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February 2019 Newsletter

A basketball player in a white Salt Lake City Stars jersey with the number 3 and "ZIONS BANK" on it, dribbling a basketball. The background is dark blue.


SAVE THE DATE!
**EDUCATION
NIGHT**
FRI > FEB 8 > 7PM
VIVINT SMART HOME ARENA
FOR DISCOUNTED TICKETS,
CALL 801.325.STAR
AND MENTION THE CODE
"STEM"



The [Salt Lake City Stars](#)—an NBA G-League team and [Utah Jazz](#) affiliate—are partnering with the [Utah STEM Action Center](#) for a family-friendly, K-12 STEM-themed night of hoops action on Friday, Feb. 8, 2019, at 7 p.m. when the Stars take on the Santa Cruz Warriors at Vivint Smart Home Arena!

STEM-related entertainment, concourse exhibits, and more are all part of the fun-filled family evening out. Kids of all ages are welcome!

[Use the promo code "STEM" when you sign up here](#) for discounted tickets. You can also call (801) 325-STAR and mention the code word "STEM" for the discounted rate.

Don't miss out on this STELLAR opportunity!

STEM NEWS



BYU Girls Code Camp

The Computer Science Department is running a coding camp for girls ages 8-11. This camp is for beginning coders. The 2019 camp will be June 3-6 from 1 pm to 5 pm daily.

The students will be learning through coding activities, both plugged and unplugged, have snacks, enjoy team building activities, get a fun t-shirt, and more. The students will have personal instruction from BYU counselors.

[More information](#)



CenturyLink STEM Excellence Award

Corner Canyon High School 9th grader Grace Mead is about as multitasking as a person can be. A stellar 4.0 GPA student, fluent in Mandarin Chinese, part of the school's dance company, and superstar champion for STEM, Grace's limitless vision and passion for life have crowned her Miss Draper Outstanding Teen 2018-2019.

[Read More](#)



Commentary: Shutdown Does Great Harm to STEM



Examining Local Issues Can Make STEM Learning Meaningful

Everyone seems to recognize the importance of STEM education, especially in recent years.

Education in Utah

The National Science Foundation is one of the federal agencies that has been closed by the federal shutdown. Many people do not know what the NSF is. The NSF is a major federal agency that supports research in all areas of science and engineering except the medical sciences.

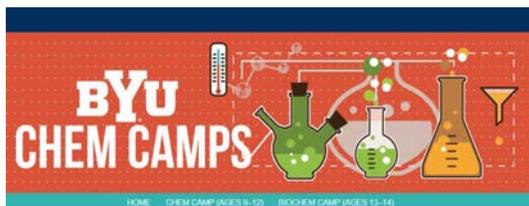
[Read More](#)



Women in Science & Technology Series

Please join Recursion in welcoming Sophie Pinkard to speak at the February installment of our Women in Science and Technology Series! Sophie is Head of Product at OODA Health and brings a wide variety of experience from companies like Imagine Health and Castlight Health.

[More information & to register](#)



BYU Chem Camps

Discover how chemistry makes a difference in your everyday life!

- Ages 9-14
- 9-10 year olds 4 1/2 days, 11-12 year olds 2 full days, 13-14 year olds 3 full days Biochem Camp
- June and July 2019
- \$135 - Scholarships for free and reduced school lunch recipients
- 100 slots (want 50 boys & 50 girls)

[More information](#)

But it can be difficult to help students understand how some STEM learning can benefit them. Maintaining student engagement is one of the most important keys to improved learning outcomes, so helping students to make a link between their interests and what they are learning can make STEM studies more meaningful.

[Read More](#)



Best & Worst Metro Areas for STEM Professionals

STEM workers are in fierce demand, and not just in the global epicenter of high tech known as Silicon Valley. According to the latest U.S. Bureau of Labor Statistics [analysis](#), STEM — science, technology, engineering and math — professions grew at over twice the rate that non-STEM jobs did between 2009 and 2015. Most types of STEM jobs will also expand faster than all other occupations until 2024.

[Read More](#)



University of Utah Geology Spring Open House

Join us for a night of volcanoes, fossils, rock stars, & more!

Friday, April 5 @ 6-9 pm - Free & Open to the Public.

Location: Sutton Building, 115 S. 1460 E., Salt Lake City, UT

Featured presentation @ 7 pm: "We Are Earth Walking: How chemistry links all living things to their place & environment" by Dr. Gabe Bowen. See how Geologists use drones, virtual reality, 3D printing, & augmented reality!

[More information](#)



STEM Education and the Rise of Female Inclusivity

As men continue to dominate the fields of Science, Technology, Engineering and Mathematics, the visibility of women in those professions often goes unseen.

[Read More](#)



A Guide to STEM Majors

Science, technology, engineering and math offer many degree options across various interdisciplinary fields.

For career-minded students, few fields offer better job prospects than science, technology, engineering and math, known collectively as STEM.

[Read More](#)



How to Get Young Girls Excited About a Career In STEM

Remind girls that STEM doesn't only live in a laboratory, research center, or technology company.

[Read More](#)



Paid Professional Development Key to Teaching STEM Effectively

More state governments should take similar steps to ensure they can provide public support for paid professional development for teachers of STEM subjects.

[Read More](#)

Science Teacher and Leaders

The National Youth Science camp is an event where 2 High School Seniors from every state are selected to attend an all-expenses paid STEM-Based camp in West Virginia and Washington D.C. Utah has a selection committee that reviews applications and selects 2 finalist that will attend to camp. Application is based on a student essay, letters of recommendation, involvement in STEM base course and activities, student high school course selection and grades, and ACT/SAT scores.



National Youth Science Camp

Apply online: <http://apply.nyscamp.org>

Established in 1963 in West Virginia, the **National Youth Science Camp** is a honors program for two accomplished high school graduates from each state in the United States of America and others from around the world. The 2019 NYSCamp begins on June 27 and ends on July 20, 2019.

Overview: The NYSCamp is a broad science, technology, engineering, and mathematics program that incorporates both creative and performing arts as well as an outdoor adventure series including opportunities for rock climbing, mountain biking, spelunking, whitewater kayaking, and overnight backpacking. The delegation travels to Washington, D.C. where they are able to tour museums and other attractions near the National Mall and attend a panel discussion held at the *American Association for the Advancement of Science*. See <http://www.nyscamp.org> for more information or to apply.

Highlights:

- Lectures and Seminars with leading scientists from across the United States
- Directed Studies alongside visiting and resident STEM professionals
- Dedicated natural science, physical science, computer science, creative arts, performing arts, and outdoor recreation program areas.
- Delegates attend **free of charge** – transportation included!

Application Requirements:

- Graduate from high school between July 1, 2018 and June 30, 2019.
- Documented superior academic proficiency.
- Recognition for notable achievement in mathematics or science.
- Skills and achievements outside of STEM and outside academics.
- Intent to pursue higher education and career in STEM.
- Availability to participate in entire NYSCamp program.
- Submit your application online at <http://apply.nyscamp.org>.

Post Office Box 3387 – Charleston – West Virginia 25333-3387 USA
 (304) 205-6724 – FAX (800) 833-8879 – www.nysf.com

Please pass on this opportunity to your High School teachers so they can pass it on to their High School Seniors. Attached is a flyer that can be printed and placed on classroom walls.



Teach a girl to code & she'll change the world.

www.girlswhocode.com

{ 🍏 } girls who code

The Utah STEM Foundation, in partnership with Carbonite, Comcast, Centeva, and Recursion, has created the Entrepreneurial Challenge to spotlight student projects that could be the next big tech startup.

The Utah STEM Foundation Entrepreneurial Challenge event is open to all Girls Who Code clubs members across the state of Utah. The awards will focus on the skills the students have learned in their clubs through the challenge award; highlight students who have become peer leaders; feature facilitators who have gone above and beyond for their students; and emphasize that Computer Science (CS) skills start in early childhood with the essay award.

Those selected for the awards will receive grant funds from STEM Action Center and will be invited to an awards ceremony in April.

How to apply

We encourage all clubs to apply for this exciting opportunity, and we are available to help in the process every step of the way.

Applications are open now! Submit an application for your club at <http://bit.ly/2CrIFKU>. Applications close on March 25th. Award finalists will be announced on April 8th. The awards ceremony will be held on April 25th.

The four Entrepreneurial Challenge opportunities include:

- Challenge Essay - Open to 3rd-5th grade clubs
- Facilitator Award - Open to all clubs
- Peer Mentor Award - Open to 6th-12th grade clubs
- Project Challenge - Open to 6th-12th grade clubs

Download the detailed scoring guidelines, rubrics and award information at <http://bit.ly/EventChallengeGuidelines>.

An informational webinar will be held on February 12th at 3:30 PM. Join the meeting at <https://zoom.us/j/701718855> to discuss the challenge, application process and any questions about the event.

FAQ document can be found at: <http://bit.ly/2WfbSQW>

Email Erin Paulsen (erinpaulsen@utah.gov) with any questions or concerns.

STEM EVENTS

STEM Day on the Hill

Stop by for a bite of breakfast and see what educators, community organizations, and companies are doing in your legislative districts.

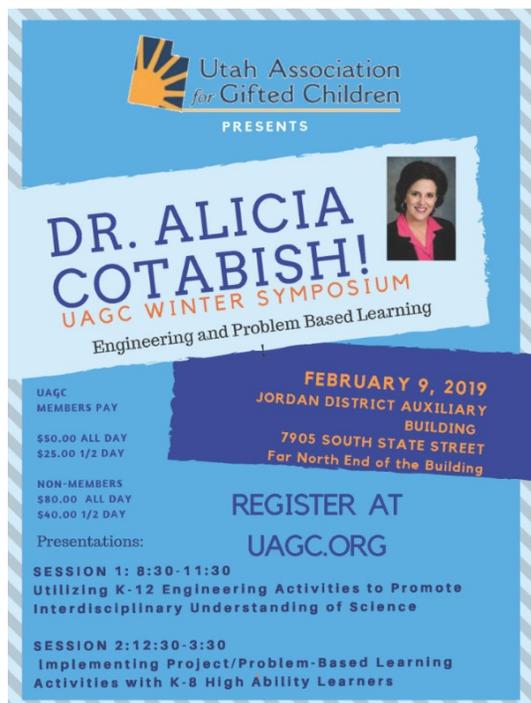
We invite you to join us for STEM Day on the Hill Capitol Rotunda February 6, 2019 7:30 a.m. - 9:30 a.m.



Waffle Love will be providing breakfast, including sweet and savory options.







Utah Association
for Gifted Children
PRESENTS

**DR. ALICIA
COTABISH!**
UAGC WINTER SYMPOSIUM
Engineering and Problem Based Learning

FEBRUARY 9, 2019
JORDAN DISTRICT AUXILIARY
BUILDING
7905 SOUTH STATE STREET
For North End of the Building

REGISTER AT
UAGC.ORG

UAGC MEMBERS PAY
\$50.00 ALL DAY
\$25.00 1/2 DAY

NON-MEMBERS
\$80.00 ALL DAY
\$40.00 1/2 DAY

Presentations:
SESSION 1: 8:30-11:30
Utilizing K-12 Engineering Activities to Promote
Interdisciplinary Understanding of Science

SESSION 2: 12:30-3:30
Implementing Project/Problem-Based Learning
Activities with K-8 High Ability Learners



AWE + SUM
ATTEND • WESTMINSTER • EXPLORE • SCIENCE • USE • MATH

SUMMER CAMP
JUNE 17-20, 2019
FOR GIRLS CURRENTLY IN 7th AND 8th GRADES

**WESTMINSTER
COLLEGE**

This camp is a unique opportunity for current 7th and 8th grade girls to spend four days enjoying hands-on math and science workshops and other activities on Westminster's campus. Girls stay in a residence hall at Westminster and are supervised by adult chaperones during daytime activities and during their overnight stays.

To attend, submit an application and ask your math or science teacher to submit a teacher recommendation form. In the first round of acceptances, by March 15, generally no more than two girls per school will be admitted, with some exceptions. Go to westminstercollege.edu/camps for more information and application forms. Scholarships available.

WESTMINSTERCOLLEGE.EDU/CAMPS

UPCOMING STEM EVENTS

- February 6, 2019 - STEM Day on the Hill - 7:30 am - 9:30 am at the Capitol Rotunda - [More information](#)
- February 7, 2019 - Women in Science & Technology at Recursion Pharmaceuticals - [More information](#)
- February 8, 2019 - Stars Basketball "Education Night" - [More information](#)
- February 9, 2019 - CenturyLink STEM Excellence Award - Jazz Game - [More information](#)
- February 23, 2019 - SLC Brain Bee (annual neuroscience competition) - [More information](#)
- March 9, 2019 - Expanding Your Horizons at Salt Lake Community College - [More information](#)
- March 14, 2019 - CenturyLink STEM Excellence Award - Jazz Game - [More information](#)
- April 5, 2019 - University of Utah Geology Open House - [More information](#)
- April 9, 2019 - CenturyLink STEM Excellence Award - Jazz Game - [More information](#)
- Summer 2019 - Code Ninjas Summer Camps - [More information](#)
- June 3 - 6, 2019 - BYU Girls Code at BYU - [More information](#)
- June 10, 2019 - STEM Best Practices - Davis Conference Center, more information to come
- June & July, 2019 - BYU Chem Camp - [More information](#)
- June 17 - 20, 2019 - AWE+SUM Summer Camp at Westminster College - [More information](#)
- July 15, 2019 - Altec Design Web Scholarship applications due - [More information](#)

STEM PROGRAMS & GRANTS

CenturyLink STEM Excellence Award: Nominate your standout STEM Student today!

In partnership with the Utah Jazz and CenturyLink, the STEM Action Center will recognize outstanding students in STEM. Every month during the NBA season, one 6th-12th grade Utah student will receive the CenturyLink STEM Excellence Award during a Utah Jazz home game. Awardees will receive two (2) tickets to the Jazz game where they will receive on-court recognition at half-time, be featured on the scoreboard, and be given a personalized jersey. Please see official rules for details.

<https://stem.utah.gov/centurylinkstemexcellenceaward/>

STEM Professional Learning Grants

The STEM Action Center has a professional learning opportunity grant available to all public K-12 education institutions. This project is designed to help schools determine what their needs are regarding STEM professional learning, and then help implement. Applications can be submitted by either a single school or a group of schools. Plans can cover either a 1-year plan or 3-year plans.

The application for this project opens Feb. 11, 2019, and must be submitted by *March 29, 2019* to be considered for funding. An updated RFP will be available by the beginning of February.

A grant work day will take place at STEM AC March 1. To register for the work day, visit the STEM AC website and click to the Professional Learning page.

[More information available here](#)

STEM Classroom Grants

Congrats to the 176 classroom grant awardees this school year! This will open ONLY ONCE next school year, starting in mid-August and closing at the end of September.

STEM Math Grants

The K-12 Math Personalized Learning Software Grant is opening soon!

The K-12 Math Personalized Learning Software Grant provides schools and districts with access to a selection of personalized learning software programs. The available programs have gone through a rigorous evaluation process and have demonstrated a statistically significant relationship between program use and improved student outcomes in math. [More information available here](#)

STEM Code.org Training

Applications are now open for Code.org professional learning program. For middle school teachers, we have spaces available for our Computer Science Discoveries (CSD) program. CSD is designed for students 6th-10th grade, and can be taught as a semester or full year program. For high school teachers, we have spaces available in our Computer Science Principles (CSP) program, which is designed for students 9th-12th grade. It can be taught as a full year introductory course or as a full year AP course. More information about CSD can be found here: <https://code.org/educate/csd> and more information about CSP can be found here: <https://code.org/educate/csp>

The professional learning program consists of a 5-day workshop from June 24th-June 28th at Dell EMC in Draper, and several academic year workshops held on Saturdays in the Fall and Spring. We cover the costs for training, including their materials, supplies and lunches.

To apply, visit <https://code.org/educate/professional-learning/program-information>, and fill out an application. Teachers will need principal approval and commit to attending all workshop days, including the academic year workshops.

Any questions about the professional learning program can be directed to Erin Paulsen (erinpaulsen@utah.gov).

STEM SCHOOL DESIGNATIONS

Potential STEM schools are in the process of setting up site visits, official awards will be made in April or May pending State Board of Education approval- well done to all of our applicants, for more information on how to become a state-designated STEM school check out our website. Intent to apply will open again in

August!

[To see a list of our STEM School Designation Awardees](#)

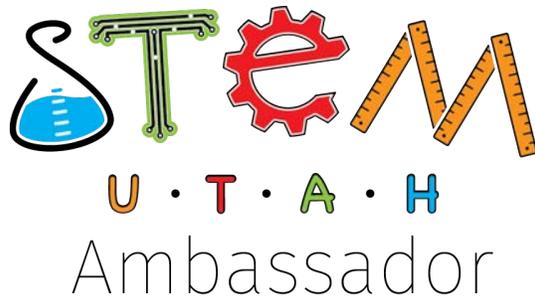
STEM BUS



This month, the STEM Bus Program is heading down to Washington County for two weeks. Crimson View Elementary, Diamond Valley Elementary, Panorama Elementary, Arrowhead Elementary, Vista School, and Horizon Elementary will receive their free STEM Bus Program visit and learn about robotics, engineering, circuitry and more!

If you are interested in having a STEM Bus Program visit, please keep an eye on your inbox. We will be sending information about registration for the 2019-2020 school year soon, please go to stem.utah.gov/stembus for information about registration.

STEM AMBASSADORS



The Utah STEM Action Center is always looking for high school and college students as well as recent college graduates and industry professionals who have a passion for STEM and would like to volunteer their time promoting science, technology, engineering, and math to K-12 students and educators throughout the State of Utah.

[Apply to become an ambassador](#)

STEM SPOTLIGHT

What do we do with our spare dimes, nickels,



quarters and pennies? We put them in a piggy bank, of course! What if you could “automate” that process?

And make it as crazy-fun as possible???

That was the challenge six teams of young people from elementary to high school ages in this year’s Utah Region Rube Goldberg Machines competition.

[Read More](#)



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Utah Governor's Office of Economic Development

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stem@utah.gov

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