

# Thursday Morning March 1

## **Online Maps Tell Awesome Stories from any Device**

Amy Work - Geoporter  
Room 304

GIS is a powerful tool to visualize data and look for patterns. Now it is completely available on a web browser. In this session, Participants will start from the beginning and learn how to use this tool to help their students learn content they want to teach without getting lost in learning the tool. We will use the Mapping Our World online inquiries.

## **Exploring Earthquakes with the Geological Society of America**

Gary Lewis – Senior Director of Education and Outreach Geological Society of America  
Davida Buehler – Advocate Program Officer Geological Society of America  
Room 306

Join the Geological Society of America as we explore earthquakes. Numerous hands-on, inquiry-based activities will be presented as we learn about the forces that cause earthquakes to happen, the types of faults and their resulting features, the types of waves that are released from an earthquake, and the hazards associated with earthquakes. Participants will walk away with a unit that will keep their students actively engaged! A free Explore Earthquakes CD-ROM will be given to participants.

## **Creating a Custom Online Map Resource Center**

Barbaree Duke - GISetc  
Room 308

Join us for a deep dive into free online mapping to the next level! We'll learn the steps to create a custom map resource center, gallery or portal for your educational environment. We'll investigate map apps, story maps, groups, galleries and all the buttons necessary to make custom experiences for your students or event. Whether you want to teach earth systems or have students experience a story in a new way, there's a custom solution for you!

## **Analysis in ArcGIS**

Stacey Maples – GIS Assistant at The Yale University Map Collection  
Room 310

We sometimes refer to Geographic Information Systems Software as 'Mapping' software, though in reality, much of the work that is done with GIS doesn't end up producing a map, at all! These sessions will consider the power of GIS to produce information about the world we live in.

Participants will begin by exploring Geoprocessing Tools, applying methods of Spatial Allocation and Central Tendency to data derived from Dr. John Snow's report on the SOHO, London Cholera outbreak of 1854. Next, overlay analysis will be demonstrated using Aerial Interpolation to estimate demographics in boundaries that are not coincident with available demographic data sets (U.S. Census). Finally, the Relational Database Capabilities of GIS Software will be used to prepare tabular data from the EPA's Toxic Release Inventory for explicitly spatial analysis and cataloguing of pollutants based on proximity.

# Thursday Afternoon March 1

## Mapping Your Community

Dr. Bob Coulter - Director of the Litzsinger Road Ecology Center

Room 304

"Learn how to use basic mapping tools to investigate your community. Examples using both online and desktop mapping tools will help you get started seeing what makes your place interesting. Individual projects draw on common science, math, and social studies concepts.

- How has your community changed over time?
- How healthy is the water in our creek?
- How does our climate compare with the rest of the state?

Tutorials written by the presenter will help you get started, and ample time will be provided for guided practice. "

## Teaching Geologic Time

Gary Lewis – Senior Director of Education and Outreach Geological Society of America

David Beuhler – Advocate Program Officer Geological Society of America

Room 306

If you are teaching about deep time, geologic time and/or absolute time, you will want to attend this presentation! Learn more about deep time as Gary Lewis presents background information on the history of our understanding of deep time and explanations of relative age dating and radiometric dating in a manner that will help you to remember the information years from now. Additionally, Gary will introduce numerous activities that are easy to implement into the classroom. Models and diagrams will be presented to help you make teaching abstract concepts easy for students to understand. Participants will receive a free Explore Deep Time CD-ROM.

## Spatial and 3D analysis in ArcGIS

Stacey Maples – GIS Assistant at The Yale University Map Collection

Room 310

The Raster Data Model provides an effective means of characterizing spatially continuous phenomena, such as elevation, temperature, precipitation and other environmental and climatic characteristics. This workshop provides a targeted introduction to the tools available in GIS for creating, managing and analyzing data in raster form. Topics will include: Types of Raster Data; Properties of Raster Data; Symbolization & Display of Raster Data; Imagery Analysis in ArcGIS; The Spatial Analyst Toolset; Extracting Data from Raster to Vector; Map Algebra; and Image Classification.

## Copyright Clarity

Kristin Hokanson - Technology Integration & Professional Development Specialist

Library

While copyright & fair use can be confusing to navigate you CAN use copyrighted material in your educational work! This introduction to the Code of Best Practices in Fair Use for Media Literacy Education will explain fair use, reduce copyright confusion and share helpful ideas regarding how to teach your students and staff about copyright & fair use.

## Friday Morning March 2

### **Teaching Languages, from Memory to Fluency**

Dr. Rachel Moreno - Education Alliance for Catholic Education  
Room 110

It takes 2000 known words for students to start tentatively trying their language skills. What activities can draw out your students while they are learning to master vocabulary? How can you get them to try out their new walking shoes in a language so they are less afraid of making mistakes and more interested in learning to communicate.

### **Pushing & Letting Go: The Dance of Sport Performance**

Dr. Richard Fenker – Professor Emeritus of Psychology from Texas Christian University  
Room 112

All sports involve some mix of *pushing*, intentionally exerting effort/energy/attention and *letting go*, which is the act of allowing well established physical patterns and images to control your performance. Sports differ a great deal in the extent to which *pushing* can have a positive impact on performance and once you are past this crucial threshold, more effort or conscious intent quickly leads to stress, scattered attention and diminishing results. *Pushing* works well, to a point, in football, weight lifting and other sports where effort/power can dominate. *Pushing* generally leads to disaster in golf or gymnastics where even a small attempt to expend extra effort immediately interferes with the subtle, relaxed muscle behavior needed for optimum performance.

*Letting go* is often associated with the concept of flow or "effortless execution" in sports that is widely associated with peak performance states. *Letting go* is mostly about not interfering with established performance patterns by imposing negative thoughts, muscle tension or a left-brain, control-oriented view of the situation. The challenge for you personally is finding the right balance so your performance becomes a dance with part intent, effort and control in perfect harmony with that of the flow, joy and unconscious release of the beautiful patterns already stored in your mind and body.

### **EarthCaching for Educators with the Geological Society of America**

Gary Lewis – Senior Director of Education and Outreach Geological Society of America  
Davida Beuhler – Advocate Program Officer Geological Society of America  
Room 114

The most exiting way to learn about the Earth and its processes is to get into the outdoors to experience it first-hand. An EarthCache site is a special place that people can visit to learn about a unique geoscience feature or aspect of our Earth. Visitors to EarthCache sites can see how our planet has been shaped by geological processes, how we manage the resources and how scientists gather evidence to learn about the Earth. Join Gary Lewis as he shows you how easy it is to incorporate EarthCaching into your classrooms. This workshop is great for all levels and can be incorporated into earth science, environmental science and geography classes. Participants will receive a free Educators' Guide to EarthCaching.

### **Elementary Science, Hands on Projects from the Kitchen to Garage**

Lizz Klammer – Award Winning Science Teacher St. John's Episcopal School  
Room 209

Science doesn't always get the top billing in schools for several reasons. Lab supplies often are expensive and require preplanning and ordering well ahead of time. Teachers generally have less experience in these activities and face the hassles of set up or storage of supplies. So what can students use with ordinary

household equipment or materials that supports students investigating how the world works scientifically. Come, play and find out just how easy common household items supports your science classroom.

### **Texas History in Trails and Tools:**

#### **Stone Tool Making as a Means of Discovering Native American Cultures in the Classroom**

James Bowden - Past to Present Programs and Trading Post

Room 211

Follow the journey of a stone tool created before your very eyes to its many connections in the Native American material culture. As the tool is repeatedly recycled, can you guess its final destination? Come see for yourself in this engaging workshop and find unique ways to rejuvenate your history lessons. As you experience casting an atlatl, throwing a rabbit stick, using a hand drill, and creating your own soapstone bead with an auger, you will gain a powerful personal connection to that history that can be passed on to your students.

### **Creating Online Content to Best Engage Self Directed Students**

Kristin Hokanson - Technology Integration & Professional Development Specialist

Room 304

New web tools make it easy to create and share online. In this session we will apply principles of fair use to unleash the power of these tools and promote critical thinking to deepen learning. We will explore ways to manipulate existing and create new content to deepen understanding of curricular materials. In this session we will find, bookmark and create interactive, teaching materials using images, audio, and video from a variety of sources.

### **PASCO Probeware from Measurement to Mathematical Models**

Roger Palmer – GISetc/ Bishop Dunne

Room 306

Students often have a challenging time understanding that graphed lines represent reality. Even more challenging is to get them to come up with the equations to describe the project. Probeware allows students to see real time data on graphs as events happen. Join us to work through the algebra of linear, squared, sinusoidal, polynomial or logarithmic relationships. We will also consider the types of geometry problems possible to explore from your known GPS position.

### **Critical Thinking Adventures in Geography**

Dr. Paul Nagel - Elementary Methods Professor at Midwestern State University

Room 308

In this interactive workshop for elementary and middle schoolteachers, learn how to challenge your students to think critically about the world. From exploring the world through travel, mapping or just plain speculation, learn motivational tricks that utilize technology to challenge your students to ask questions and develop thinking skills. Other strategies and hands-on lessons geared to build basic geographic and critical thinking skills will be shared.

### **Writing Skills for College Ready Students**

Dr. Sophia Von Holden - Center for Writing Excellence, Western Governors University

Room 310

Grim statistics face freshman students entering college today. Colleges also face a daunting task of providing substantial enrichment to students entering degrees. Helping students write well will make the difference between success and dropping out. We will examine common writing skills needed to help students flourish in their fields of study based on years of experience in the college writing development

labs. Knowing what shows up missing at the university will be a great lens to examine teaching across the grades in language programs at your schools

## **Friday Afternoon March 2**

### **The Flipped Classroom**

Todd Nesloney - Techninja Todd, 5<sup>th</sup> Grade Teacher at Fields Store Elementary  
Room 110

Have you heard of "flipping" your classroom? This teacher will give you an in-depth look at all the ins-and-outs of flipping a classroom and data proof of the power of Flipping the Classroom. This session promises to give an honest look at exactly what worked in his class, and what failed! You will leave with all the knowledge and tools necessary to go back and start flipping right away! This session will also show you how to become "Flip Class Certified".

### **Building Focus in a Distracted World:**

#### **Leaders Are Made not Born**

Aaron Weintraub - CoachTraub.com  
Room 112

We will explore methods for developing leaders, including clarifying their vision, teaching them to lead by example, and coaching them to have the strength and resources to help their teammates give their best effort, too. We will empower coaches to teach confidence-building thought patterns and create an ideal performance state. Student-athletes who embrace and tap into their immense personal power by controlling their internal state are able to overcome adversity and have the consistency required in today's challenging sports climate.

### **Weakened, Worn, and Eroded with the Geological Society of America**

Gary Lewis - Senior Director of Education and Outreach Geological Society of America  
Davida Beuhler - Advocate Program Officer Geological Society of America  
Room 114

You spoke, we listened! Many teachers at last year's GeoTech Conference mentioned that they need more content and activities for their weathering and erosion unit. Join the Geological Society of America as we present several student activities that can be implemented easily into your classroom. Learn more about rocks and minerals and discover the processes that cause them to weaken and erode. Be prepared to participate in numerous labs during this workshop. Participants will receive the Weakened and Worn CD-ROM.

### **The Impossible LEGO® Innovator Challenge (Limit: 20 Participants)**

Play-Well TEKologies  
Room 209

To create innovators that will tackle the challenges of the future, you need teachers that believe the impossible is possible. In this fun, interactive, hands-on, LEGO® engineering workshop, we will tackle a series of "impossible" challenges, proving that our imagination has no limits. The goal of this workshop is for teachers to remind themselves why they got into teaching and how their why helps their students discover the future innovators that they are.

### **Mobile Field Data Collection and Mapping Using Smart Phones**

Laura Bowden - Esri  
Room 211

What do you get when you combine a cloud, a map, and a smart phone? A fun and engaging way to get your students collaborating, thinking critically, and building GIS technology skills that will help them in

their future careers, that's what! In this workshop you will use ArcGIS Online to collect data collaboratively, both in the lab and using your own smart phone or tablet. You will also learn what is involved in creating and publishing your own empty data layers in ArcGIS Online to power interdisciplinary student data collection projects.

### **Connecting, Creating and Collaborating: iPad Apps in the Classroom**

Dr. Jennifer Smolka - Director of PhD in Education Programs at Walden University  
Room 304

Learning can be elevated to new levels of connectivism by using the iPad to help students collaborate while creating new knowledge. This half day session will be a hands-on workshop to engage with learning teams to introduce iPad apps, practice using them, discuss classroom integration and sketch out possible lesson plans. A collaborative work space will be used to enable all participants' access to other teams' work. Participants are encouraged to bring their own iPads, however it is not required. Bishop Dunne will provide some iPads for group work.

### **Learning Through Games and Simulations**

Dr. Bob Coulter - Director of the Litzsinger Road Ecology Center  
Room 306

Virtually all of your students play computer games and simulations on smart phones, game systems, and computers. Learn how you can leverage this interest by guiding students in designing their own games. Curriculum linkages are up to you: Will it be a standard computer game, a simulation of key environmental concepts or ... ?

In three action-packed hours you'll learn the basics of StarLogo TNG, a free computer modeling tool used by kids as young as third grade. Sample projects will be shared to get you started, and then ample time will be provided in a guided work session as you try your hand as a game designer. Many tutorials are available online to support continuing work back at school.

### **Dallas Museum of Art Field Trip:**

#### **Exploring the Artifacts and Technology of Central America**

Crystal Rosenthal – Latin Department, Bishop Dunne  
Roger Palmer – GISetc/Science Department, Bishop Dunne  
Dallas Museum of Art

While the cradle of civilization started in the Middle East, similar events had to happen to establish human centers of populations in the Americas. Come explore the rich art and technologies that arose out of Central America's cradles of civilization. Explore the evolution of societies as centers of culture arose from Olmec, to Aztec, to Mayan and finally Incan centers of influence. Bishop Dunne's Crystal Rosenthal will guide from her experiences when employed at the Museum the process of an artifacts road from the earth to the exhibit. Live online maps will be demonstrated that can be accessed after the session to relate your discoveries to your students back in your own classrooms.

### **Geographic Explorations in 3D: From Animations to Understanding**

Brad Baker - Bishop Dunne Geography and GIS  
Room 310

Learn to build 3D virtual reality models or computer simulated environments or the real world in ArcGIS and GoogleEarth. Using the latest technology, participants will learn the foundation of 3D model building. Once the 3D model is constructed, participants can control the environment and "fly through" the model as well as recording video animations.