

Workshop Descriptions

Hooray! It's (almost) THES STEAM Day 2019!

Next Tuesday is our second annual STEAM Workshop! While our PK-2nd students will be awed by a Mad Science presentation, our 3-5th grade students experience these exciting sessions. We are also still looking for parent volunteers to help with the day. Please sign up [here](#) if you are interested.

SCIENCE Presentations

1. Jeff Andrews - Professor of Electrical Engineering, UT Austin

Wireless Communications

SO many aspects of our lives depend on wireless communications. UT Professor (and dad to a soon-to-graduate, Thunderbird) will tell you more about something we all use every day!

2. Austin Fire Department

Fire Engineering

Come learn some of the science behind working as a firefighter and managing fires.

3. Dennis Baldwin & Marisa Vickery

All about Drones

In this talk, I will cover some fun and interesting things that can be done with drones. I'll demonstrate the process of shooting a 360 degree aerial panorama and viewing it in virtual reality with goggles. I'll also give the students an interactive challenge to solve using a drone.

4. Seth Bank - Professor of Electrical Engineering, UT Austin

Fiber Optics

What are fiber optics? Why are there thousands of miles of them on the ocean floor? What role do they play in your life? Come to this session and find out more about fiber optics!

5. Tara Beck - Beekeeper

The Wisdom of Bees

Tara's work has led her to examine how bees and their venom can provide relief for people suffering from some health issues that had no known cure or treatment. As bees become increasingly threatened with extinction, Tara began to learn more about how we can help them! Tara now lives with four bee colonies in Dripping Springs!

6. Greg Clark - Plant Scientist, UT Austin

How Plants Move, Shake, and Talk

Plants have wondrous and unexpected abilities to sense stimuli and "talk" with each other and with animals. My presentation will discuss these abilities and show time-lapse photography of plant growth. Come discover how plants sense and respond to their environment and what kind of language plants use to communicate. See what happens when plants "talk" to animals.

7. Scott Fisher - Meteorologist, KTBC Austin

Weather and Storytelling

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Students learn about the radar and how it works to forecast the weather. I'll also show you some things I do at work.

8. Laura Garcia & Igor Kafando - Bridge Engineers, Texas Department of Transportation

Structural Design, Texas Floods, and Crash Tests: Texas Bridge Engineering

We will kick off this session with a hands-on bridge design activity and end with some behind-the-scenes, super-slow-motion crash test videos! In between, we see some of the emergency repairs we've done after major Texas floods and talk about safety tests we run to make sure our designs work.

9. Kim O'Driscoll - Licensed Psychologist

The Mysterious Science of Sleep

In this presentation, Thunderbirds will learn about something we all do every day --sleep! What happens to the body during sleep? What are the effects of sleep deprivation? What helps us fall asleep with ease? We will also explore one of the coolest things about sleep, our dreams!

10. Jennifer Martin - Veterinarian

Diagnosing Your Pet Using the Microscope

By looking at samples under the microscope, veterinarians figure out what is wrong with your pet. We will look at parasites, infections and abnormal cells.

11. Brian Phillips - Data Analyst

Coding for Humans

I help make digital channels (websites, apps, social media) better by looking at how people use them. In my job, I use the scientific method, develop hypotheses about what would make the channels better, and use a combination of coding, statistics and psychology. I'll share a little of what I do every day with something we use every day!

ARTIST Workshops

1. Ben Appl, CERAMICIST & INSTRUCTOR AT ACC

In this hands-on workshop, students will work with artist and THES parent, Ben Appl, to paint and glaze small pendants that will be made and fired using the Raku firing process! CAUTION: HOT!

2. Ethan Azarian, PAINTER

Art is everywhere including on the walls of THES! In this workshop, Ethan will introduce students to the techniques and process he uses in his art. Then, students will get an opportunity to create a work of their own! Come make some art *and* meet the artist who is currently working with Thunderbirds to create THES' newest mural!

3. Aimee Blasé, GRAPHIC DESIGN

Explore the world of graphic design in everyday objects - like food packaging (labels). We will learn about graphic design elements in packaging and then Aimee Blasé, a graphic designer for over 20 years, will help you design your own product label that you will hand-draw and then take home.

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4. Leslie Bonnell, FABRIC and SEWING ARTIST & INSTRUCTOR

Come have fun with fabric! In this workshop, students will work with local fabric wonder woman to create a take home felt project!

5. Katie Dawson, THEATRE & UT PROFESSOR

How can theatre and stories help us think about earth science? In this hands-on workshop Thunderbirds will become characters in a familiar story. Together we will help a small valley figure out how to handle some big changes. Be ready to think, create, imagine and play!

6. Valentina Dorsa, PAINTER

As an artist and mother I like to use materials that are all around us and easy to get hold of. Come experiment with masking tape, sharpie, spray paint and acrylic sprays to create wonderful abstract art pieces of your own!

7. Melissa Knight, FABRIC ARTIST

Students will make collage art with batik fabric. Collage art is a type of folk art, and anyone can participate. It is fun and students can create beautiful designs with color and imagination! Students will make frame-worthy artworks to take home!

8. Kate Meehan, THEATRE

Learn all about theatre masks and movement in this fun workshop!

9. Heather Bishop, SONGWRITING

A workshop on songwriting that includes both music and lyrical components and talks about the creative process in general. Both Heather and her musical partners play a variety of instruments.