



President's Page

Hello,

As I get ready to wrap up another school year I feel the excitement of a summer of 'different' work. I also reflect back on the happenings of this last school year. I wonder what impact or should I say lasting impact I have had. This train of thought brought me to how I answer the question, "What do you do for work?" We as educators are never 'just a teacher.' We are a group that are curious, we have impact on future generations, we are question askers, we motivate, and unlike many other occupations we get to 'start over' each year.

Here is a thought, as you wrap up your year, look back and identify your *triumphs*. Actually write them down. Look for the individual successes of your students; sometimes the smallest baby step for a student is in reality the completion of a marathon for them. Look for broad sweeping trends that you saw in your classroom that brought about change in your students. Look for personal triumphs no matter how small. You will find that your list will grow and expand as you contemplate this.

Here is the second part of the process, list down three *trials* that you had. If you feel more pushing on you to be included try to narrow it down to the three that had the biggest impact on you.

Now for the real challenge, choose one of those three trials and make it a target. Create an action plan to address that target. Write it down but know that this can and will be added to throughout the summer. As you go about your summer activities you will find your mind reflecting back to your target and be able to add to your action plan. Write these ideas down or they may float away.

The USTA board will be meeting the first weekend of June to start planning for the February 10, 2017 conference. Please feel free to email myself, or your regional representative, with ideas that you may have to improve the conference.

Have a wonderful summer.

Dawn Monson, President

Hi, to the readers of the newsletter. I'm trying a different newsletter template. I left my computer, with all my photos and logos, at TSA in LAX, so enjoy, or not, the different look of the newsletter. I did, however, make sure the grandchild with special needs was not lost or didn't run away. Priorities. Whatever you do, enjoy your summer. There are some pretty wonderful opportunities mentioned in the newsletter and the web. Always check them out.

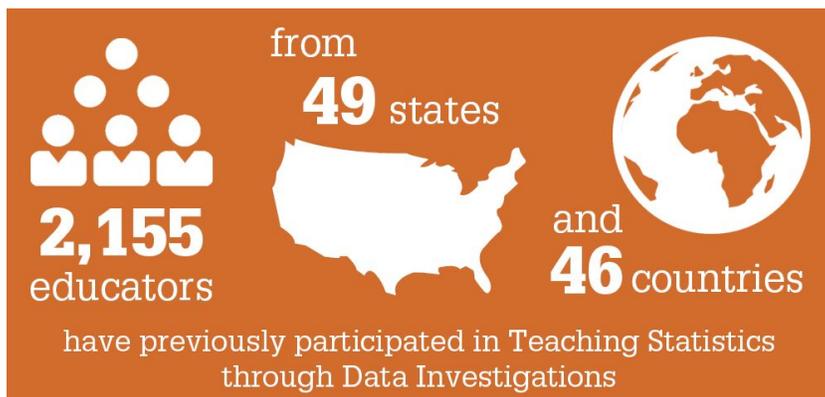
MOOC-ED @ FRIDAY INSTITUTE

massive open online courses for educators

Register Today for *Teaching Statistics through Data Investigations*

Our world is rich with data sources, and technology makes data more accessible than ever before! To help ensure students are future ready to use data for making informed decisions, many countries around the world have increased the emphasis on statistics and data analysis in school curriculum—from elementary/primary grades through college. This course allows you to learn, along with colleagues from other schools, an investigation cycle to teach statistics and to help students explore data to make evidence-based claims.

The 5-unit course starts June 6th so register today!



● “It made me reflect on how I teach statistics and determine whether I am using the best practices in statistics. I also found tools and activities that I can use in my classroom when I teach statistics units.”

“The fact that it was available on demand and I could go at my own pace was very important. Having the content available when I was available was very helpful.”

Delia Bayna

USTA Elementary Board Representative

Engineering by Design (EbD) curriculum

Have you heard of [iteea.org](http://www.iteea.org/)? It is the International Technology and Engineering Educators Association. They offer STEM integrated resources for educators of Utah for FREE. It's a bit tricky to access, so follow these steps created by the USOE and you will have access to all 21 PDFs containing the entire K-12 EbD Curriculum.

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1. Open a browser and go to <http://www.iteea.org/>
2. Click on the orange "Join" button at the top left hand side of the screen.
3. Fill in the information requested using your school email address.
4. Respond to the email sent to your account requesting validation. If you do not see one, check your "junk" folder.
5. Click on the green "Login" button
6. Click on the blue "Manage Profile(s)".
7. Click on the "Edit Profile" button lower down on the right hand side of the screen.
8. At a minimum, update your address under the "Contact Info" tab.
9. Click the blue "Update" button to save the data.
10. Click on the green "Logout" button at the top left hand side of the screen.
11. Click the green "Login" button to log back in.
12. Click on "STEM CTL Consortium" under the STEM + Center tab on the right at the top of the page.
13. Scroll down and click on the Utah within the map of the United States.
14. Click on the red "Request Access" button.
15. Wait to have your account authorized and then you will see a third tab on the Utah page that reads "EbD consortium Resources".
16. Acknowledge the ITEEA's copyright agreement
17. You will have access to the entire K-12 EbD curriculum.

Betta Fish & Life-long Learning!

I had a rather interesting conversation with one of our custodians recently! He stopped by to clean my room one day, and asked what we were learning about in class. I mentioned that we'd just got done talking about reproduction and the passing down of traits. He then mentioned that he used to keep and breed betta fish at his home. He mentioned how the males are a lot more colorful and decorative than the females (many of these traits are further enhanced through selective breeding). When it's time to mate, males will fan out their fins and twist their bodies in a sort of dance to attract a female. The male also builds a "bubble nest" to house the fertilized eggs after reproduction. He blows bubbles from his mouth, creating a large, frothy mixture, wherein the eggs are placed. The male then chases off the female and guards the nest until their offspring are ready to survive on their own. Fascinating, huh?! I had no idea that there were fish out there that could do this! I guess certain species of fish and frogs are known for building these types of nests, also called foam nests. After talking with our custodian, I did some digging online and was amazed at what I found! I'd learned something that I hadn't known before, something that captured my attention! Needless to say, I had to share things with my students as well!

Looking back on this experience, I got thinking about what it means to be a "life-long learner," a phrase that's heard often in education. In fact, I've used this phrase before with my own students, as I've encouraged them to open their eyes to the world around them and to question, investigate, and explore. I can't help but feel like the same advice applies to us as teachers. Aren't we supposed to be modeling the learning process for our students? How can we effectively teach them this process if we're not striving to be life-long learners ourselves? As teachers, we should constantly be on the look-out for new ideas and ways of teaching.

Another school year is drawing to a close (I know, can you believe it), and with it comes a chance to look back and reflect on how things went. This is actually one of my favorite things about teaching- each day, each week, and each school year is another opportunity to start fresh, to learn from past mistakes, and to become even better than we were before. Take a moment to ask yourself: What went well this year? Were there any lessons or activities that were a big hit with your students? How well were you able to manage your classroom? What kinds of relationships were you able to foster with students and their families? Is there anything that you'd like to do better? If you're like me, there's ALWAYS room for improvement! :-) Identify what you'd like to improve upon, and set a few goals for the coming year. Do this now while things are still fresh on your mind, and keep these goals in a safe place until the start of school again. In this way, you'll be better prepared for the coming year, and will be able to hit the ground running with your future students.

Don't forget to check out our summer endorsement courses at www.utsta.org, and stay tuned for our upcoming USTA Family Days in the fall.

All are great opportunities to continue being a “life-long learner.” We hope that you have a restful and rejuvenating summer, and wish you all the best! From my classroom to yours- happy teaching!

Sincerely,
Richard S. LeSueur, 7th Science
USTA Region II Representative

As you may know, last summer PBS broadcast a series called *The Mystery of Matter: Search for the Elements*. The three-hour NSF-funded series's, which tells the amazing human story behind the Periodic Table, was praised by the press and warmly received by chemistry teachers. “This was one of the most inspirational and educational programs I have ever seen on television,” one teacher wrote. “I applaud PBS for their leadership in developing such wonderful educational shows. I hope there is an effort to ensure that all chemistry students will have this series as part of their curriculum.” [See the attached document for a small selection of other comments on using the series in the classroom.]

After the premiere of *The Mystery of Matter*, we continued working on the project, using extra grant money we had raised to create a rich collection of educational materials for teachers. They include a Teacher’s Guide aligned with the latest science teaching standards, 60 short clips lifted from the series, and 32 short videos, mostly on topics of interest to chemistry teachers. These resources – all free – live at our website at www.mysteryofmatter.net. (When you get to the site, click on For Teachers in the top menu bar.)

Having created all this, we’re now working to spread the word so that as many teachers as possible can take advantage of these resources. We’ve already been in touch with NSTA and the American Association of Chemistry Teachers, and they’ll be using their social media and publications to put out the word. But I’m hoping there are some things the Utah Science Teachers Association would like to do to alert its members to these new chemistry education resources.

Sincerely,

Steve Lyons Project Director *The Mystery of Matter: Search for the Elements*
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ActivEpi Web, an electronic textbook for teaching epidemiology, available free on-line

ATLANTAActivEpi Web, a multimedia electronic textbook that provides an interactive resource to learn the fundamentals of epidemiology, is now available on-line at no cost.

David Kleinbaum, Ph.D., professor of epidemiology at Rollins School of Public Health at Emory University, originally developed ActivEpi in 2001 as a CD Rom. Because many computers no longer have CD capability, Kleinbaum converted it to a Web format.

“I consider this text an important educational gift to anyone, anywhere in the world and hope it has a major impact on education in the health, medical and mathematical/statistical fields,” said Kleinbaum who has written seven epidemiology textbooks and won numerous teaching awards during his 40-year career. “I hope it provides a clear understanding of how epidemiology links the health and medical sciences with mathematics and statistics.”

ActivEpi includes 15 lessons with narrated instructional expositions that use video and animation; interactive study questions and quizzes; and homework exercises.

Topics covered include study designs, measures of frequency and effect, potential impact, overview of validity, selection information and confounding bias, effect modification, analysis of 2x2 tables, options for control of variables, stratified analysis, matching and introduction to logistic regression.

Health professionals and students in the United States and abroad have used ActivEpi for standard lecture courses, online courses and individualized learning. A CD Rom version has been translated into Spanish for the Pan American Health Organization.

ActivEpi Web can be accessed at <http://activepi.herokuapp.com>. The author’s website at www.activepi.com provides further details about ActivEpi Web and includes free Power Points Instructional Materials.

For further information:

Edna Kleinbaum

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Maggie Huddleston's award. She has been chosen as one of the ten middle school teachers to participate in the National Stem Cell Foundation Scholars Program! She will be spending a week in June at the Carol Martin Gatton Academy of Mathematics and Science in Kentucky. Then later on she gets a trip to Washington DC! Way to go Maggie!!!! We will want to hear all about it. For more information check out this website <https://wkunews.wordpress.com/2016/03/16/nscfs-program/>

Into the Outdoors



We are actively expanding our network of stations we broadcast on and want to keep pace with the educational community.

Currently, we offer all of our videos and lessons for free on our [website](#). We believe in using an inquiry-based approach to teaching and really

believe that our videos and standards-based lessons offer teachers a unique way to get students engaged with science topics.

Here is a place to spend some summer time. Don't let those science cells die out during the summer. HHMI Biointeractive has released a short film that focuses on trophic cascade and keystone species.

<https://youtu.be/hRGg5it5FMI>



The one constant in life is change. As we embark into the new SEEd standards we need to prepare our selves in order to provide the best educational opportunity for each student in our class.

Todd Monson
Middle School Representative

Science instruction should solve and build student's curiosity to solve problems with a sense of wonder. Effective science instruction engages students in enjoyable learning experiences where they are stakeholders in the learning process. The true learning of science is in doing science outside of a text, video, Powerpoint, and worksheets. It's through the building, forming, and implementation of successes and failures that students understand science.

I encourage everyone to register for the 6, 7, 8th grade SEEd training programs provided in your area. This will enhance the student's opportunities to function responsibly and successfully in a world of ever expanding science discoveries and technology.

GEEO teacher travel programs.

Being a 501c3 non-profit, we count on other organizations to help us get the word out about GEEO

"I will talk about these trips all year in my classes. For so many of my students, my description of my travels will be the only exposure they will have to other countries and other ways of life."- Social studies teacher Michael Baldwin, whose first time traveling abroad was with GEEO.

Founded in 2007, [Global Exploration for Educators Organization \(GEEO\)](#) is a 501c3 non-profit organization that has sent over 1300 teachers abroad on adventurous travel programs. With GEEO educators can earn professional development credits while seeing the world. GEEO's trips are 7 to 21 days in length and are designed and discounted to be interesting and affordable for teachers. In addition to amazing tour leaders, many of the programs are accompanied by university faculty that are experts on the destination.

GEEO also provides teachers educational materials and the structure to help them bring their experiences into the classroom. The trips are open to all nationalities of K-12 and university educators, administrators, retired educators, as well as educators' guests.

GEEO is offering the following travel programs for 2016: Bali/Lombok, Bangkok to Hanoi, Costa Rica, Eastern Europe, The Galapagos Islands, Iceland, India/Nepal, Southern India, Ireland, Israel, Italy, Morocco, Myanmar (Burma), Peruvian Amazon, Peruvian Andes, Portugal/Spain, Heart of the Silk Road, Southern Africa, Turkey, Vietnam/Cambodia, Western Balkans, Morocco (Winter Break), The Philippines (Winter Break) and Mt. Kilimanjaro (Winter Break). The registration deadline is June 1st, but space is limited and many programs will be full well before the deadline.

Detailed information about each trip, including itineraries, costs, travel dates, and more can be found at www.geeo.org. GEEO can be reached 7 days a week, toll-free at [1-877-600-0105](tel:1-877-600-0105) between 9 AM-9 PM EST.

Kelly Carney **Communications Director GEEO Teacher Travel Programs**

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Website: www.geeo.org

Last thing before I sign out. This email was sent to all USTA members from Robert Krampf. Robert is a member of the Utah Science Teachers Association and a past conference keynote speaker. If in the haze and push of school you didn't check this, please do so now. It is an amazing resource for Utah science educators and

it is **FREE FREE FREE!**

I hope this finds you well. I wanted to let you know about a new, free feature on my website. I have added a "Test Your Science Knowledge" page: <http://thehappyscientist.com/content/test-your-science-knowledge>

Each time you visit the page, it gives you five randomly selected science questions. question is keyed to the Utah Science Core Standards, letting students see which standards the question is testing. Teachers are finding them very useful, and students seem to enjoy them as well.

There are currently over 100 questions, and I am adding more questions every week. When you have a moment, please take a look and let me know if you think it would be worthwhile for me to try to spread the word to Utah schools.

Have a wonder-filled day!

Robert Krampf

The Happy Scientist

