportunities within the Army and AMC. The event also introduced area students to an aspect of Army technology not previously experienced by most of the students, including a jump demonstration by the Golden Knight's female jump team.
3. This event allowed multiple Army and industry agencies to collaborate to educate and inform 3rd – 5th grade female students on opportunities within STEM subjects. Participating in Girls' Science and Engineering Day allowed the Army and AMC to connect with the community to inspire female students to pursue STEM fields.

Encls


EDWARD M. DALY
Brigadier General, USA
Deputy Chief of Staff



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TAB B: Event Summary

More than 400 third, fourth, and fifth grade girls from Madison County, Alabama attended the 2014 Girls' Science and Engineering Day at the University of Alabama in Huntsville's Shelby Center for Science and Technology on Nov. 1, 2014. The half-day event featured a jump demonstration and question and answer session from the Army Golden Knight's female jump team.

The event began with an assembly of all the girls and remarks from Lt. Gen. Patricia McQuiston, deputy commanding general of Army Materiel Command and senior commander of Redstone Arsenal. At the conclusion of her remarks, the Army Golden Knights jumped in front of the assembly. The jump team fielded questions from the girls. Following the opening ceremony, the girls split into groups and attended four sessions.

A collaboration of Army organizations at Redstone have made the event possible since its origination in 2009 by providing breakout sessions featuring Army technology and sciences, volunteers, statics displays and guest speakers. Girls' Science and Engineering Day provides a unique opportunity for females to engage other young girls and personally inspire them to go after their dreams and to expose them to new opportunities in STEM fields – an opportunity that would not exist with the support of the Army at Redstone Arsenal.



The 2014 event featured 20 STEM sessions, including five sessions provided by the Aviation and Missile Research, Development and Engineering Center.

Army Sponsored Sessions:

The Aviation & Missile Technology Workshop: included hands on activities focused on various aspects of U.S. Army aviation missile technology. Experiments Included:

- **Infrared Camera** – Students received a better understanding of infrared camera capabilities by visually seeing how their bodies put out heat. The girls were exposed to various applications for infrared cameras and thermal imaging.
- **Homemade Play Dough Propellant** – Students learned that each ingredient in propellant mixing served a critical purpose through an active lesson of measuring ingredients accurately and mixing thoroughly.
- **Storm the Castle** – Students see firsthand force applied to a catapult and the resulting trajectory of a missile. They learned the effect of the length of the catapult and how it directly affected the distance that each missile was launched, as well as the effect of the height of the fulcrum to launching distance. They witnessed that the weight of the projectile did not affect the time at which each struck the ground by comparing a ping pong ball to a heavier tennis ball. Students decorated a projectile and then competed to see who could shoot theirs the



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farthest.

- Lemon Juice Missiles – Students learned about chemical reactions (acid + base emits CO₂ gas) by watching their missiles “fire”.
- Principles Of Flight – Students studied the differences between fixed wing and rotary wing by exploring the four principles of flight – drag, gravity, thrust, and lift.

The Computer and Electronics Technology Workshop: demonstrated how computers and electrical circuits operate and how they are used extensively by our military. Experiments Included:

- Raspberry Pi, Arduino and Python/Networked Computers – Students were given an explanation of the components of a simple computer. Networks were explained using five preassembled open chassis computers connected in a Local Area Network (LAN). Students used five Raspberry Pi single board computers to build their own programs using Scratch.
- Electro-Magnet – Students built a simple electro-magnet using wire, nail, and six volt battery. They tested their electro-magnet while learning about the principles of electro-magnetism. A 6 foot length of wire was cut and the insulation removed on each end prior to workshop (three different sizes of wire available). Students wrapped wire around nail, connected both ends of the wire to a battery and then tested the electro-magnetic capability by picking up paper clips.
- Fundamentals of Electricity Activity – Students assembled a simple electronic circuit. Following assembly, they measured voltage and current using a multi-meter and learned about batteries, motors, and switches. Early finishers examined the more complex preassembled musical recorder and/or FM radio circuits.

The Engineering Experiments Workshop: allowed the girls to perform hands-on experiments in basic engineering functions/disciplines. There were two different modules: a trebuchet experiment and a foam rocket experiment. The objective was to demonstrate the science and math behind engineering fundamentals to include Bernoulli's principle, velocity, acceleration, ballistics, trajectory and more. Learning modules included:

- Trebuchet – Students used a trebuchet to knock down castle walls. They then used a computer program to learn how the angle, velocity and mass of the projectile affected its flight.
- Foam Rockets – Students were given a brief overview of rocket components and flight. Students assembled a foam and rubber band launched rocket. They attempted to launch the rocket and hit a target by using various launch angles to change the trajectory.

Math Bowl Workshop: students competed using their math intelligence to advance through timed video games. The competition not only allowed the opportunity to demonstrate math proficiency but students also competed for bragging rights as well as prizes. Workshop Included:

- Video Math Competition - Using two of the several distinct missions offered in the DimensionU Multiplayer series, the students tackled numerous mathematical obstacles that required knowledge of content and swift reaction to score the most points.

Robotics Workshop: demonstrated how robots are assembled and how they operate. Students discovered how robots are used to accomplish different tasks in different environments. Experiments included:

- Large Remote Controlled Tanks – Students controlled a large tank and maneuvered the tank around obstacles while attempting to disable another tank or hit a target.
- Lego Robots – Students experienced how the Lego Mindstorm Robot Kit is used to build different types of robots and how each one can accomplish the task it was built to do.



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Other Sessions:

- Herp Journey
- Raptor Trek
- Science at Work in Healthcare
- Diagnostic Imaging - "We See You"
- See The Real You
- A Berry Fun DNA Extraction
- Spaghetti Anyone
- Ion Jones and the Lost Castle of Chemistry
- Family Feud
- Jitterbug Robotics
- The Incredible Hoop Glider!
- Understanding the Human-Canine Bond
- You Be the Chemist
- Biological Sciences Crystals and Food





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TAB C: Planning Phase

Planning for the upcoming Girls' Science and Engineering Day begins as soon as the previous event ends. An after action review is conducted to see specific areas the event can improve and expand. Following the 2013 event, AMC's Deputy Commanding General Lt. Gen. Patricia McQuiston had a vision of the Army Golden Knights jumping into the field in front of the hundreds of young girls. She knew this demonstration would leave an impression on each girl that they would never forget. AMC PAO began to research the possibility and costs associated with the jump.



Extensive planning began four months prior to the event.

AMC PAO hosted the co-founders of Girls' Science and Engineering Day at the AMC headquarters to map out a support plan for the event. This plan included scheduling the Army Golden Knights, procuring MREs for the girls to try, facilitating remarks from Lt. Gen. Patricia McQuiston and recruiting Soldiers and workforce volunteers to mentor the young girls at the event.

Several Army organizations played an integral role in planning, including:

- AMC's Deputy Commanding General provided oversight and direction for AMC's support to the event, gave remarks at the opening ceremony, volunteered in the breakout sessions and conducted a media engagement
- AMC's Chief Technology Officer (CTO) partnered and provided ideas for subjects to be covered through hallway displays and videos at the event
-
- AMC's Aviation and Missile Research, Development and Engineering Center, a sub-unit of AMC's Research,



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Development and Engineering Command (RDECOM), provided five breakout sessions and more than 20 volunteers

- U.S. Army Natick Soldier Systems Center coordinated the delivery of 500 MRE energy bars and 144 MRE pizzas to showcase the Army's latest technology in shelf stabilization
- U.S. Army Garrison provided leadership and public affairs synchronization across Redstone Arsenal. U.S. Army Golden Knights collaborated with AMC to provide their all-female jump team to conduct a jump demonstration at the event and brought Army coloring books and stickers for the attendees. The team worked through several logistical challenges, including the contingency plan for the Army Golden Knights in the case of inclement weather. If the team was unable to jump due to weather, the assembly would take place inside the Shelby Center and the team would show videos of their jumps and conduct a longer question and answer session with the girls.

AMC PAO also coordinated media engagements for the event to maximize exposure of the Army Golden Knights' jump. In order to ensure the safety of the young girls, the jump was not publicized beforehand – even the attendees were surprised. However, messaging post-event showcased the jump to a wide audience in the community. The local news featured interviews with Lt. Gen. McQuiston and one of the female Army Golden Knights.

Communication Objectives: AMC PAO established two key communications objectives for the event:

- To highlight AMC's commitment to the future workforce, especially in STEM fields
- The Army's long-term leadership depends on educating and producing future scientists and innovators.
- The Army seeks out the best innovative and technical solutions to support the Warfighter.
- To demonstrate AMC's vision to grow STEM females in the workforce?
- Women hold only 25 percent of STEM jobs, so exposure and inspiration is important.
- STEM education is key to the Army's future.

Budget Analysis: Expenses for the event included the cost for the Army Golden Knights and the MREs which were paid for by AMC PAO as an outreach effort. In order to reduce costs and maximize efforts, the Army Golden Knights flew in and out of Huntsville on the day of the event. Only one team lead was sent as an advanced party. Instead of paying for seven overnight stays, AMC only had to pay for one. In addition, a government vehicle was used to transport the team saving the expense for a rental van.

Preparation: In preparation for the event, AMC PAO developed and distributed appropriate messaging and talking points. In addition, AMC PAO set-up an office call with the leadership of the Girls' Science and Engineering Day and Lt. Gen. McQuiston, the AMC Chief Technology Officer, public affairs, AMRDEC Education Outreach Coordinator and U.S. Army Redstone-Garrison public affairs. This office call served to maximize collaboration and partnership at the highest levels of the event.



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TAB D: Execution

AMC PAO arrived on location at the event at 8:30 a.m. to greet the Army Golden Knights and check-in with event coordinators. At 9 a.m., media arrived and AMC PAO coordinated an interview with Lt. Gen. McQuiston.

Following the jump, AMC PAO coordinated an interview with an Army Golden Knight. The media also interviewed the event coordinators and two event participants.

The girls were supervised and escorted at all times. Divided into groups, each girl attended four of the 20 sessions. AMC and Redstone Arsenal leadership participated in various sessions, engaging the girls and answering questions about science and what it is like to be a Soldier.



The day's schedule provided each girl with an opportunity to learn about STEM subjects through hands-on activities.

Event Schedule:

- 7:30 a.m. – Doors unlocked for staff and set-up / Volunteer sign-in
- 8:10 a.m. – Golden Knights land at HSV / Transported to UAH
- 8:30 a.m. – Golden Knights ground crew arrives / Final leader check-in
- 9:00 a.m. – Girls arrive and check-in
- 9:30 a.m. – Welcome / VIP Introductions- Ms. Emily Vandiver, Chair, Women's Leadership Council
- 9:33 a.m. – Opening Remarks- Dr. Robert Altenkirch, President, University of Alabama in Huntsville
- 9:35 a.m. – Remarks- Lt. Gen. Patricia McQuiston, Deputy Commanding General, AMC
- 9:45 a.m. – Golden Knights begin jump
- 9:50 a.m. – Jump complete / Jump team speaks to girls, Q&A session
- 10:00 a.m. – Session 1
- 10:45 a.m. – Session 2
- 11:30 a.m. – Session 3
- 12:15 p.m. – Session 4
- 12:55 p.m. – Event concludes, girls return to lobby with leaders
- 1:00 p.m. – Doors open for parents to retrieve daughters
- 1:30 p.m. – End



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TAB E: Effectiveness / Metrics

Throughout the course of the day, hundreds of girls and their caregivers, volunteers and University of Alabama in Huntsville employees saw AMC's hallway exhibit, the Army Golden Knights jump demonstration and AMRDEC's workshops. Below is a breakdown of measurable metrics.

WHNT 19 News: The local CBS affiliate had 184 Facebook likes on their story "More than 400 girls inspired to study STEM subjects at annual event." The story also aired on their evening news.

Social Media: AMC's social media post netted 634 Facebook views, 197 Facebook likes and 76 Facebook shares.




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 Posted by Lisa Simunaci [?]
 Page Liked · November 1, 2014 ·

Allowed on Timeline ▼

LTG Patricia E. McQuiston surprised the Girls Science and Engineering event at UAHuntsville with the US Army Golden Knights jump team this morning. AMRDEC STEM-Education Outreach Herald, The Redstone Rocket newspaper & website — with Kara Beth Wall.

Tag Video Add Location Edit

634 Views

Like · Comment · Share · Feature This Video

Lira Frye, Kimberly Levine Hanson, AFSBn-Carson and 195 others like this.

76 shares

Dlynne Distance I sometimes miss those days
 Like · Reply · December 23, 2014 at 12:10pm

Write a comment...

Internal: AMC Public Affairs published an article with photos on CORE/Army.mil and the post newspaper, The Redstone Rocket, further engaging the internal Army audience. The article garnered 85 Facebook likes from CORE.

The event effectively achieved its communications objectives, AMC's and Redstone Arsenal's initiatives in promoting STEM career opportunities within the U.S. Army. The metrics achieved exceeded expectations, reaching across a vast diverse audience with Army and AMC messages.



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TAB F: Overall Value to the Army

Through Girls' Science and Engineering Day, AMC and Redstone Arsenal leadership and volunteers connected to the community and shared valuable messaging about the importance of STEM careers. The event provided a unique cross-section of females from across the area's schools at an impressionable age. The event showcased a premier example of community engagement and partnership across multiple Army organizations and community groups. With AMC's leadership, the community was brought together and successfully achieved a common goal of inspiring young girls to pursue STEM fields.

Following the event, AMC PAO received positive feedback from the event's organizers. Among the feedback, the following statements from event lead, Emily Vandiver stood out:

"As usual, the AMRDEC workshops provided an opportunity for the girls to have fun while understanding various technologies. The efforts to bring the Golden Knights female jump team here was outstanding. That jump added such an exciting element, not only for the girls but for the adults as well.

One fifth-grader told me it was the first time she actually did a hands-on experiment saying, 'We only get to read about them in school.'

A Little Sister in the Big Brothers/Big Sister program said she begged not to come thinking it would be boring. Now she has made her Big Sister promise she can come back next year.

A 3rd grader said she thought she was the only girl who liked science in North Alabama until she got to meet all the smart girls at the event.

The Mayors from Huntsville and Madison have both expressed appreciation to us for presenting our annual Girls' Science and Engineering Day and how important it is to our community. The emphasis on STEM at this age helps to prepare the students for further studies in these fields."

In line with the two key themes, Army and AMC messages were effectively communicated to a wide audience, and addressed:

- **Mission** – Our Soldiers on the battlefield need the best technology and equipment in order to maintain our dominance and decisive edge. Army technology like robotics and aviation systems enables the Soldier to maintain that edge. Soldiers and Army civilians can pursue STEM fields critical the Army's and AMC's mission.
- **STEM** – The Army and AMC are leaders in STEM careers. AMC has a vested interested in promoting STEM education for its future workforce. The Army's long-term leadership depends on educating and producing future scientists and innovators to ensure Soldiers maintain a technological edge. The Army relies on and seeks out the best innovative and technical solutions to support the Warfighter.

AMC is focused on equipping and sustaining a leaner, more agile force, and shaping a force for the future that



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maintains a technological edge on the battlefield. Ensuring tomorrow's workforce is well-equipped in STEM fields is critical to AMC's future readiness. According to the U.S. Department of Commerce, women only hold a quarter of STEM jobs in the U.S. but account for nearly half of the U.S. workforce. AMC is looking to fill the gap and encourage girls of all ages to pursue STEM career fields. (Source: <http://files.eric.ed.gov/fulltext/ED523766.pdf>)





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TAB G: Media Coverage

Parachute team just one of many highlights from Girls Science and Engineering Day



The U.S. Army's Golden Knights aerial demonstration team kicked off this year's Girls Science and Engineering Day on the UAH campus. Photo by Michael Mercier, UAH.

November 4, 2014

By DIANA LACHANCE

Girls Science and Engineering Day, held this past Saturday at The University of Alabama in Huntsville (UAH), was attended by more than 400 third through fifth grade girls from across Madison County.

Participants enjoyed an educational program consisting of 40-minute workshops on a variety of topics from the STEM (science, technology, engineering, math) fields.

They were also treated to a special performance by the U.S. Army's Golden Knights aerial demonstration team - four of whom are women - who parachuted in over the Shelby Science Center and fielded questions from the students.

"Girls Science and Engineering Day is designed to help ensure that we have a technologically literate workforce 20 years from now by piquing the interest and curiosity of young girls in STEM and, hopefully, lighting a curiosity that will eventually lead them to study these disciplines," says April Harris, Associate Vice President of Advancement at UAH, who serves as the program's administrator.



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Founded in 2009 and proudly bearing the tag line "It's Cool to Be Smart," Girls Science and Engineering Day is dedicated to stimulating girls' interest in STEM fields in response to the stated goals of the area's three public schools systems, the U.S. Army, and NASA. It is entirely volunteer-driven, with 200 people - including many UAH students - taking part to make the day a success.

"Huntsville's community resources make this day possible," says Harris. "We offer 24 workshops, all presented by volunteers. We owe a large thank-you to Team Redstone, PPG Aerospace, Boeing, and Lockheed Martin."



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Girls get glimpse of science and engineering



November 5, 2014

By LISA SIMUNACI, AMC Public Affairs

A day after Halloween, more than 400 third- through fifth-graders attending Girls Science and Engineering Day at the University of Alabama in Huntsville had an opportunity to top the sweet-laden Friday.

“Today is about mind candy,” said Redstone Arsenal senior commander Lt. Gen. Patricia McQuiston, who helped kick off the event. “You’re going to get a lot of treats and learn a little bit about the tricks of science.”

McQuiston, who also is the deputy commander of the Army Materiel Command, urged the participants to “feed their minds.”

As a surprise to the girls, a competitive parachute team from the Army’s Golden Knights jumped onto the lawn of the university’s Shelby Center to help kick off the event. The four female and two male Soldiers took questions from the girls before the hands-on portion of the program.

Girls wanted to know what it felt like to jump out of a plane.

“Have you ever stuck your hand out of car window when the car was going really fast? That’s what it’s like, but over your entire body,” a team member told them. Team members, most with thousands of jumps under their belts, admitted that parachuting was a little scary, but also a lot of fun.

“Everyone loved the Golden Knights. They are spectacular role models for the girls and shows them it’s cool to be smart and that they can do anything,” said Emily Vandiver, UAH’s Women’s Leadership Council chair and the event’s chair. “All of the Army’s involvement and the community’s involvement is such an inspiration.”

Corporate sponsors and Redstone Arsenal-based Army commands presented a total of 50 different presentations and experiments for Saturday’s event, now in its sixth year. Girls had the opportunity to attend four 40-minute programs during the half-day event.

Lemon juice missiles and strawberry DNA extractions were on the menu, alongside investigations into the intricacies of catapults, flight, robotics and chemistry.



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Mill Creek Elementary School fourth-grader Rylie Rivera, 9, said the Carnegie Science Center's demonstration by Ion Jones and the Lost Castle of Chemistry was among her favorite parts of the day. "I got to learn about carbon dioxide, oxygen, water and fuel and how they go together and how they can explode," Rivera said. She also was excited about the focus on girls and the chance for this exposure to subjects that she finds interesting. "Sometimes I like math, but I really like science."

University of Alabama in Huntsville's assistant vice president of university events April Harris said the purpose of the event was to pique the girls' interest of the "so-called" hard subjects. "They have a chance to see real-life applications and to see good role models."

In a room full of girls testing model airplanes and conducting other experiments, Darnell Whitney, a strategic analyst for the Aviation and Missile Research Development and Engineering Center, said he was glad to be among the team of volunteers who took time to impart their knowledge and offer a glimpse into science and engineering opportunities.

"We're investing our time and resources into the future of these young ladies and exposing them to the day-to-day things we do in support of the war fighter," Whitney said. "Our hope is they may go on to be engineers or possibly work for us in some capacity. It's an investment in their future and in ours."

McQuiston, who has participated in three of the six Girls Science and Engineering Days, said the event is one that is close to her heart. "I attend about 250 events a year," she told the girls. "This one is my favorite!"



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More than 400 girls inspired to study STEM subjects at annual event



November 2, 2014
By KRISTEN CONNOR

HUNTSVILLE, Ala. (WHNT)—Pink filled the sky Saturday as a parachute team descended upon Huntsville at the University of Alabama-Huntsville campus.

They were the famed US Army Golden Knights, many of whom are female soldiers. Dannielle Woosley is one of them.

“I’ve done [jumps] over 4000 times and it never gets old,” she said. “It’s so exciting to see the impact we can have on younger kids. Especially younger girls.”

But the Golden Knights weren’t the stars of the day.

They were a warm-up and surprise for the main focus of the day: a group of 3rd-5th graders at UAH’s Girls in Science and Engineering Day. They came to learn all about what makes science, technology, engineering, and math cool, and inspire them to persue careers in those fields.

As April Harris, UAH Assoc. VP for University Events, said, “It’s not just a man’s world.” Emily Vandiver, a female engineer who helped organize the event, said it’s all about showing the girls these careers are attainable.



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“Events like these help them to know they can do this sort of thing,” she said.

Redstone Arsenal’s LTG Patricia McQuiston attended the event for the third year in a row, representing the US Army Materiel Command.

“We want to show these girls that there are people that are rooting for them, they’re pulling for them,” she said. “[We] want them to know they can achieve anything they dream of.”



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Heritage girls explore tech options at UAH science day



November 21, 2014

MADISON – Technical careers edged closer to reality for Heritage Elementary School students at Girls' Science and Engineering Day at the University of Alabama in Huntsville (UAH).

Targeting girls in grade 3-5, the UAH event spurred interest in STEM-related subjects (science, technology, engineering and math). Delegates browsed exhibits and attended four 40-minute workshops on topics like organisms, space/rockets, doctors/nurses and stars/planets.

Tamaira Polk and Michaela Robinson attended from Sarah Stewart's fourth-grade class. During experiments, Polk made Play-Doh propellant and lemonade that exploded when she added baking soda.

Polk joined two girls to fly a remote-control airplane to the ceiling. "It was going everywhere," Polk said.

She also learned about a camera that senses temperature of different body areas. "We rubbed an ice cube on our faces and hands; then, the camera showed blue for cold."

Polk's favorite experiment involved lemon missiles. "They all exploded except one, and, when we were going inside, it exploded," she said.

Robinson built crystals and mini-robots and made a new friend named Maddie. "I learned, if you look through a spectrometer at a helium light, it looks different than a regular light," Robinson said. Her favorite encounter was "tasting how ice cream tastes after it is put in liquid nitrogen."

Tramani Osley in Katie Scruggs' fourth-grade classroom also attended. "I'm always excited about science and math," Osley said. "We learned about flying things for war and made rocket missiles. We also went to a place to see falcons, owls and hawks."

Osley's favorite experience was watching people parachute out of planes.



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Samantha Moore is in Jessica Dean's room. Moore learned about nursing, weather and airplanes. "I made magnets out of paper clips, used snap circuitry and learned about cloud formations," Moore said.

"While animals and insects are my favorite things in science, I want to be a veterinarian. (Science Day) gave me neat ideas, in case I decide to do something else. It was amazing," Moore said.