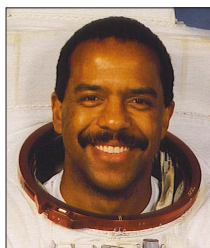# UTeach
Conference
2018

12th Annual

May 22–24, 2018

THE UNIVERSITY OF TEXAS AT AUSTIN

Program

AT&T Executive Education and Conference Center • Austin, Texas

Featured Speakers

Keynote

DR. BERNARD A. HARRIS, JR.

Dr. Harris is currently Chief Executive Officer and Managing Partner of Vesalius Ventures, Inc., a venture capital firm that supports and invests in early to mid-stage healthcare technologies and companies. He is also a founding member of the National Math and Science Initiative board and the nonprofit's incoming CEO.
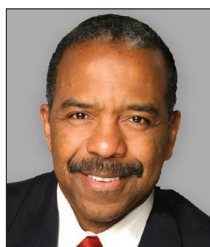
He has had over 20 years of business experience in various leadership roles such as CEO, president, SVP, and CMO of some of the leading companies and organizations in the nation. He is a member of the Board of Directors for U.S. Physical Therapy (NASDAQ: USPH), Sterling Bancshares (NASDAQ: SBIB), E-Cardio, RMD Networks, Monebo Technologies, American Institute Minimally Invasive Surgery (AIMIS) and the Space Agency. In addition, Dr. Harris serves as a Director of a number of investment funds, including The Endowment Fund, Salient Absolute Return Fund, Salient MLP & Energy Infrastructure Fund, Salient Midstream & MLP Fund and Salient MF Trust, with over $18 billion in assets under management (AUM); and Board of Trustees of Babson Capital Global Short Duration High Yield Fund and Babson Capital Funds Trust with over $600m AUM.

Dr. Harris was at NASA for 10 years, where he conducted research in musculoskeletal physiology and disuse osteoporosis. Later, as Head of the Exercise Countermeasure Project, he conducted clinical investigations of space adaptation and developed in-flight medical devices to extend astronaut stays in space, which involved the use of telemetry. A veteran astronaut for over eighteen years, he has logged more than 438 hours and traveled over 7.2 million miles in space. On his second flight, Dr. Harris conducted the first telemedicine conference from space with the Mayo Clinic and became the "First African American to walk in Space." Dr. Harris served as Vice President and Chief Scientist of SPACEHAB, Inc., a venture-backed innovative space commercialization company where he directed the company's space science business. Later, he served as Vice President of Business Development for Space Media, Inc., an Informatics company, establishing an e-commerce initiative.

Dr. Harris earned a Bachelor of Science in Biology from the University of Houston, a Master of Medical Science from the University of Texas Medical Branch at Galveston, a Master of Business Administration (MBA) from the University of Houston and a Doctorate of Medicine from Texas Tech University School of Medicine. He completed a Residency in Internal Medicine at the Mayo Clinic, a National Research Council Fellowship in Endocrinology at the NASA Ames Research Center and trained as a Flight Surgeon at the Aerospace School of Medicine, Brooks Air Force Base. He is also a licensed private pilot and certified scuba diver.

He is the recipient of numerous awards, including honorary doctorates from Stony Brook University (SUNY), Morehouse School of Medicine, New Jersey Institute of Technology (NJIT) and University of Hartford, NASA Space Flight Medal, NASA Award of Merit, a fellow of the American College of Physicians, and was the recipient of the 2000 Horatio Alger Award.

Dr. Harris is also the Founder and President of the Harris Foundation, a non-profit organization that supports math/science education and crime prevention programs for America's youth.

Opening Plenary

KATE BIBERDORF

Kate Biberdorf is a Ph.D. chemist who loves to ignite things, including opportunities for young women. Born and raised in Kalamazoo, Michigan, Kate earned a Bachelor of Science in Chemistry and German from the University of Michigan in 2008. She then relocated to Austin, Texas, to attend The University of Texas at Austin, where she graduated with her Ph.D. in inorganic chemistry in 2014. In her current role as a chemistry Lecturer and the Director of Demonstrations and Outreach for The University of Texas at Austin, Kate is known for developing explosive demonstrations that excite undergraduate chemistry students.

Outside of the classroom, she is often found at local Austin schools, promoting science education with her outreach program Fun with Chemistry. After all, who doesn't want to wear designer heels while discussing nuclear energy? She is highly motivated to inspire students of all ages to pursue a degree in STEM—all while diminishing the stigma around women in science. To this end, she has launched a Women in Chemistry program within UT Chemistry, and offers three summer camp sessions for K–12 youth. Dr. Biberdorf's work has spread like wildfire, and she's caught the attention of local news stations and national advocates. Her demos were recently featured by NBC Nightly News, CNN's Great Big Story, Discovery Channel's Daily Planet, and Amy Poehler's Smart Girls. Fun with Chemistry is supported by the generosity of UT Austin, private donors, the Welch Foundation and H-E-B's community grants program.

2018 UTeach STEM Education Association

OUTSTANDING FACULTY TEACHING AWARD: GREG HALE

UTeach Arlington Co-Director, Assistant Dean, and Faculty Member

Greg Hale earned his Ph.D. in Organic Chemistry from the University of Pittsburgh in 1999 and immediately joined the Department of Chemistry and Biochemistry at The University of Texas at Arlington as a Lecturer and Undergraduate Advisor. In his seven years there, he taught a total of 63 lecture courses and advised about 200 majors per semester for the department. In 2000, then Dean of Science Neal Smatresk recruited Greg to help teach in a master's program for science teachers that was launching in 2001.

Over the next few years, Greg became more involved in the teaching of courses in this program and in its administration alongside his responsibilities in the Department of Chemistry and Biochemistry. This culminated with him being named the Director of the Science Education and Career Center and Assistant Dean of Science in May 2006. In these roles, Greg has been the principal investigator for grants and gifts totaling $5.02M and the co-principal investigator on an additional $5.03M. This funding has fueled projects including summer camps that have served 600 residential campers and 150 day campers and a chemistry demonstration squad that has served over 130,000 K–12 students, funded scholarships for dozens of science teachers pursuing master's degrees, and funded the UTeach replication at UTA, which has increased the secondary mathematics and science teacher production there by 500%.

After replication funding for UTeach was secured, Greg was named one of three co-directors at UTA. Greg has been the lead instructor for Research Methods nine times and a co-instructor the other two times the course has been offered, so he has been able to work with almost every UTeach Arlington graduate. Over his entire career, Dr. Hale has been the sole or lead instructor for nearly 180 lecture course sections, but Research Methods is still a whirlwind every semester. In his personal time, Greg was a board member at one of the oldest charter schools in Texas, Arlington Classics Academy, from 2008 until 2015, serving as board treasurer from 2009 to 2012 and president from 2012 to 2015. In his time on the board, the school grew from 400 to over 1,200 students, from four acres of property to over 20, and from a fund balance of under $400k to one over $3M.

OUTSTANDING MASTER TEACHER AWARD: RICO TYLER

SKyTeach Master Teacher, Co-Director NSCF Scholars Program

Rico Tyler is a master teacher with the SKyTeach program at Western Kentucky University. Before joining WKU in 2001, he spent 19 years teaching high school physics and won the Presidential Award for Excellence in Science Teaching. During his time teaching high school, he served a year on loan to the Kentucky Department of Education as a science teaching consultant. Since 1984, he has been an astronomy faculty member of the Kentucky Governor's Scholars Program.

Rico's interests include providing professional opportunities for both SKyTeach students and practicing teachers. He created a Teaching Fellows Program in cooperation with the Governor's Scholars Program, giving SKyTeach students the opportunity to develop inquiry-teaching skills by co-teaching with GSP science faculty. In 2012, he began an international student teaching program with the Liceo Scientifico Respighi, a science magnet high school in Piacenza, Italy. Rico also directs a regional bridge building contest and a K–12 rocket competition. During the months leading up to the August 2017 solar eclipse, he conducted numerous workshops preparing Kentucky teachers to share the experience with students.

In addition to his SKyTeach work, Rico is the co-director of the National STEM Scholar Program. In partnership with the National Stem Cell Foundation, the STEM Scholar Program recruits creative middle school science teachers from across the U.S. to promote creative approaches to inquiry learning. He has also conducted workshops on the 5E model and inquiry learning for teachers from Italy, Egypt, and Saudi Arabia.

OUTSTANDING STAFF AWARD: KIM DISTIN

UTeach Dallas Program Coordinator and Materials Manager

Kim Distin's passion for organization can be traced back to elementary and middle school when she would organize closets, the kitchen pantry, and neighborhood babysitting co-ops. She has excelled as the Science/Mathematics Education Department Program Coordinator, Materials Manager, and Intern Coordinator since the inception of the UTeach Dallas program in 2007. Kim is vital to the daily operation of the UTeach Dallas program from class, lab, and lesson materials management, web and social media, data reports, alumni tracking, and more.

Kim has devoted the last 20-plus years to education of both herself and others. She taught high school science in the Dallas area for 10 years before moving to UTD. While at UTD, her Master's research on the Integrated Physics and Chemistry course influenced the State Board of Education's determination of graduation requirements. As she worked closely with the UTeach Dallas students, she discovered her next research project idea. Kim recently earned her PhD from Curtin University of Australia with her award-winning research on multiple learning environments that UTeach students experience throughout their university careers and how their perceptions of these change as their pedagogical knowledge increases.

While organizing the Science/Mathematics Education Department is her primary job function by day, Kim also puts those organizational skills to use by spending many nights and weekends as an active volunteer dance mom, PTA mom, and running a 5,000+ member online Rick Springfield fan group.

OUTSTANDING ALUMNUS AWARD: JENNIFER WEST

UTeach Arlington Graduate, Pre-AP and AP Chemistry Teacher, Irving High School

Jennifer West completed the UTeach Arlington program in 2014 as part of the program's first graduating class. After graduation, she began her teaching career at Irving High School, a Title I school in the Dallas–Fort Worth area. She was instrumental in recruiting a large number of UTeach alumni to work on the campus, which currently employs 15 UTeach graduates. After her first year of teaching, she was promoted to Chemistry subject head and continues to serve in this role.

In 2017, the Irving Independent School District Curriculum Department invited Jennifer to serve as a curriculum writer, having noted her leadership and ongoing work to create and share inquiry-based lessons. In this role, and as Chemistry subject head, Jennifer has worked to increase inquiry-based teaching throughout the district. She spearheaded the project to rebuild the high school Chemistry curriculum from scratch, embedding 5E cycles for each of the Texas Essential Knowledge and Skills.

This year, Jennifer ran professional development sessions for each of the 12 Chemistry units, ensuring that each teacher in the district was comfortable conducting the labs, had a foundational understanding of the 5E process, and was ready to bring this into their classroom instruction. She has received feedback from teachers who have traditionally done no inquiry, letting her know that they are implementing inquiry-based teaching in their classrooms. She would like to thank her family, friends, professors, and coworkers—the impact they've had is immeasurable.

Tuesday, May 22

10:00 a.m. - 1:00 p.m. Registration

REGISTRATION | LEVEL M2

11:00 a.m. – 12:30 p.m.

STUDENT ORIENTATION | 203

For UTeach students only! Join us for a student orientation from 11:00 a.m. to 11:45 a.m. We will have lunch afterward in The Carillon.

1:00 – 2:30 p.m. Opening Plenary

FUN WITH CHEMISTRY: INSIDE (AND OUTSIDE) OF THE CLASSROOM | BALLROOM

Kate Biberdorf, *Chemistry Lecturer and Director of Demonstrations and Outreach, University of Texas at Austin*

In this presentation, Dr. Kate Biberdorf will identify a few key techniques that allow her to facilitate Active Learning, both inside and outside of the classroom. Attendees will gain a deeper understanding of the general chemistry pedagogy at The University of Texas at Austin, and they will observe a few of Dr. Biberdorf's favorite demonstrations that have been featured on *CNN, NBC,* and the *Discovery Channel.*

2:45 – 3:45 p.m.

RESEARCH AND INNOVATION IN STEM PRESERVICE TEACHER PREPARATION: EXTENDING THE AAAS/NSF NOYCE REGIONAL DIALOGUE | 101

Roundtable Discussion

Greg Hale, *Assistant Dean of Science; Co-Director, UTeach Arlington, University of Texas at Arlington*

Ann Cavallo, *Associate Dean of Education; Co-Director, UTeach Arlington, University of Texas at Arlington*

The purpose of this session is to continue the work of the Southwest Noyce Regional Dialogue hosted at UTA in June 2017, discussing best practices for preparing STEM teachers for high-need schools. We will present a summary of the responses, new questions, and proposed solutions from the 2017 dialogue, and we will task attendees with discussing some of the same guiding questions.

UTEACH COURSE OVERVIEW: PERSPECTIVES ON SCIENCE AND MATHEMATICS | 103

Interactive Presentation

Gregory Gilson, *Associate Professor, University of Texas Rio Grande Valley*

Al Martinez, *Professor, University of Texas at Austin*

This session provides an introduction to Perspectives on Science and Mathematics, one of nine UTeach courses. This course fosters an understanding of the historical development of the fields of science and mathematics.

UTEACH CO-DIRECTORS SPECIAL INTEREST GROUP | 104

Roundtable Discussion

Kimberly Hughes, *Director, UTeach Institute*

Steve Case, *Director of the Center for STEM Learning; Assistant Director of the Center for Science Education; Co-Director, UKanTeach, University of Kansas*

Program co-directors, college deans, and other university leaders will convene to discuss topics of interest to the group.

THE HIGH SCHOOL RESEARCH INITIATIVE: TEACHING RESEARCH METHODS IN HIGH SCHOOLS (AND IT'S WORKING!) | 105

Interactive Presentation

Gwen Stovall, *Director, High School Research Initiative, University of Texas at Austin*

Patrick Goertz, *Teacher, Dominic Savio Catholic High School*

Jill Rhoden, *Outreach Program Coordinator, High School Research Initiative, University of Texas at Austin*

The University of Texas High School Research Initiative (HRI) offers a dual-enrollment, project-based research course. Taught by trained high school teachers at their high school campuses, the unique HRI course offers an open-inquiry research experience, similar to the UTeach Research Methods course, for the first semester. The second semester of the course offers a University-partnered research collaboration, which is similar to the UT Freshman Research Initiative (FRI) experience. This UTeach conference talk will provide an overview of the HRI program, as well as a demonstration of the open-inquiry project conversations, teaching students how to "ask and answer their own scientific questions" and asking conference participants to facilitate this discussion. We will report the early HRI program results and lessons learned from this two-year program.

A HOMEMADE 3D PRINTER PROJECT AND THE UNFORESEEN IMPACT ON UNDERSERVED STEM STUDENTS | 106

Roundtable Discussion

Daniel FitzPatrick, *Clinical Assistant Professor, University of Texas at Austin*

Victoria Dominguez, *Teacher, Lanier High School, AISD*

This session will provide multiple perspectives on the effect of fostering academic risk through choice and discuss how a 3D printing project had unforeseen impacts on equity for traditionally underrepresented students in STEM.

FOSTERING A STEM ECOSYSTEM THROUGH COMMUNITY INVOLVEMENT | 107

Interactive Presentation

Zach Pekor, *Senior Program Associate, George Washington University*

This session will explore the intersection of community engagement/involvement and building a supporting environment for STEM education. Emphasis will be placed on ways to enhance program visibility.

FUNCTIONS AND MODELING: DEVELOPING CANDIDATES' ATTENTIVENESS AND QUANTITATIVE REASONING IN CONTEXT THROUGH IMPLEMENTATION OF ONLINE MODULES | 108
Interactive Presentation
Laurie Cavey, *Associate Professor of Mathematics, Boise State University*
Tatia Totorica, *Clinical Assistant Professor / Master Teacher, IDoTeach, Boise State University*
  Participants will engage with the content of one developed online module, participate in small and whole-group conversations about the affordances of implementation as it pertains to both teacher candidate attentiveness and their quantitative reasoning in context, brainstorm potential uses for and/or barriers to use of the modules in their own Functions and Modeling courses, and offer suggestions for improvement.

WHAT IS UTEACH? | 203
Interactive Presentation
Jill Marshall, *Associate Professor of STEM Education, Department of Curriculum and Instruction; Co-Associate Director, UTeach Austin, University of Texas at Austin*
Ellen Granger, *Director, Office of Science Teaching Activities; Co-Director, FSUTeach, Florida State University*
  This session is for anyone interested in learning more about the UTeach secondary math and science teacher preparation program. Presenters will describe the hallmarks of UTeach, its organizational structure, the roles of key program staff and faculty, and its partnership with local K–12 schools. The presenters also will review the program's results at UT Austin, including program enrollment and retention, student profiles, and teacher production and retention.

USING GOAL-FREE PROBLEM SOLVING AS AN EFFECTIVE INQUIRY-BASED APPROACH WITH STRUGGLING LEARNERS | 301
Hands-On Workshop
Curtis Turner, *Master Teacher, University of Colorado, Colorado Springs*
Shanae Garner, *Student, University of Colorado, Colorado Springs*
  Participants will learn how to design lessons and activities for students who struggle in math and science using significant elements of Cognitive Load Theory.

4:00 – 5:00 p.m.

TEACHHOUSTON COURSES: A MODEL FOR UTEACH PROGRAMS | 101
Interactive Presentation
Paige Evans, *Clinical Professor, University of Houston*
Leah McAlister-Shields, *Academic Program Manager, University of Houston*
Mariam Manuel, *Instructional Assistant Professor, University of Houston*
  teachHOUSTON has infused Culturally Responsive Teaching (CRT) into their courses to broaden participation in STEM. Activities including the CRT Mathematics/Science Lesson Analysis Tool will be shared.

UTEACH COURSE OVERVIEW: APPRENTICE TEACHING | 103
Interactive Presentation
Kelli Allen, *Clinical Associate Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
Stacy Solis, *Master Teacher, University of Texas Rio Grande Valley*
  This session will provide an overview of Apprentice Teaching, the last in the series of nine UTeach courses. This course provides the final clinical preparation before UTeach students are recommended for certification.

YOU'RE A TEACHER! NOW WHAT? | 104
Interactive Presentation
Gustavo Valencia, *Assistant Professor in Practice, University of Texas Rio Grande Valley*
Pamela Groves, *Assistant Professor in Practice, University of Texas Rio Grande Valley*
  The purpose of this session is to get teachers ready for their first day of school and beyond. We will discuss preparing a classroom, what to expect, classroom management, organization, and more.

BRIDGING THE GAP BETWEEN THEORY AND PRACTICE WITH TEACHER ASSISTANTSHIPS | 105
Interactive Presentation
Curtis Turner, *Senior Instructor, University of Colorado, Colorado Springs*
Shanae Garner, *Student, University of Colorado, Colorado Springs*
  We will share a program innovation in UCCSTeach that increases the amount of classroom exposure for our students while providing part-time employment.

FUNDRAISING FOR YOUR UTEACH PROGRAM | 106
Panel Discussion
Gay Stewart, *Eberly Professor of STEM Education; Professor of Physics; Co-Director, WVUteach, West Virginia University*
Lee Meadows, *Associate Professor; Co-Director, UABTeach, University of Alabama, Birmingham*
Stacey Smith, *Senior Director of Corporate and Foundation Relations, Oklahoma State University Foundation*
Maria Allen, *Associate Director for Development, UTeach, University of Texas at Austin*
  UTeach partners discuss how they navigate issues related to fundraising for their programs. Presenters include development officers and co-directors who raise funds for program sustainability.

LESSON PLANNING IN PERSPECTIVES ON SCIENCE AND MATHEMATICS: EXPLORING RESOURCES FOR STUDENTS AND INSTRUCTORS | 107
Megan Raby, *Assistant Professor, University of Texas at Austin*
  This session will provide resources for Perspectives instructors to help their students successfully develop 5E lesson plans that address the history and nature of science and math.

UTEACH INSTRUCTIONAL PROGRAM OVERVIEW | 203
Interactive Presentation
Steve Case, *Director of the Center for STEM Learning; Assistant Director of the Center for Science Education; Co-Director, UKanTeach, University of Kansas*
Lynn Kirby, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
This session will provide a comprehensive overview of the design and implementation of the UTeach model program curriculum. Each of the UTeach courses will be discussed, as well as the UTeach program field component.

HI THERE, NEIGHBOR! DIGITAL MEDIA RESOURCES FOR PRE-SERVICE AND NOVICE TEACHERS FROM PBS | 301
Interactive Presentation
Benjamin Kramer, *VP of Education, KLRU-TV, Austin PBS, University of Texas at Austin*
We at PBS like to be good neighbors to the people we admire most in the world, like teachers. To that end, PBS has a bounty of resources to share, including PBS LearningMedia, our digital archive of assets for educators, and PBS TeacherLine, offering just-in-time coursework to brush up or acquire new skills. Staff from the local PBS station, KLRU, will walk you through how to obtain these assets anywhere in the 50 states and US territories, and how to share among colleagues, students, and families.

5:15 – 7:15 p.m. Welcome Reception and Poster Session

BALLROOM

POSTER DESCRIPTIONS

Course Exposition—Students
A1. PBI REAL WORLD
Samantha Serio, *Student, University of Texas at Dallas*
Ariel DeZeeuw, *Student, University of Texas at Dallas*
Keelie Kish, *Student, University of Texas at Dallas*
This PBI project utilizes a cross-curricular approach to explore periodic behavior in music, as well as characteristics of poetry. Students are engaged by being asked to create a song that incorporates trigonometric ratios and functions using chords containing consonance and dissonance to present to an authentic audience at an open mic night.

A2. EQUITY AND EQUALITY
Charlotte Gaynor, *Student, George Washington University*
This poster presentation will focus on equity versus equality in the classroom, tying in activities and points of discussion from Classroom Interactions. It will also discuss ways to implement equity and equality practices to help all students succeed.

A3. CULTURAL COMPETENCY: WHY IS EACH STUDENT'S CULTURAL IDENTITY IMPORTANT TO SCHOOLS AND TEACHERS?
Linda Catalan, *Student, George Washington University*
Family reunions and food, among other things, remind us why we love our cultural identity, but what happens when we step into the classroom? It is important for us to learn to expand teaching practices to include cultural competence and embrace students' cultural identities.

A4. THE EFFECT OF SOCIOECONOMIC STATUS ON A STUDENT'S DESIRE TO FOLLOW A STEM CAREER PATH
Zoe Gillespie, *Student, Middle Tennessee State University*
The purpose of this study is to determine if there is a correlation between a student's socioeconomic status and that student's desire to follow a STEM career path.

A5. MATHEMATICAL METHODS IN THE CLASSROOM
Joshua Cox, *Student, Oklahoma State University*
Morgan McCaskey, *Student, Oklahoma State University*
We will present the fundamental ideas in mathematical research. This includes Game Theory and Number Theory, specifically the "N-Card Game," Perfect Numbers, and Goldbach's Conjecture. Integrating these methods in classrooms will allow students to understand real-world applications of math research.

A6. DIFFERENTIATING MATH INSTRUCTION WITH DESMOS ONLINE GRAPHING SOFTWARE
Sabrina Garcia, *Student, University of Arkansas, Fayetteville*
My poster presents how a teacher can use DESMOS (a free online graphing program) to differentiate instruction and support learning for all students. This program has many features, including a teacher dashboard for formative assessment.

A7. HOW ARE WE DIFFERENT?
Melissa Maxson, *Student, University of Central Arkansas*
Alyssa Hash, *Student, University of Central Arkansas*
We would like to show the difference between UTeach PBI and StemTeach PBI. We will explore the difference in curriculum, projects, focus points, etc. We will show our day-to-day activities and include information on our field trips.

A8. DEVELOPING CRITICAL PERSPECTIVES IN STEP 2: MAINTAINING AN OPEN DISPOSITION WHILE SHIFTING FROM STUDENT TO TEACHER
Azike Precious, *Student, University of Maryland, College Park*
Joshua Pooranmal, *Student, University of Maryland, College Park*
We believe that teaching should be a continuous effort to learn—about ourselves and our students. We will share how we developed our own critical perspectives in Step 2, and how this work influenced our fieldwork experiences and allowed us to practice understanding students with an open mind.

A9. BUILDING KNOWLEDGE THROUGH MULTIPLE LEARNING STYLES
Joe Morales, *Student, University of North Texas*
Project-based instruction encourages self-monitoring learners to achieve a more meaningful learning experience. In a diverse classroom, the integration of non-linguistic representation and cooperative learning helps all students to gather and process information in a style that fits them best.

A10. BRRR-BIRD IS THE WORD! HIGH SCHOOL BIOLOGISTS SOLVE GRAND CHALLENGES ACROSS CULTURES: A STUDY OF BIRDS, BIODOMES, AND BIOETHICS
Kay-Dee Vales, *Student, Western Kentucky University*
Madison Wells, *Student, Western Kentucky University*
The grand challenge of this problem-based unit is for students to design environments that allow birds used in the studies to live in the most realistic and naturalistic environments possible.

A11. PROJECT-BASED INSTRUCTION: THE PROCESS, IMPLEMENTATION, AND COMMUNITY INVOLVEMENT

Jaione Rosagaray, *Student, University of Texas Rio Grande Valley*
This poster will focus on the PBI Saturday event held at UTRGV and the processes that lead up to it. It will share information on how the students prepare for and implement their PBI. It will highlight the UTeachRGV collaboration with local high schools, creating a positive learning experience.

A12. DID YOUR STOMACH DROP? INVESTIGATION OF THE MATH BEHIND ROLLER COASTERS

Jared Thompson, *Student, Western Kentucky University*
High school students participated in a problem-based unit of instruction where students designed a new roller coaster as the star attraction for a new theme park. Students learned how roller coasters mimic the behavior of quadratic functions and designed their own roller coasters.

Program Exposition—Students

B1. BUILDING A COMMUNITY: ENHANCING STUDENT EXPERIENCES THROUGH INTERNSHIPS AT CENTRAL WASHINGTON UNIVERSITY

Matthew Changar, *Student, Central Washington University*
Ana Garcia, *Student, Central Washington University*
At Central Washington University, the internship program utilizes relationships with the nearby community. Due to the rural area CWU is in, many student internship experiences offer the opportunity to build tighter relationships in the community by supporting local educators and outreach programs.

B2. HOW UTEACH IS INFLUENCING STEM EDUCATION IN APPALACHIA

Taylor Ray, *Student, Morehead State University*
Megan Pauley, *Student, Morehead State University*
This poster will be a presentation on how UTeach and MSUTeach have influenced how students in local and regional schools are learning math and science. It will also discuss how the 5E model has changed students' perspective on teaching STEM classes.

B3. ANALYZING THE IMPACT OF SERVICE LEARNING ON CIVIC ENGAGEMENT AND SUSTAINABLE PRACTICES IN A LARGE ENROLLMENT NON-MAJORS BIOLOGY CLASS

Daniel Mendoza, *Student, University of Alabama, Birmingham*
National calls for reforming undergraduate education have highlighted the need to relate abstract concepts in biology to real-world examples on a regular basis. This is especially important for non-majors who may not otherwise realize the value of scientific processes in their day-to-day life.

B4. MRS. HESLER'S PROFESSIONAL PORTFOLIO

Jessica Hesler, *Student, University of Arkansas, Fayetteville*
As a culminating project, I created a professional Google site that allowed me to document and demonstrate my teaching preparation process, develop a working knowledge and thorough understanding of the Arkansas Teacher Excellence Support System, and create an artifact to use in my job search.

B5. CREATING A LEARNING COMMUNITY IN AN UNDERGRADUATE MATH CLASS

Tara Tanasovich, *Student, University of Maryland, College Park*
Vanessa Wagener, *Student, University of Maryland, College Park*
This poster describes a co-teaching internship in an undergraduate Pre-Calculus course. In this internship, prospective teachers enacted teaching practices that created an inclusive, equitable classroom climate, thereby increasing undergrads' learning and positive dispositions toward mathematics.

B6. NEVADATEACH: THE GROWTH OF A PROGRESSIVE PROGRAM

Vigitta Manounyavong, *Student, University of Nevada, Reno*
Lily Robistow, *Student, University of Nevada, Reno*
Since the inception of the NevadaTeach program in 2015, the program has seen rapid growth academically, financially, and within the community itself. We evaluate the changes and growth of NevadaTeach through comparison of the perspectives of a student who has been with the program from the start and a student who recently began the program.

B7. THE UNEXPECTED BENEFITS OF AUTHENTIC LEARNING

Nathan Floyd, *Student, University of North Texas*
As an apprentice teacher, I had many challenges involving disengaged students with various behavioral issues. Using what I learned about authenticity from Project-Based Instruction, I made my lessons as authentic as possible. The impact it had on my students was profound.

B8. PEER MENTORS: A STRONG WAY TO SUPPORT YOUR PROGRAM FROM WITHIN

Aditi Busgeeth, *Student, University of Texas at Austin*
Elaine Kuriakose, *Student, University of Texas at Austin*
UTeach peer mentors provide support, encouragement, and information to students in the program. Peer mentors have experience in the UTeach program; they can assist in creating lessons, organizing schedules, packing lesson supplies, and navigating courses. They focus mainly on the Step classes.

B9. UTEACH MAKER: INSPIRE AND EMPOWER THROUGH MAKING

Mao Leonard, *Student, University of Texas at Austin*
Halle Herzog, *Student, University of Texas at Austin*
UTeach Maker is an endorsement program that supports passionate students interested in bringing innovative practices and skills into STEM classrooms. This program is for pioneers who want to bring project-based, constructionist Maker education to learning spaces. This poster showcases why we Make.

B10. ENGINEERING AND UTEACH: CONSIDERATIONS FOR FUTURE PEERS

Danielle Schlapo, *Student, West Virginia University*
This poster presents survey data from students about challenges in the program (i.e., added credit hours/semesters, class-time conflicts), while highlighting the value of the program seen by the engineers enrolled (i.e., new ways of learning, reasoning about problems, and questioning for a deeper understanding).

B11. THE 5E LESSON PLAN: TO ENCOMPASS AND ENGAGE TODAY'S LEARNERS

Vasili Giannoutsos, *Student, Old Dominion University*
MonarchTeach presents innovative teaching methods to teach today's learners in any STEM class. Getting the attention of technology natives can be hard, but with a solid 5E lesson

plan and a focus on Engagement, Explanation, Exploration, Elaboration, and Evaluation, students can exceed expectations in class.

B12. VETERANS IN THE STEM CLASSROOM
Michael Paul, *Student, Middle Tennessee State University*
Veterans bring a unique perspective to the STEM classroom. My poster highlights three aspects of veterans in education: the advantages of having veterans in schools, the value to the students, and the benefits to the veteran.

B13. NAVIGATING A YEAR-LONG RESIDENCY
Allie Free, *Student, Louisiana Tech University*
Nicole Schubert, *Student, Louisiana Tech University*
This year, four UTeach students at Louisiana Tech spent two to three days each week getting hands-on experience teaching in a secondary classroom. From August to May, these students learned how to set up, maintain, and conclude a full year in the classroom. They're here to tell you how they navigated the ride.

Research—Students

C1. INCREASING PERFORMANCE OF ENGLISH LANGUAGE LEARNERS IN URBAN SCHOOLS
Maria Boerlin, *Student, Drexel University*
This poster analyzes multiple experiences with teaching culturally diverse students, especially students who are English Language Learners, to highlight the importance of knowing the cultures and socioeconomic backgrounds of the students we teach so all are engaged.

C2. COMPUTER SCIENCE IDENTITY: DECODING CAREER INTEREST AND STEREOTYPE BARRIERS
Karina Bhutta, *Student, Florida International University*
Analysis of survey data from minority middle school males attending an after-school informal computer science program reveals the influence of computer science identity in predicting student career likelihood, while controlling for additional factors such as student grades and ethnicity.

C3. "I HAVE A QUESTION, BUT IT'S A LITTLE OFF-TOPIC": CHARACTERIZING STEM TEACHERS' INITIAL EXPERIENCES WITH RESPONSIVE TEACHING
Jacob Truett, *Student, Florida State University*
Caroline Herbster, *Student, Florida State University*
This poster examines teachers' initial attempts at enacting responsive teaching as part of a professional development aimed at fostering their attention and responsiveness to student thinking. We analyzed teachers' experiences with qualitative data from interviews and classroom videos.

C4. THE FREQUENCY OF USING INQUIRY-BASED ACTIVITIES BY UTEACH GRADUATES
Ashley Gereben, *Student, Middle Tennessee State University*
Inquiry-based learning is the foundation of the UTeach program and is a huge contributor to its success, but teaching inquiry-based lessons is quite a challenge due to the need for a lot of planning, supplies, and time. How often do UTeach graduates use this approach and how does this change over time?

C5. MIDDLE SCHOOL STUDENTS' PERCEPTIONS OF STEM AFTER PARTICIPATING IN AN INFORMAL LEARNING ENVIRONMENT
Chaise Cremeans, *Student, Morehead State University*
This poster describes an investigation of how participating in an informal learning environment, such as See Blue STEM Camp, influences students' perceptions of preparedness for STEM learning. Semi-structured student interviews and written session reflections were coded and qualitatively analyzed to formulate meta-themes.

C6. BEES CAPTURED IN COLORED PAN TRAPS
Aubrea Martin, *Student, Oklahoma State University*
This poster addresses color preferences in bees. The purpose of the research I conducted during the Research Methods course was to determine the favored color in different bee species to increase the pollination rate.

C7. FROM MILITARY SERVICE TO STEM PROFESSIONAL
Nicole Johnston, *Student, University of Colorado, Colorado Springs*
Veteran enrollment in undergraduate institutions has increased by 67% in the past decade. The NSF Military STEM Scholarship Program began at UCCS to facilitate the transition from service to STEM professional. In this program, we have conducted research to identify barriers and ways to address them.

C8. TO STEM OR NOT TO STEM: WHY AFRICAN-AMERICANS AND AFRICAN INTERNATIONAL STUDENTS CHOOSE (OR DO NOT CHOOSE) STEM FIELDS
Meya Mate, *Student, University of Texas at Arlington*
A survey was conducted of approximately 100 Black (African and African American) students at the University of Texas at Arlington. Using random sampling and snowball sampling techniques, students were asked five questions related to their reasons for choosing or not choosing to major in a STEM field.

C9. ANALYZING WATER QUALITY OF LOCAL TAP, STATE-SOURCED BOTTLED, LOCAL CREEK, AND TOWN LAKE WATER ACCORDING TO FEDERAL EPA REGULATIONS AND GUIDELINES THROUGH RESEARCH METHODS
Nishma Maredia, *Student, University of Texas at Austin*
Drinking water is regulated by both the EPA and the FDA. Through UT Austin's Research Methods course, drinking water quality was statistically analyzed according to EPA guidelines to determine if the local tap and state bottled water were significantly different from the EPA recommendations.

C10. ATTITUDES TOWARD STATISTICS HELD BY PRE-SERVICE MIDDLE SCHOOL TEACHERS IN UTRGV'S UTEACH PROGRAM
Anakaren Suarez, *Student, University of Texas Rio Grande Valley*
Amanda Cantu, *Student, University of Texas Rio Grande Valley*
Data provided by the UTeach program at UT Austin in 2017 shows that their preservice math teachers are less prepared to teach statistics compared to other courses. This project uses a survey developed by Estrada in 2012 to investigate pre-service math teachers' attitudes toward statistics.

C11. THE IMPACT OF THE PROJECT-BASED INSTRUCTION (PBI) COURSE ON PRE-SERVICE TEACHERS' ATTITUDES TOWARD IMPLEMENTING PBI

Amanda Cantu, *Student, University of Texas Rio Grande Valley*
Anakaren Suarez, *Student, University of Texas Rio Grande Valley*
In this study, we are exploring the impact of the PBI course on pre-service teachers' attitudes toward the implementation of PBI. Data analysis will be collected through a survey questionnaire to compare the attitudes based on students' current status of PBI course completion.

C12. EXTRINSIC AND INTRINSIC FACTORS THAT INFLUENCE HISPANIC STUDENTS' ATTITUDES TOWARD MATHEMATICS

Yesenia Trevino, *Student, University of Texas Rio Grande Valley*
This study investigated the relationship between intrinsic (i.e., self efficacy) and extrinsic (i.e., classroom environment) factors and attitudes toward math among high school and undergraduate students in the Rio Grande Valley. Findings from this mixed methods study will be discussed.

C13. BARRIERS TO INCORPORATING INQUIRY INTO THE CLASSROOM

Eliza Foster, *Student, University of Colorado, Colorado Springs*
Inquiry-based education methods are taught in teacher certification programs around the world, but teachers have reported feeling hesitant to incorporate inquiry into their lessons. This study surveys the opinions of preservice teachers regarding the application of inquiry in their classrooms.

Other—Non-Competitive

D1. SERVICE MATTERS: AN ACTION APPROACH TO STUDENT LEARNING

Yolanda Kirkpatrick, *Clinical Assistant Professor / Master Teacher, University of Tennessee, Knoxville*
The poster highlights service learning in PBI class. Topics include engaging K–12 students and families in STEM inquiry; best practices in service learning to support underrepresented K–12 students; PBI student reflections of their service; and service as a model to unpack project-based instruction.

D2. MEASURING STUDENT ENGAGEMENT IN GENERAL CHEMISTRY LABORATORIES

Kenneth Smith, *Associate Professor, University of Texas Rio Grande Valley*
Valeria Alonso, *Student, University of Texas Rio Grande Valley*
A 46-item Likert scale survey on student engagement in general chemistry laboratories was constructed. Survey items reflected three dimensions of engagement: behavioral, affective, and cognitive. Survey results and implications for use of the survey with different types of labs are presented.

D3. USING PROPORTIONAL REASONING TASKS TO CONNECT MATHEMATICS AND SCIENCE CONCEPTS

Michael Gilbert, *Associate Professor and UTeach Co-Associate Director, University of Massachusetts, Boston*
Barbara Gilbert, *Program Director, Center for Education Policy Research, Graduate School of Education, Harvard University*
Ratios and proportions top the list of hard-to-learn topics, from the "sharing" activities in first grade to almost every concept in physics and science classes. We have developed a tool box for teachers of high cognitive-demand tasks focused on the conceptual understanding of proportionality.

D4. EXAMINING THE RELATIONSHIP BETWEEN TEACHER TURNOVER AND TEACHER ENGAGEMENT

Dr. Ariel Taylor, *Mathematics Instructor, Wharton County Junior College*
Teacher turnover is a significant issue for schools around the nation. The purpose of this study was to examine the relationship between teacher turnover and teacher engagement. Subjects included current, certified, secondary STEM teachers who completed the UTeach program.

D5. A TALE OF TWO CITIES: A COMPARISON AND ANALYSIS OF URBAN UTEACH PROGRAMS

Debbie Jackson, *Associate Professor, Teacher Education, Cleveland State University*
David Sparks, *Assistant Professor, Curriculum and Instruction, University of Texas at Arlington*
This study investigates the impact of the UTeach model and Noyce scholarships at Cleveland State University and the University of Texas at Arlington. The poster will describe the quantitative and qualitative results of the study, similarities and differences in the programs, and implications for urban UTeach universities.

D6. LEVERAGING UTEACH DALLAS OUTREACH TO TEST INTERACTIVE UNITY-BASED SIMULATIONS FOR PHYSICS EDUCATION

Mary Urquhart, *Associate Professor and Department Head, University of Texas at Dallas*
Michael Kesden, *Assistant Professor, University of Texas at Dallas*
Midori Kitagawa, *Associate Professor, University of Texas at Dallas*
UTeach Dallas student-run camps are supporting interdisciplinary researchers in designing two types of interactive simulations to help students learn physics: Scaffolded Training Environment for Physics Programming (STEPP) and Virtual Interaction with Gravitational waves to Observe Relativity (VIGOR).

7:15 p.m.

STUDENT SOCIAL ACTIVITY | MEET IN LOBBY BY REGISTRATION DESK

For UTeach students only! We will meet at 7:15 p.m. and take a campus tour on our way to the Texas Union Underground for an evening of food and games!

Wednesday, May 23

8:00–8:45 a.m. Breakfast

BREAKFAST | BALLROOM

9:00–10:00 a.m. and 10:00–11:00 a.m.

OPEN HOUSE—UTEACH FACILITIES | MEET IN LOBBY BY REGISTRATION DESK

We will tour the UTeach facilities in Painter Hall (4th floor) in two groups. Meet in the lobby a few minutes before 9 or a few minutes before 10, and we'll walk over together. There's a map in your folder, in case you miss the group.

9:00–10:00 a.m.

MICROMESSAGING AS A VEHICLE FOR EQUITY EDUCATION—WITH SPECIAL APPLICATION TO RURAL CLASSROOMS | 101
Interactive Presentation
Nancy Spillane, *Clinical Associate Professor, West Virginia University*
Michael Tilley, *WVUteach Master Teacher, West Virginia University*
Audrey Selden, *National Alliance for Partnerships in Equity, West Virginia University*
> This session introduces our integration of ideas of micromessaging and how awareness of this factor can influence pre-service teachers' perceptions of students and interactions in their classrooms.

MAXIMIZE YOUR GROWTH: DEVELOPING STRATEGIES FOR TARGETED AND ADAPTIVE RECRUITMENT | 103
Interactive Presentation
Adam Roderick, *Academic Coach and Program Enhancement Specialist, University of Alabama, Birmingham*
> This session will provide an overview of the successful UABTeach recruitment model and focus primarily on assisting participants in development of recruitment strategies specifically tailored to their universities.

IMPLEMENTING THINKING STRATEGIES TO SHIFT FROM TEACHER TO STUDENT-CENTERED CLASSROOMS IN APPRENTICE TEACHING | 104
Interactive Presentation
Marlene Hilkowitz, *Assistant Clinical Professor, Drexel University*
Nicole Naranjo, *Apprentice Teacher Alumna, Drexel University*
> Apprentice Teaching presents many unanticipated challenges for the UTeach student. We will engage the participants in thinking and discussing the challenges they had in the past with Apprentice Teaching and how they met those challenges. This sharing of experiences will help segue into our interactive presentation that focuses on how one Apprentice Teacher, with the support of her University Supervisor, met the challenge of shifting from a teacher-centered to a more student-centered class.

RESEARCH ON UTEACH: PAST, PRESENT, AND FUTURE RESEARCH COLLABORATIVE OPPORTUNITIES | 105
Roundtable Discussion
Melissa Dodson, *Principal Researcher, American Institutes for Research*
Joanne Goodell, *Professor and Director of the Center for Faculty Excellence, Cleveland State University*
Selma Koc, *Associate Professor, Cleveland State University*
> More collaborative research is needed, covering a broad set of topics and methods, to address important questions related to STEM programs, practices, and policies among the UTeach community. We will engage session participants in discussions and activities to learn about previous, current, and future research on UTeach and explore possible future collaborations and opportunities for publishing research. The goal is to connect faculty and staff across the UTeach community who are interested in collaborative research on STEM teaching and learning.

SHARED MASTER TEACHER MODEL | 106
Roundtable Discussion
Anisha Campbell, *Associate Director, Terrapin Teachers, University of Maryland, College Park*
Julie Brenner, *Shared Master Teacher, Terrapin Teachers, University of Maryland, College Park*
> Discuss and share how the University of Maryland, College Park, has partnered with a school district to develop a Shared Master Teacher model. The new initiative provides unique and exciting opportunities that are beneficial to both.

10 IDEAS TO MAKE YOUR STEP 1 LIFE EASIER | 108
Interactive Presentation
Suzanne Culbreth, *Master Teacher, University of Alabama, Birmingham*
Paulette Evans, *Master Teacher, University of Alabama, Birmingham*
> How do you manage 140 students in seven Step 1 classes? What can you do to support 50 mentor teachers? Where do students find lesson resources? We will share ideas to answer all of these questions and more!

DEVELOPMENT SPECIAL INTEREST GROUP: RESEARCHING AND WRITING GRANTS | 203
Interactive Presentation
Sean Redmond, *Assistant Director for Development, University of Texas at Austin*
> This session will cover research opportunities and best practices for identifying foundations and writing grants.

BUILDING A POSITIVE CLASSROOM COMMUNITY (PART 1 OF 2): HOW TO CREATE COOPERATIVE KIDS | 301
Interactive Presentation
Scott Fray, *Master Teacher, Northern Arizona University*
Lynn Kirby, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
> Participants begin with a TPS, experience a practice assignment, unpack their experience, discuss real world challenges they have observed and experienced, and role play using the strategies to solve common classroom management situations.

10:15–11:15 a.m.

BRIDGING THE DIVIDE BETWEEN STEM TEACHER PRODUCTION AND LOCAL DISTRICT NEEDS | 101
Interactive Presentation
Melissa Moritz, *Vice President, Strategic Initiatives, NMSI*
Ronda Brandon, *Senior Director, STEM Teacher Pathways, NMSI*
> This session looks at STEM teacher shortages as a local need and asks the question, "How might UTeach programs and area school districts partner more effectively to plan for and eliminate STEM teacher shortages?" This topic is the focus of a current 100kin10 Project Team, and in this session team members will provide a review of new approaches to building partnerships, discuss potential tools for predicting local STEM teacher needs, and seek feedback on potential strategies. Participants are encouraged to share their successes and challenges in building these partnerships to contribute to building on the knowledge base.

USING MAKING TO PROMOTE INQUIRY IN MATHEMATICS | 103
Interactive Presentation

Shelly Rodriguez, *Clinical Assistant Professor / Master Teacher, UTeach Austin; Maker Director, University of Texas at Austin*
Lauren Siegel, *Director, MathHappens, University of Texas at Austin*
Glenn Larson, *UTeachTech Master Teacher, Louisiana Tech University*
Payton Crawley, *UTeach Maker, University of Texas at Austin*
Abdulkarim Bora, *UTeach Maker Teaching Fellow, University of Texas at Austin*
Jason Harron, *Graduate Research Assistant, University of Texas at Austin*

We will engage participants through hands-on experience. Participants will use tools created by UTeach Makers in MathHappens to explore selected mathematics lessons developed by UTeachTech. The session will also include an interactive Q&A activity.

UTEACH COURSE OVERVIEW: CLASSROOM INTERACTIONS | 104
Interactive Presentation

Lee Meadows, *Associate Professor; Co-Director, UABTeach, University of Alabama, Birmingham*
Paulette Evans, *Master Teacher, UAB Teach, University of Alabama, Birmingham*
Chris Costello, *Site Coordinator, UTeach Institute*

This session will provide an overview of Classroom Interactions, one of nine UTeach courses. This course continues the process of preparing students to teach mathematics and science in secondary settings by providing opportunities to see how theories explored in the Knowing and Learning in Mathematics and Science course play out in instructional settings.

STEPPING INTO COMPUTER SCIENCE TEACHER PREPARATION—PRE-SERVICE, IN-SERVICE, AND INFUSING CS INTO SCIENCE AND MATHEMATICS | 105
Interactive Presentation

Mary Urquhart, *Associate Professor and Department Head, University of Texas at Dallas*
Amin Lalani, *Master Teacher, University of Texas at Dallas*
Katie Donaldson, *Master Teacher/Assistant Director, University of Texas at Dallas*
Georgia Stuart, *Lecturer, University of Texas at Dallas*

UT Dallas is preparing in-service science and mathematics teachers to certify in, and teach, CS. CS majors are also seeking out and being served by UTeach Dallas, without active recruitment. We will discuss our work, challenges, next steps, and lessons learned.

UTEACH STEM EDUCATORS ASSOCIATION | 106
Interactive Presentation

Paige Evans, *Clinical Professor, teachHouston; 2018-2019 USEA President, University of Houston*
Jo Hamilton, *USEA Member Services Coordinator, UTeach Institute*
Mariam Manuel, *Master Teacher, teachHouston; USEA Executive Board Treasurer and Alumni Representative, University of Houston*

The UTeach STEM Educators Association (USEA) was founded in 2014 and includes all UTeach partner programs, the National UTeach Alumni Network, and affiliate members. Presenters will speak about the vision for the future of the association and the benefits of being a USEA member. Come hear how you can be actively involved in the association and help achieve its mission of STEM literacy for all.

HELP US "GET THE FACTS OUT" TO RECRUIT MORE TEACHERS | 107
Interactive Presentation

Gay Stewart, *Eberly Professor of STEM Education, Professor of Physics, West Virginia University*

Participants will engage with and review a toolkit to address misperceptions and lack of knowledge about the benefits of the teaching profession produced by a 100Kin10 working group including physics, chemistry, and mathematics societies. The audience for various modules in this toolkit includes high school faculty, students, and parents as well as college faculty and students, so this breadth of experience is very important to us. While all are welcome in this session, I am particularly interested in Master Teacher feedback, since they are vital to recruiting, and they have experience at the high school teaching level.

DESIGNING FOR A PRODUCTIVE DISCOURSE AROUND A COGNITIVELY DEMANDING TASK | 108
Interactive Presentation

Miray Tekkumru-Kisa, *Assistant Professor, Florida State University*
MaLynn Kelso, *Master Teacher, Florida State University*
Kirby Whittington, *Ph.D. Student, Florida State University*

This session provides an illustration of how we incorporated designing cognitively demanding tasks into PBI. We will engage the audience in thinking about ways to support pre-service teachers' learning to design for a productive discourse in a carefully designed lesson.

IMPLEMENTING UTEACH | 203
Interactive Presentation

Pamela Romero, *Associate Director, UTeach Institute*
Ashley Welch, *Manager of Site Support, UTeach Institute*
Amy Chavez, *Financial Analyst, UTeach Institute*

The UTeach Institute has developed a comprehensive approach to supporting the implementation of UTeach at partnering university sites. This session provides an overview of the Institute's products and services, communication of the UTeach model, operational and instructional support, evaluation services, and networking and community building opportunities. Participants will learn about the UTeach Application opportunity and selection criteria, initiating a UTeach program, planning and budgeting for a UTeach program, and expectations for program rollout and course fidelity.

BUILDING A POSITIVE CLASSROOM COMMUNITY (PART 2 OF 2): A DAY AT THE IMPROV | 301
Hands-On Workshop

Scott Fray, *Master Teacher, Northern Arizona University*
Lynn Kirby, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*

Real-world scenarios are given to participants who then role play in groups (using the given strategies) to solve common classroom management issues.

11:30 a.m.–12:30 p.m.

STRATEGIES FOR ENCOURAGING CONTENT-AREA CONVERSATIONS IN THE CLASSROOM | 103
Interactive Presentation
Pam Kirkland, *Master Teacher, University of Texas at Dallas*
Jim McConnell, *Master Teacher, University of Texas at Dallas*
  This session will focus on using peer-to-peer interactions and encouraging academic conversation to enhance students' listening, reading, writing, and speaking skills. The strategies will allow for differentiated instruction. A special focus will be on both Newcomer and Long-Term English Language Learners (ELL).

UTEACH COURSE OVERVIEW: STEP 1 AND STEP 2 | 104
Interactive Presentation
Lynn Kirby, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
Scott Fray, *Master Teacher, Northern Arizona University*
  This session will provide an introduction to the Step courses, the first two UTeach courses taken by students. The Step courses provide students with early opportunities to "try out teaching."

INTEGRATING COMPUTER SCIENCE IN THE UTEACH CURRICULUM | 105
Interactive Presentation
Justin Cannady, *Curriculum/Teacher Support Specialist, UTeach Computer Science, UTeach Institute*
Lee Meadows, *Co-Director, Associate Professor; Co-Director, UABTeach*
Julie Brenner, *Shared Master Teacher, Terrapin Teachers, University of Maryland, College Park*
  The UTeach Institute and UABTeach partnered to develop and integrate computer science lessons in each of the UTeach courses at UAB. The CS lessons were made available for students in each of the classes to use for apprentice teaching. Preliminary results will be shared from student surveys (pre and post) that measured computer science interest and self-efficacy.

UTEACH COURSE OVERVIEW: PROJECT-BASED INSTRUCTION | 107
Interactive Presentation
Jill Marshall, *Associate Professor of STEM Education, Department of Curriculum and Instruction; Co-Associate Director, UTeach Austin, University of Texas at Austin*
  This session will provide an overview of Project-Based Instruction, one of nine UTeach courses. This course focuses on developing problem- and project-based units of instruction.

MADE YOU LOOK! HOW TO CREATE GRAPHICS TO CAPTURE THE ATTENTION OF STUDENTS AND ALUMNI | 108
Interactive Presentation
Elizabeth Goldberg, *Assistant Professor in Practice / Master Teacher, UTeach RGV, University of Texas Rio Grande Valley*
Omar Elizondo, *Assistant Professor in Practice / Master Teacher, UTeach RGV, University of Texas Rio Grande Valley*
  Want to connect with students and alumni? Make your information graphic! Learn how to use free resources to create easy, bold, and beautiful fliers, infographics, memes, and more to get your message across.

IS UTEACH A GOOD INVESTMENT? | 203
Interactive Presentation
Amy Chavez, *Financial Analyst, UTeach Institute*
Michael Marder, *Professor of Physics; Co-Director, UTeach Austin, University of Texas at Austin*
Gina Tempel, *Associate Dean, College of Science; Associate Professor; Co-Director NevadaTeach, University of Nevada, Reno*
  This session will discuss why UTeach is not just a good investment, but a great investment. We present the "real" cost of UTeach and an ROI analysis on dollars invested in producing high-quality STEM teachers.

MILK FOR CATS: MAKING LACTOSE-FREE MILK | 301
Interactive Presentation
Dhani Biscocho, *Product Manager, Carolina Biological*
  Explore the relationship between lactase and human evolution in this hands-on lab. Review the relationship between genes and proteins, and learn about enzyme functionality by creating a column with immobilized lactase enzyme beads to make lactose-free milk.

12:30–1:30 p.m.

LUNCH | TEJAS DINING ROOM – LEVEL M2

1:45–2:45 p.m.

UTEACH IMPLEMENTATION PANEL: LESSONS LEARNED | 101
Panel Discussion
Kimberly Hughes (Moderator), *Director, UTeach Institute*
Ellen Granger, *Director, Office of Science Teaching Activities; Co-Director, FSUTeach, Florida State University*
Elizabeth Goldberg, *Assistant Professor in Practice / Master Teacher, UTeach RGV, University of Texas Rio Grande Valley*
Deborah Gober, *Professor; Co-Director, UTeach Columbus; Woodrow Wilson Teaching Fellowship Director, Columbus State University*
  This panel brings together colleagues from UTeach partner universities (co-directors, faculty members, master teachers) to discuss lessons learned while implementing a UTeach model program. Panel members will discuss student recruitment and support, institutional support, implementing courses, field placements, working with colleagues in other departments, and fundraising.

AVOIDING "HANDS-ON, MINDS OFF" BY DESIGNING LESSONS TO ADDRESS MISCONCEPTIONS | 103
Hands-On Workshop
Mary Urquhart, *Associate Professor and Department Head, University of Texas at Dallas*
Stephanie Taylor, *Senior Lecturer, University of Texas at Dallas*
Pam Kirkland, *Master Teacher, University of Texas at Dallas*
Jim McConnell, *Master Teacher, University of Texas at Dallas*
  Have you have ever been in a classroom where the students are busy (physically active), but not learning (mentally disengaged?) Everyone has misconceptions, and many of us encounter these barriers to learning every day with our own students. We will engage participants in the why, what, and how of dealing with misconceptions.

UTEACH COURSE OVERVIEW: KNOWING AND LEARNING IN MATHEMATICS AND SCIENCE | 104
Interactive Presentation
Perri Segura, *Clinical Associate Professor / Master Teacher, teachHOUSTON, University of Houston*

This session will provide an introduction to Knowing and Learning in Mathematics and Science, one of nine UTeach courses. This course focuses on issues of what it means to know and learn secondary science and mathematics.

INTEGRATING EDTPA INTO UTEACH COURSES | 105
Tim McKenzie, *Master Teacher, UABTeach, University of Alabama, Birmingham*
Lee Meadows, *Associate Professor; Co-Director, UABTeach, University of Alabama, Birmingham*
Paulette Evans, *Master Teacher, UABTeach, University of Alabama, Birmingham*
Interactive Presentation
The UTeach community has many institutions that must submit edTPA portfolios as a certification requirement. This presentation will give an overview of UABTeach's edTPA integration into all courses.

TWO SESSIONS IN ONE: TEACHER CAREERS | 106
DEVELOPING TEACHER CAREER INTEREST AND PERSISTENCE THROUGH EARLY FIELD EXPERIENCES AND INTERNSHIPS
Paige Evans, *Clinical Professor, University of Houston*
Davinia Rodriguez-Wilhelm, *Research Assistant, University of Houston*
Leah McAlister-Shields, *Academic Program Manager, University of Houston*
Koryn Dillard, *Research Assistant, University of Houston*
This qualitative multiple-case study discusses how early field experiences and internships attract students to STEM teaching careers and support their development as emerging teachers.

WHERE THE PIPELINE ENDS: ANALYZING THE POST-GRADUATION OUTCOMES OF TWO URBAN STEM TEACHER EDUCATION PROGRAMS
David Sparks, *Assistant Professor, Department of Curriculum and Instruction, University of Texas at Arlington*
Debbie Jackson, *Associate Professor, Teacher Education, Cleveland State University*
This study investigates the impact of UTeach and Noyce scholarships on graduates from Cleveland State University and UT Arlington transitioning from pre-service to in-service in science or mathematics classrooms.

PUBLISHING WITH YOUR UTEACH STUDENTS | 107
Interactive Presentation
Jason Harron, *Graduate Research Assistant, University of Texas at Austin*
Shelly Rodriguez, *Clinical Associate Professor/ Master Teacher; UTeach Maker Director, University of Texas at Austin*
Patrick Benfield, *UTeach Maker Mentor, Magellan International School of Austin*
This session will describe recent efforts at UT Austin to publish practitioner centered articles with UTeach students and graduates. The session will highlight strategies and publishing tips.

HOW THE UTEACH COMMUNITY SUPPORTS ALUMNI | 108
Interactive Presentation
Jo Hamilton, *Member Services and Communications Coordinator, National UTeach Alumni Network, UTeach Institute*
Peggy Pitts, *Member Services Coordinator, National UTeach Alumni Network*
Michelle Lowry, *Senior Software Developer/Analyst, UTeach Institute*
Mariam Manuel, *Alumna and Master Teacher, teachHOUSTON, University of Houston*
Learn about the avenues of support you and your alumni can access from the National UTeach Alumni Network. Hear how to set up an alumni advisory team; the tools we offer to track alumni employment and generate reports that can help your UTeach program; what types of professional learning are available to UTeach graduates; and how to get your alumni connected to the online community for alumni — the UTeach Nation Virtual Network.

SUPPORTING YOUR FIRST FIVE YEARS: KNOWLES TEACHER INITIATIVE FELLOWSHIP | 204
Interactive Presentation
Sarah DiMaria, *Math Teacher, Knowles Science Teaching Foundation*
Want extra professional development, materials funds, and a cohort of new STEM teachers nationwide to share in your first five years of teaching? Join us for an overview of the Knowles Teacher Initiative Fellowship from a current Fellow who will share experiences that would not be possible without the fellowship. Participants will walk away with an understanding of how to apply for the fellowship and all of the support Knowles will offer!

PROTEIN NECKLACE: HARNESSING THE GLOW OF JELLYFISH | 301
Interactive Presentation
Dhani Biscocho, *Product Manager, Carolina Biological*
Illuminate the dark corners of your students' curiosity by teaching them about proteins. This simple classroom exercise allows your students to isolate the green fluorescent protein (GFP) found in jellyfish. Show them that protein science can be tangible and engaging but not overwhelming with this beginner's activity.

3:00–4:00 p.m.

SUPPORTING NEW TEACHERS: INDUCTION PANEL | 101
Panel Discussion
Kelli Allen, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
Amena Amires, *Grade 6 On-Level/Pre-AP Teacher, Pflugerville Middle School, Pflugerville ISD*
Austin Batson, *Physics Lead, On-Level, Pre-AP, and AP Physics, Glenn High School, Leander ISD*
Kristela Garcia, *AP Physics Teacher, Physics PLC lead, John B Connally High School, Pflugerville ISD*
Kira Lowery, *Grade 7 Science Teacher, NYOS Charter School*
Jonathan D. Broussard, *Biomedical Science and UT OnRamps HRI Instructor, Austin High School, AISD*
What kind of support do new teachers need and value from their preparation programs? UTeach graduates reflect on their experiences as first- and second-year teachers.

CONTINUING COURAGEOUS CONVERSATIONS: A MODEL FOR SOCIAL JUSTICE IN EARLY FIELDWORK COURSES | 103
Interactive Presentation

Anita Sanyal Tudela, *Master Teacher, University of Maryland, College Park*
Sarah Henson-Darko, *Master Teacher, University of Maryland, College Park*
Steven Karig, *Master Teacher/High School Teacher, University of Maryland, College Park*
Kayla White, *Master Teacher/High School Teacher, University of Maryland, College Park*

We will share a model for using social justice as a lens to refocus the work instructors and students do within an early fieldwork course, using Step 2 as an example. We will present descriptions of the course, evidence from our students, and narratives related to our own professional growth over the semester. Participants will then have the opportunity to engage in a discussion related to the possibilities of such an approach in other contexts, potential challenges, and other questions.

CAN UTEACH REIMAGINE ALTERNATIVE CERTIFICATION PATHWAYS? | 104
Roundtable Discussion

Kimberly Hughes, *Director, UTeach Institute*

Career changers and returning military are currently not well-served by the typical UTeach post-bacc pathway. How can we design pathways that meet the unique needs of this population? Can we imagine developing an innovative alt-cert pathway that does not sacrifice quality? Bring your best ideas, and your strongest objections, to this roundtable discussion.

TWO SESSIONS IN ONE: STUDENT PERCEPTIONS | 105

EXPLORING STEP 1 STUDENTS' VIEWS OF TEACHING
Sarah Ferguson, *Assistant Professor and Master Teacher, Old Dominion University*
Latanya Sutphin, *Assistant Professor and Master Teacher, Old Dominion University*

The purpose of this session is to present the findings of from a research study aimed at exploring Step 1 students' views of teaching before and after presenting their first lesson.

HOW CONFIDENCE IN CONTENT KNOWLEDGE IMPACTS CONFIDENCE IN TEACHING
Michelle Buchanan, *Master Teacher, University of Central Arkansas*

This research study identifies how UCA STEMteach teacher candidates' confidence in content knowledge relates to confidence in teaching.

BRIDGING UTEACH, ENGINEERING, AND COMPUTER SCIENCE | 106
Interactive Presentation

Noah Salzman, *Assistant Professor, Boise State University*
Adam Fontechio, *Professor of Electrical and Computer Engineering and Director, Center for the Advancement of STEM Teaching and Learning (CASTLE), Drexel University*
Jennifer Stanford, *Assistant Professor, Biology, Drexel University*
Jason Silverman, *Associate Professor, Drexel University*
Jacquelyn Sullivan, *Co-Director, Integrated Teaching and Learning Program, University of Colorado, Boulder*
Malinda Schaefer Zarske, *Instructor, University of Colorado, Boulder*

Mariam Manuel, *Instructional Assistant Professor, University of Houston*

Come learn more about how to integrate engineering and computer science with UTeach and be part of a growing community of UTeach sites creating pathways to support this integration.

NATIONAL UTEACH DATA: ENROLLMENT AND GRADUATE PROJECTIONS AND TARGETS | 107
Roundtable Discussion

Pamela Romero, *Associate Director, UTeach Institute*
Mary Lummus-Robinson, *Data Coordinator, UTeach Institute*
Ronda Brandon, *Senior Director, STEM Teacher Pathways, NMSI*

What do the national UTeach implementation data tell us? In this session, we will discuss broad patterns across nine years of data on national UTeach implementation and invite participants to share experiences from their own programs. Highlighted data will include enrollment and graduate trends, as well as program recruitment and retention data.

UTEACH COURSE OVERVIEW: RESEARCH METHODS | 108
Interactive Presentation

Michael Marder, *Professor of Physics; Co-Director, UTeach Austin, University of Texas at Austin*

This session will provide an introduction to Research Methods, one of nine UTeach courses. This course engages future teachers in a series of independent scientific inquiries.

LANDING YOUR FIRST TEACHING POSITION | 301
Hands-On Workshop

Liz McKay, *Director of K–12 Services, UTeach Institute*
Paula McKinney, *AP Computer Science and AP CS Principles Teacher, Eanes ISD*

UTeach students: Are you putting your résumé together? Nervous about your first job interview? Want to be ready for both of these in the near future? This session will help you find out exactly what administrators are looking for when hiring teachers for their campuses. Get feedback on your résumé, ask questions, and leave with great tips and suggestions.

4:15–5:15 p.m.

OVERCOMING THE CHALLENGES OF UTEACH REPLICATION IN RURAL SETTINGS | 101
Roundtable Discussion

David Long, *Professor of STEM Education, Morehead State University*
Edna Schack, *Professor of Education; Co-Director, MSUTeach, Morehead State University*
Michael Odell, *Professor of STEM Education; Co-Director, UTeach Tyler, University of Texas, Tyler*
Patrick McGuire, *Associate Professor; Co-Director, UCCSTeach, University of Colorado, Colorado Springs*
Michelle Buchanan, *Master Teacher, University of Central Arkansas*

UTeach programs in rural settings face unique challenges, such as low populations and a changing economy. Four UTeach programs discuss steps taken to ensure the vitality of rural STEM education.

EFFECTIVE TEACHING: EMBEDDING CLASSROOM MANAGEMENT, EQUITY, AND HIGH-YIELD INSTRUCTIONAL STRATEGIES IN THE UTEACH CURRICULUM | 103

Hands-On Workshop

Cindy Watson, *Master Teacher, University of North Texas*
Marcia Jacobs, *Master Teacher, University of North Texas*
Joe Morales, *Pre-Service Science Teacher, University of North Texas*
Taylor Vaughn, *Math Teacher, University of North Texas*
Nathan Floyd, *Pre-Service Math/Physics Teacher, University of North Texas*

Participants will explicitly experience embedded classroom management techniques and ways to implement equitable practices using high-yield instructional strategies.

A LAB SCHOOL MODEL TO SUSTAIN UTEACH POST GRANT FUNDING | 104

Interactive Presentation

Michael Odell, *Professor of STEM Education; Co-Director, UTeach Tyler, University of Texas at Tyler*
Jaclyn Pedersen, *Curriculum Director, University of Texas at Tyler*

UT Tyler opened three charter laboratory schools designed to provide model experiences for UTeach students in a PBL STEM-focused environment. We will provide concrete examples of how the lab school and potential replication models (including non-charter) could enhance their UTeach program and lead to resource efficiencies while at the same time enhancing the UTeach experience for students.

TWO SESSIONS IN ONE: ENGINEERING AND CS | 105

A COLLABORATIVE EFFORT AT THE UNIVERSITY OF HOUSTON TO INTEGRATE ENGINEERING DESIGN INTO THE STEP 1 COURSE

Mariam Manuel, *Instructional Assistant Professor, University of Houston*
Jerrod Henderson, *Instructional Assistant Professor, University of Houston*
Virginia Rangel, *Assistant Professor, University of Houston*

This research presentation will include discussion on findings from the pilot and sample interactive activities utilized in the 5E Step 1 lessons.

INTEGRATING COMPUTER SCIENCE INTO MATHEMATICS IN THE MIDDLE SCHOOL

Ellen Granger, *Director, Office of Science Teaching Activities, Florida State University*
Christine Andrews-Larson, *Assistant Professor, Florida State University*
Sherry Southerland, *Professor, Florida State University*

This NSF project is developing modules that integrate computer science into middle-school general mathematics courses and studying the outcomes of this integration and the challenges it poses.

FRAMEWORK FOR INTEGRATED PROJECT-BASED INSTRUCTION IN STEM DISCIPLINES | 106

Interactive Presentation

Anthony Petrosino, *Faculty, University of Texas at Austin*
Candace Walkington, *Professor, Southern Methodist University*
Denise Ekberg, *Clinical Faculty, University of Texas at Austin*

Discussion will be around a forthcoming book on Project-Based Instruction by Petrosino, Walkington, and Ekberg. This book will extend current knowledge in the field by bridging and providing frameworks and examples of effective STEM integration in K–16 project-oriented research and pedagogies.

DEVELOPING FUTURE TEACHERS' PROFESSIONAL IDENTITIES THROUGH ENGAGEMENT WITH MENTORS | 107

Interactive Presentation

Katrina Rothrock, *Master Teacher, University of Kansas*
Edith Eskilson, *Master Teacher, University of Kansas*
Carrie La Voy, *Lecturer, University of Kansas*

It is critical that mentors create positive and powerful interactions that ground future teachers' expectations in the classroom. Research supporting mentors and mindset will be shared.

UTEACH COURSE OVERVIEW: FUNCTIONS AND MODELING | 108

Interactive Presentation

Daniel FitzPatrick, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
Steven Obenhaus, *Master Teacher, UKanTeach, University of Kansas*

This session will provide an introduction to Functions and Modeling, one of nine UTeach courses. In this course, students engage in explorations and lab activities designed to strengthen and expand their knowledge of the topics found in secondary mathematics.

ROUNDTABLE WITH UTEACH GRADUATES (RESTRICTED TO CURRENT UTEACH STUDENTS) | 301

Roundtable Discussion

Kelli Allen, *Clinical Assistant Professor / Master Teacher, UTeach Austin, University of Texas at Austin*
Austin Batson, *Physics Lead, On-Level, Pre-AP, and AP Physics Teacher, Glenn High School, Leander ISD*
Amena Amires, Grade 6 *On-Level/Pre-AP Teacher, Pflugerville Middle School, Pflugerville ISD*
Kristela Garcia, *AP Physics Teacher, Physics PLC lead, John B Connally High School, Pflugerville ISD*
Kira Lowery, *Grade 7 Science Teacher, NYOS Charter School*
Jonathan D. Broussard, *Biomedical Science and UT OnRamps HRI Instructor, Austin High School, AISD*

Everything you've wanted to know about life after UTeach but have been afraid to ask. At least in front of your instructors. UTeach grads will answer questions regarding finding a job, getting through the first two years, the realities of teaching using diverse instructional styles in a variety of contexts, and more.

6:00–8:30 p.m.

RECEPTION AND DINNER | BALLROOM

DREAMWALKER: A STEM JOURNEY!

Dr. Bernard A. Harris, Jr., *CEO, National Math and Science Initiative*

Astronaut, physician, and philanthropist, Dr. Bernard A. Harris, Jr., reminds us of the power of the DREAM through his personal story—and how STEM education can enable our youth, our communities, and our nation. Inspiring students to pursue daring new goals, encouraging them to dream, and equipping them with the educational tools to pursue their aspirations are critical. Our nation's future depends on it.

Thursday, May 24

8:00–9:15 a.m. Breakfast and Breakfast Meetings

BREAKFAST | TEJAS DINING ROOM, LEVEL M2

FLORIDA REPLICATION SITES MEETING | TEJAS DINING ROOM
Closed Meeting
   This is a closed session for current Florida replication sites and will focus on topics of interest and relevant updates.

MARYLAND/DC REPLICATION SITES MEETING | TEJAS DINING ROOM
Closed Meeting
   This is a closed session for current Maryland and Washington, DC, replication sites and will focus on topics of interest and relevant updates.

TENNESSEE REPLICATION SITES MEETING | TEJAS DINING ROOM
Closed Meeting
   This is a closed session for current Tennessee replication sites and will focus on topics of interest and relevant updates.

TEXAS REPLICATION SITES MEETING | TEJAS DINING ROOM
Closed Meeting
   This is a closed session for current Texas replication sites and will focus on topics of interest and relevant updates.

9:00 a.m.–12:00 p.m.

USEA ANNUAL BUSINESS MEETING | 301
Michael Odell, *USEA President; Co-Director, UTeach Tyler, University of Texas at Tyler*
Jo Hamilton, *Member Services and Communications Coordinator, National UTeach Alumni Network, UTeach Institute*
   This is the annual business meeting of the USEA Executive Board. All USEA members are welcome to observe the proceedings.

MASTER TEACHER RETREAT | BALLROOM
Glenn Waddell, *Mathematics Master Teacher, NevadaTeach, University of Nevada, Reno*
Ashley Welch, *Manager of Site Support, UTeach Institute*
   Restricted to Master Teachers. This three-hour Master Teacher Retreat will have you meeting, interacting, and learning from others. Hear or share favorite experiences or activities, explore successes, and develop contacts with other programs. The meeting will include a participant-driven unconference hour spent with your colleagues on a topic of your interest.

UTEACH COMPUTER SCIENCE EDUCATION WORKING GROUP | 104
Bryan Hill, *Assistant Dean, College of Engineering, University of Arkansas, Fayetteville*
Juana Moreno, *Associate Professor, Physics and Astronomy, Louisiana State University*
Kimberly Hughes, *Director, UTeach Institute*
   Join us to continue exploring strategies and university-based pathways to recruit and prepare CS teachers. A draft working paper will be shared and discussed. Registration includes breakfast and lunch on Thursday.

12:15 a.m. – 1:30 p.m.

LUNCH | TEJAS DINING ROOM, LEVEL M2

ExxonMobil

Globally, a strong emphasis on education empowers communities and builds the foundation for human progress. The ExxonMobil Foundation focuses on math and science education because they are — and will increasingly be — the universal languages of the global workplace and are critical tools for success in today's high-tech world.

National Math + Science Initiative

The National Math + Science Initiative (NMSI) is transforming STEM education in America by identifying and replicating successful academic programs across the country that not only have been proven to produce immediate results, but can be sustained over time. We are recruiting and preparing college students to become dedicated math and science teachers and training teachers in grades 3–12 to inspire students to succeed in rigorous math and science courses.

PBS Kids & PBS Learning Media

You probably know PBS and PBS KIDS from your own childhood . . . but did you know that PBS goes WAAAAY beyond television to develop standards-aligned, research-based, field-tested educational resources for PreK–12 classrooms — for free? Stop by the PBS table to speak with representatives from KLRU, the local PBS station (and home of Austin City Limits), to see what is available for you, regardless of the grade level and subject you teach.

Carolina Biological Supply Company

Carolina Biological Supply has proudly supported educators for 90 years, providing innovative science materials to classrooms around the world. Our mission is to provide educators the finest products and services to aid in science literacy. Let Carolina help make your lesson plans even more impactful with our kits, supplies, and resources to confidently prepare your STEM students.

American Association of Chemistry Teachers

The American Association of Chemistry Teachers (AACT) is a professional community by and for K–12 teachers of chemistry. AACT's connect with K-12 teachers of chemistry with quality classroom resources, networking and professional development opportunities for teachers to achieve their professional goals. Membership is open to educators and anyone with an interest in K–12 chemistry education.

Mathematics Learning by Inquiry (MLI)

MLI's mission is to strengthen the mathematical preparation of all students by supporting and expanding the community of teacher-practitioners at the undergraduate, graduate, and pre-college levels in Inquiry-Based Learning.

Greater Texas Foundation

Greater Texas Foundation supports efforts to ensure all Texas students are prepared for, have access to, persist in, and complete postsecondary education. We put particular focus on helping underserved and disadvantaged populations. We pursue our mission by forming partnerships, supporting research, sharing knowledge, and making grants.

UTeach STEM Educators Association (USEA)

The UTeach STEM Educators Association (USEA) is dedicated to maintaining and strengthening the connections between UTeach partner programs across the country and to supporting UTeach alumni in long-term careers as successful STEM educators.

BloxMob

BloxMob is an online social platform where teens build mobile apps for their smartphones. No coding is required, and anyone with a computer and create an app really fast using our building Blox! Build once for both iOS and Android. Teachers and students can quickly build apps: how to's, quizzes, mapping, chatting, and more. Help students learn design, UX/UI, critical thinking skills, systems thinking, meeting audience needs, and entrepreneurship and innovation concepts. Excite and empower students. Unleash their creativity and help them be makers and creators in everything they do.

UTEACH PARTNERS AND SUPPORTERS

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