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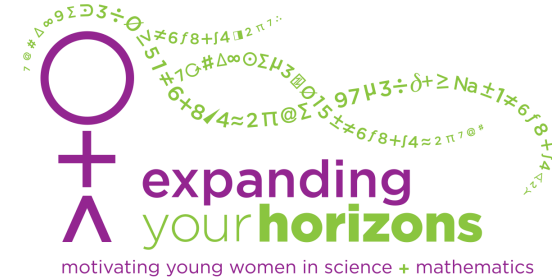
Renee Tindall

Jennifer Verissimo

UPHS Robotics Team

Tulare County Office of Education

Tim A. Hire, County Superintendent of Schools



22nd Annual Tulare County Expanding Your Horizons

SATURDAY, NOVEMBER 5, 2022

8:30 A.M. — 2:30 P.M.

COLLEGE OF THE SEQUOIAS

915 S. MOONEY BLVD., VISALIA

Welcome

Welcome to the Twenty-Second Annual Expanding Your Horizons Conference!



We appreciate College of the Sequoias being our partner so that annually hundreds of young women have the chance to explore careers in the areas of science, technology, engineering, and mathematics (STEM). The sessions available for you today were designed to be fun! In them, you'll get a taste of what it might be like to work as an engineer, a scientist, or a doctor. Between your sessions, take the opportunity to meet your presenters. They are here to share their professional passions and hopefully help unlock yours. We hope you have a wonderful day at Expanding Your Horizons!

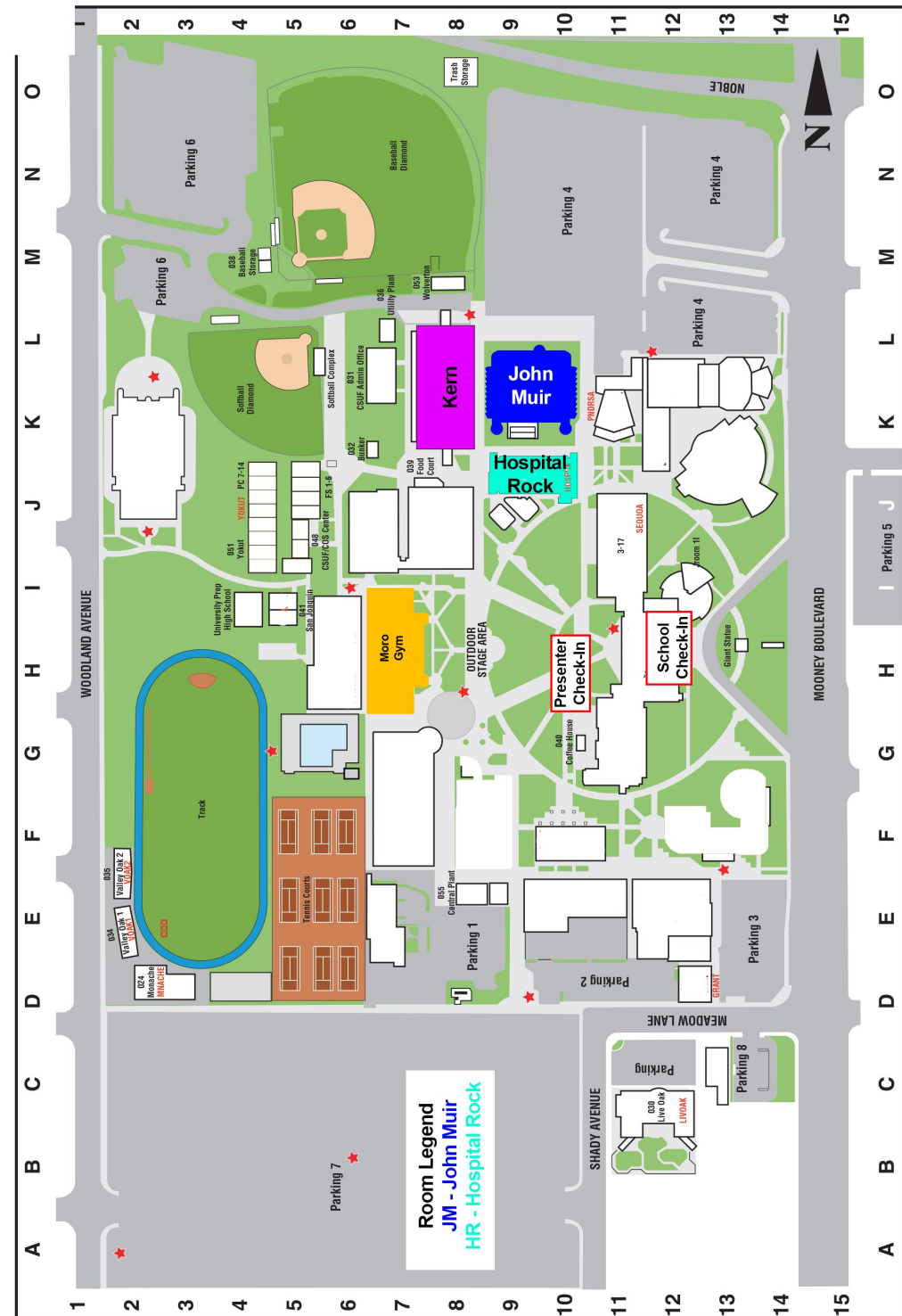
Tim A. Hire
Tulare County Superintendent of Schools

Join us for:



Saturday, March 4, 2023
Tulare County Office of Education
Conference Center
6200 S. Mooney Boulevard, Visalia

10:00 a.m. - 3:00 p.m.





CONFERENCE SCHEDULE

The conference begins at 9:00 a.m. on **Saturday, November 5, 2022**. Please pick up your conference information packet (containing your workshop assignments) between 8:30 a.m. and 9:00 a.m. at the front of COS near the circle drive.

8:30 a.m.	9:00 a.m.	Check-In – front of COS near circle drive
9:00 a.m.	9:15 a.m.	Welcome – Moro Gym
9:25 a.m.	10:10 a.m.	Session I
10:20 a.m.	11:05 a.m.	Session II
11:15 a.m.	12:00 p.m.	Lunch Break – Quad
12:10 p.m.	12:55 p.m.	Session III
1:05 p.m.	1:50 p.m.	Session IV
2:00 p.m.	2:30 p.m.	Closing Session – Moro Gym

Students may not leave campus during the conference for any reason.

Workshop Descriptions

A Biologist's Perspective: The Central Valley – Reagen O'Leary JM 122
Past, Present, and Future

Have you ever wondered what the San Joaquin Valley looked like before it was converted to agriculture and development? In this session you will learn about the Central Valley's natural history yesterday, today, and tomorrow.

Bioindicators of Water Quality Amanda Driver JM 107

Water quality can be tested in many different ways, but one way to assess water quality is to look at what animals live in the water. By identifying the animals that are living and thriving in the water, you can determine the amount of pollution and turbidity of the water. In this workshop, students will identify the organisms living in the water to determine the water quality.

Bridge Design and Other Engineering Concepts Maha Razoulo JM 208

Have you ever wondered how bridges and buildings are designed? Learn about basic engineering concepts used to design structural solutions. Design a bridge using a graphic computer model in class.

Build a Fish Workshop Renee Tindall JM 121

We will discuss body and fin shapes of fish that impact where they live and how they find food. The students will then get to build a paper fish based on our discussions.

Chemical and Physical Changes Jennifer Verissimo JM 219

Chemistry is the study of matter and the changes it undergoes. These changes can be divided into two classes: physical changes and chemical changes. In a physical change, one or more physical properties of a substance are altered, but the chemical formula of the substance doesn't change. Chemical changes, however, result in the formation of new substances with different properties. In this workshop, you will perform different activities and, based on your observations, determine whether a chemical or physical change has taken place.

E&M Reptile Family Eric Johnson Moro Gym

A one-hour, hands-on, live reptile show featuring bugs, frogs, lizards, turtles, tortoises, and snakes! Come learn about these amazing animals and how you might be able to work with them too!

Workshop Descriptions

Explore Science and Discover Possibilities **Stephanie Doria** **JM 101**

We will teach children about the world of informal education through Fresno Discovery Center. We make teaching and learning fun for all ages. Join us for a hands-on, brains-on activity about STEM!

First Aid and Suturing **Dr. Christine Seto and Nancy Huynh** **HR 127**

Students will learn the basics about first and suturing from a doctor that serves our county.

Fruit...with a side of DNA? **Kristine Fajardo** **JM 119**

Have you ever wondered how scientists extract DNA from an organism? Or why scientist want to study DNA? All living organisms have DNA (short for deoxyribonucleic acid) whether you're a human, hamster, strawberry or bacterium. It is basically the blueprint for everything that happens inside an organism's cells. DNA tells an organism how to develop and function and is so important that this complex compound is found in almost every cell. In "Fruit...with a side of DNA?" you'll be able to extract DNA from fruits using common household items and use this experience to explore the world of scientific research!

Girls Can Build the World **Monique Mello** **HR 134**

Discuss the various careers women can have in the Architecture, Engineering, and Construction Industry. Activity will be building plastic straw boats.

Hands-On with Sir Isaac Newton **Dr. Larry Owens** **JM 207**

Newton's Laws of Motion can be used to understand forces and motion in the world around us. We'll do hands-on activities and tricks to understand these important concepts of physics.

Introduction to Programming **Ahsen Baig** **Kern 714**

We will go over an hour of code tutorials while answering any questions.

Iodine Clock Reaction **Nallely Hinojosa** **JM 221**

Hands on demonstration of Iodine reacting with hydrogen peroxide to produce an iodine element.

Workshop Descriptions

Journey to the Sun **Marc Royster** **JM 124**

The Sun is the brightest object in space from our vantage point on Earth. However, this also means we normally can't look it. In this activity we will investigate tools astronomers use to make objects appear brighter and clearer. Then, with the right precautions, we will look at the Sun itself.

Mind Your Own Body **Nikki Scholl** **HR 128**

Connecting the mind and body to create strength and power. We will learn how our thoughts and exercise habits transfers into being stronger athletes, confident leaders and powerful individuals.

Nurses Change Lives **Christina Rodriguez** **HR 129**

Students will learn how EpiPens work and practice life-saving CPR techniques on medical mannequins while learning what it takes to become a nurse.

Popsicle Stick Flashlights **UPHS Robotics Team** **JM 123**

Using one popsicle stick, a watch battery, tinfoil, tape, and mini LED bulbs, students will be guided through making a flashlight while learning the basics of electricity.

Rocking the Rock Cycle! **Kerry Workman Ford
Kiersti Ford** **JM 120**

Students will make their own rocks while learning about the processes involved in the rock cycle.

STEM is Everywhere **Vanessa Salyer** **JM 201**

STEM can be seen everywhere, even in making slime. This activity and presentation will highlight how STEM is important and how it is everywhere around us.

Weed ID, Insects and More! **Sara Scott** **JM 222**

Hands on weed identification, insects in turf and in Commercial agriculture. We will use small hand lenses to look at the insects and learn about lifecycles of some key pests and stubborn weeds.
