

## **Thursday Morning March 1**

### **Mapping Our World, Getting Started With GIS**

Barbaree Duke – GIS Y.E.S.  
Room 304

GIS is a powerful tool to visualize data and look for patterns. 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. Content covered in this session will be plate tectonics.

### **Plate Tectonics with the Geological Society of America**

Gary Lewis – Geological Society of America  
Davida Beuhler – Geological Society of America  
Room 306

Volcanoes & Mountain Building TEKS 9a-d, & 10a-f

Investigate the unifying theory of plate tectonics and see how it relates to earthquakes, volcanoes and mountain building. Make observations using the same data geologists used to identify the different plate boundaries. Construct a 3-D model to show the depth of earthquakes in a subduction zone. Create models that demonstrate various fault movements and the physiographic features that form as a result of these movements. Identify the epicenter of an earthquake using seismic data. Participate in seismic relay races to learn the properties of seismic waves. Participants will receive three CDs from our Exploring Geosciences series. They include: Plate Tectonics, Earthquakes and Volcanoes.

### **Robotics with NASA, Elements of Design**

Angelo Cassaburi – NASA AESP – Johnson Space Center  
Room 308

With the many things that compete for the attention of students, our challenge is to ignite a passion for STEM education. Many of NASA's K-12 projects highlight robotics among other disciplines within their various lessons and activities. NASA is well-known for its robotics efforts. Knowledge of our solar system and universe has increased exponentially with each near-Earth and deep-space mission. Indeed, in their 33-year journey, Voyagers 1 and 2 are now close to the edge of the Heliosphere, as they approach interstellar space beyond the Sun's influence. On the planet Mars, the rovers, Opportunity and Spirit, have captured the public's imagination. This is the first of two workshops to help participants understand that robotics design is best accomplished with a purpose in mind. Participants will build several structures to accommodate particular tasks.

### **“Analyzing Our World” GIS, Evidence Based Arguments Using Maps**

Roger Palmer GISec/Bishop Dunne  
Room 310

Working with data in GIS is hugely desirable if you want to begin doing your own projects. The datasets included in this workbook provide an easier place to get started building your own data. “Analyzing Our World” is characterized by downloading data from online resource centers to use in a project. While most projects will require the user to find more than just one data set these are prototype exercises that will allow you or your students to open most of the common formats of data on the web. The book continues to put GIS techniques in the context of important standards required by curricular areas from geography, science, mathematics and technology.

## **Thursday Afternoon March 1**

## **Esri Mobile Maps for Engaging Students**

Dr. Tom Baker – Esri

Room 304

On the Horizons in Media reports the new driving trend in technology is to access resources in the cloud. Esri's solutions to cloud accessed maps from mobile devices ranging from smart phones to iPads will be demonstrated. Participants will be able to search for the maps of choice from hundreds of sources and even mash them up to suit individual classroom purposes. Join us for an exciting look at an ever expanding source of content types as we play with these easy to access sources.

## **Doctor's Office for GIS**

Dr. Shannon White - University of Missouri

Barbaree Duke – GISetc

Anita Palmer – GISetc

Room 306

This session is designed to address individual participants' needs. Presenters will come prepared to lead participants on common tasks that school based projects typically attempt but also will be willing to show participants many of the new functionalities of the free ArcGIS cloud based software that is accessible by students from any networked computer.

## **Robotics with NASA, Programming the "NeXT" Generation**

Angelo Cassaburi – NASA's Aerospace Education Service Project – Johnson Space Center

Room 308

The **Aerospace Education Services Project (AESP)** provides formal and informal professional development to make teachers aware of NASA's use of robots in spacecraft and on board the Space Shuttle and International Space Station. Specialists have worked with teachers to help them learn to build and program Lego robots and have worked with FIRST Lego robotics competitions to judge or present NASA robotics connections to participants. This session will work to build participants comfort with program languages to maneuver the Legos NXT robots.

## **Energy, Environment and Earth: A World Wind of Activities**

Amy Work – TWIST Program, Cayuga Community College

Room 310

TWIST is a New York professional development consortium for the integration of spatial tools into classrooms at Cayuga Community College. This session will expose teachers to NASA's virtual earth program called World Wind. [\*World Wind\*](#) is a NASA-developed, open source desktop mapping application. A geographic data visualization tool, it lets users visualize a wide range of Earth data in a 3-D globe environment. *World Wind* allows the interactive selection and visualization of a number of data sets. Participants will explore the data made available in the interface and can download and use them back at their home computers.

**Friday Morning March 2**

## **Mapping Field Measurements via Pasco Probes and iOS**

Roger Palmer – GISetc/ Bishop Dunne  
Room 304

Questions often arise in class that would be nice to answer based on measurable data. Probeware allows students to see real time data on graphs, tables or meters to quickly address fun and educational questions. Why do we sweat? What colors go best in the Texas sun? What is fast or slow movement on a graph? where do fish breathe best underwater. Come on in just to play and see that gathering data can be both fun and engaging. Who knows we may all learn some things from each other in the process. We will also see the potential to leverage student iPhones or iPads as a data analysis tool.

## **Rocks and Minerals with the Geological Society of America**

Gary Lewis – Geological Society of America  
Davida Beuhler – Geological Society of America  
Room 306

Rocks and minerals lend themselves to inquiry-based lessons. Students are naturally curious about rocks and minerals and they enjoy having time to make observations as they learn how to identify them. This session will incorporate inquiry-based lessons for you to use in your classrooms. In addition, you will use a mnemonic device to help students remember the characteristics that define a mineral. Identify common minerals using physical properties. Interpret the rock cycle using Hershey Kisses and marshmallows then relate the rocks to plate tectonics. Learn the keys to identifying common igneous, sedimentary and metamorphic rocks. Participants will receive the Rocks and Minerals CD from the “Exploring Geosciences” CD series.

## **GPS Guided Robotics**

Megan Paten-Nygren – University of Nebraska 4H  
Room 308

This workshop will focus on integrating GIS with LEGO NXT Robotics. Youth can use GIS to see where their LEGO NXT robot has gone then use the LEGO NXT as a data collection tool that leads to analysis in GIS. GEAR-Tech-21 is a National Science Foundation-funded program available nationwide integrating GIS, GPS and robotics for a club, camp, after-school or classroom environment. Youths explore through building and programming a robot, geo-tracking, navigation, and mapmaking activities. Leaders have step-by-step guides and training provided.

## **Looking Down at Earth: Finding Stories in Aerial Images**

Dr. Shannon White – University of Missouri  
Room 310

With the widespread use of many more virtual earths from Google, NASA and Esri, teachers and students have more access to exploring any place on Earth and a numerous amount of times! How should we take advantage of these tools? How do we train students to look at imagery and ask good questions, figure out what they are looking for, and use the images to answer tough questions? We will use online and desktop tools to look at imagery that appears normal to the human eye and to look at some imagery that is false colored. Participants will be amazed at what they can see and understand from up there!

# **Friday Afternoon March 2**

## **Tools to Get Your Students Writing**

Dr. Jennifer Smolka – Walden University

Dr. Robert Marshal – Walden University  
Room 304

The writing development of a twenty-first century learners includes a tremendous amount of facilitated growth. To be a change agent of writing for our students, educators need to have a variety of strategies and tools to support a collaborative writing environment. By implementing technology tools including digital graphic organizers, screen sharing, and advanced Word features, we can provide a scaffolded learning experience that is inclusive of multiple learning styles. In this session we will share tools, sites, interactive tips and tricks at engaging your students through the use of technology.

### **Free Resources from the National Archives Using DocsTeach in Classrooms**

Jenny Sweeny - National Archives of Fort Worth  
Room 308

Teaching with primary documents encourages a varied learning environment for teachers and students alike. Lectures, demonstrations, analysis of documents, independent research, and group work become a gateway for research with historical records in ways that sharpen students' skills and enthusiasm for history, social studies, and the humanities.

### **20 Minute GIS and GPS for Young Explorers**

Barbaree Duke – GISetc  
Room 310

Elementary students will love the interactivity of very concrete placed maps and concepts such as when figuring out which way the rivers flow, studying physical geography through reading “Poetry in Motion, or likely spots for pirate havens! Teachers will appreciate the open-ended design of the curriculum and the ease of using online GIS. The directions are a great resource to know you will be able to return to class with all you need to get your students mapping! Follow this with the interactivity made available when using GPS units and your students are sure to be more engaged in your classes.

### **Online Testing with Blackboard Course-sites and Examview**

Brad Baker - Bishop Dunne  
Room 211

All online testing systems are not created equal. In this workshop learn how to use the free and powerful system Blackboard CourseSites to create online assessments. Instructions will also be provided on how to import ExamView® files into the system to reduce setup time.

### **Motivating Students: the Mental Aspects of the Game**

Aaron Weintraub - CoachTraub.com  
Room 209

Mental skills develop with practice just as physical skills do. One of the best ways to practice your mental skills is to meet with Coach Traub. If you have the courage and motivation, he has the teaching skills to help you reach your dreams. This program takes positive coaching and the toolbox of applied sport psychology in the style of Coach Traub’s “Mental Skills Training” to coaches of any level.

### **Dallas World Aquarium with Amazon Naturalist Field Trip (\$15)**

Cliver Rioja – Peruvian Amazon Naturalist  
Herb Thompson – The GeoMan  
Roger Palmer – GISetc/Bishop Dunne

## Dallas World Aquarium

Join us as we explore the fabulous Dallas World Aquarium. We will have a unique opportunity to join Amazonian professional guide Cliver Rioja as he describes relationships between the animals and living conditions of his home on the Amazon near Iquitos, Peru. Tour handouts will be provided for teachers to use on future visits to the Aquarium. We will look at major biological themes such as speciation, climates, organism interactions, world biome formation, specialization, particular adaptations and of course tour the well modeled ecosystems of the American Tropics.

## **SMU Bridwell Library Tour**

Melanie Gibson – Bishop Dunne  
SMU Bridwell Research Library

The Bridwell Library offers a rich array of materials and services in support of the study and research needs of students and faculty of the SMU Perkins School of Theology and the Graduate Program in Religious Studies. Bridwell is also the principal bibliographic resource at Southern Methodist University for the fields of theology and religious studies.

## **Attracting and Engaging Hispanic Students in Your School Community**

Erika Banwarth-Cedrone – Catholic Foundation  
Room 205

All school staff and faculty can work together to lead school-wide efforts aimed at attracting and supporting immigrant families living in the neighborhoods of their schools. This session will explore and develop methods to help schools connect with Hispanic families seeking a Catholic education as well as help those who are currently enrolled in schools become more fully engaged in the life of the school.