

Introduction and Pre-Registration & Pledge Forms 2021 Central Coast STEM Expo

Written by Edmund Burke, Endeavour Center, Founder
www.endeavourinstitute.org

A note to the parents:

The 2021 Central Coast Science, Technology, Engineering and Math (STEM) Exposition (Expo) mission is to provide your son/daughter an experience into the world of creativity and thinking in science, engineering and mathematics. We hope they will consider a high-tech career in the future. Engineers, scientists and educators from Vandenberg AFB, the Endeavour Center, Lompoc Unified School District and the community are donating their time to run a first-class STEM Expo.

We would appreciate your support by providing:

- 1) Positive assistance at home for the multi-month Science and/or STEM project endeavor. A continuous effort (1 - 2 hours a week) is much better for your son's/daughter's growth than a last minute attempt. It's very important for you to keep the enthusiasm going at home with constant encouragement and help. One way to do this is to take your son/daughter on a weekend nature or science trip relating to their project (i.e. science museums, etc.).
- 2) You may elect to present your project for a judging slot on either Friday, May 14th (5-6, 6-7, or 7-8 PM), or Saturday, May 15th (8-9, 9-10, 10-11 AM, or 11-12 noon). If you are working with a partner you must choose a time that works for both you and your partner, as you must present your project together.
- 3) Awards will be decided and posted on the www.CCSTEMExpo.org by Monday, May 17th and sharing awards results with the local Community news and media.

A note to students:

You probably have many questions, such as "What is a STEM Expo project supposed to look like?", "How is it to be put together?", "What am I supposed to choose as a topic?", "Who's going to help me?", "Once I choose a topic, then what?", "How is it going to be graded?". These questions, and others you may have, will be answered as you read through the *General Entry Rules and Requirements* available at www.CCSTEMExpo.org (see STEP 2) and/or when your science teacher provides it to you and fully explains this exciting activity.

One thing is certain, however, is that a STEM Expo Project is an involved endeavor, one that should not be taken lightly. It will require a great deal of your time with planning, researching, experimenting, evaluating, writing and constructing. So try to put a few hours a week into your project. Don't wait until the last few weeks to begin working on the project. You will be much more competitive and confident in your presentation to the judges if you are well prepared and have practiced your speaking part ahead of time.

STUDENT THINGS TO DO:

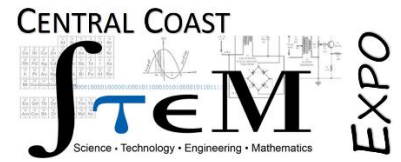
- 1) Complete and sign the **Pre-Registration and Pledge Form (See Attachment 2 below)** and return to your school science teacher before **April 16, 2021**. The form may also be found at www.CCSTEMExpo.org (click STEM Expo and see STEP 3).
- 2) Return all signed forms to your teacher who will guide you through the online registration at www.CCSTEMExpo.org or with the help of a parent you may complete the online registration, but ensure your selected judging time has been coordinated with team members if you are working with partners.
- 3) Select a scientific inquiry project or engineering design demonstration that interests you. An engineering demo project is something like Robotics, 3D Printing, Electronics, Mechanical Devices, etc. and may not have a science experiment hypothesis and/or conclusion. Whether you select a demonstration and/or science inquiry project, you must provide a Google Slides or PowerPoint (PPT) presentation to display your work to be compatible with a virtual video conference judging event. Plan on creating an electronic presentation and then displaying it to the judges through sharing within the Zoom video teleconference.
- 4) Read the **General Entry Rules and Requirements**. They can be found at www.CCSTEMExpo.org (see **STEP 1** on website)
- 5) Do not procrastinate and wait until the last minute to start your project.

PARENT THINGS TO DO:

- 1) Read and sign the **Pre-Registration and Pledge Form (See Attachment 2)**. Select a time for your student to present for judging and indicate on this form. The form may be found below as **Attachment 2**, or on www.CCSTEMExpo.org. Coordinate the judging time with project partner(s) if working with one or more.
- 2) Sign the **Certification of Humane Treatment of Live Vertebrate** form if your son or daughter STEM Expo project involves live animals (See **Attachment 3**), or on www.CCSTEMExpo.org.
- 3) Complete the online registration at www.CCSTEMExpo.org.
- 4) Ensure student returns **Attachment 2** form to their teacher with signatures and judging slot checked by **April 16, 2021**. If they are working with live vertebrate animals, please include signed **Attachment 3** form
- 5) Encourage and actively participate with your son's or daughter's Science or Engineering Demo Project, but let them do the work.
- 6) Communicate with the school science teacher to make sure your son and/or daughter is making weekly progress on their Science or Engineering Demo Project.
- 7) Take your child to a Science Museum, industry tour, STEM event, etc. (we realize these are COVID-19 limited) to motivate them prior to the Central Coast STEM Expo.

Please turn the page for attached Agenda, Pledge of Participation Signature Form and Certification of Human Treatment of Live Vertebrate Animals.

Attachment 1 **2021 AGENDA**



Friday, May 14, 2021

5:00 p.m. - 8:00 p.m., web conferencing invites via Zoom

When your time comes to be judged, be **prompt** and ready on the Zoom video conference call immediately when judges arrive. **NO EXCEPTIONS.** Realize judges will be on a tight schedule to complete activities within approximately 15-minute intervals, so be prepared. A well prepared and thought out presentation will be more pleasing to the judges when scoring points in the different areas.

Saturday, May 15, 2021

8:00 a.m. - 12:00 p.m., web conferencing invites via Zoom

When your time comes to be judged, be **prompt** and ready on the Zoom video conference call immediately when judges arrive. **NO EXCEPTIONS.** Realize judges will be on a tight schedule to complete activities within approximately 15-minute intervals, so be prepared. A well prepared and thought out presentation will be more pleasing to the judges when scoring points in the different areas.

2:00 p.m. - 4:00 p.m., web conferencing invites via Zoom

All judges will be invited to a Zoom meeting to discuss best of age category awards, special plaque awards, and determine the \$500 scholarship award winner.

Monday, May 17, 2021

By 1:00 p.m. Award winners will be posted via www.CCSTEMExpo.org and local media

Plaque and cash awards will be coordinated through your teachers in order to get them to the students and parents.



Attachment 2

2021 PRE-REGISTRATION & PLEDGE FORM

Please review and email your student's teacher before April 23, 2021. After reviewing this form and determining how to respond to each part students must then register online at www.CCSTEMExpo.org (see **STEP 4** on website).

Student (First/Last name) _____ Check if working solo: _____

Check if working with a team: _____. If working with a team (maximum of 4 on a team counting yourself) list each member's First and Last names. Reminder – ALL teammates MUST register on-line! If working solo, then leave blank:

1st: _____ 2nd: _____

3rd: _____

Parent's or Guardian's (First/ Last name): _____

Home/ Primary Phone: _____ Work Phone: _____

Email Address (best email to contact parents and student): _____

School Name: _____ Student Grade Level (3rd thru 12th): _____

Teacher's Name _____

Project Title: _____

Type of Project (Choose one): Science Inquiry: _____ **OR** Engineering Design Demonstration: _____

Science Inquiry Category (Choose one): Animal Behavior _____ Biology/Microbiology _____ Botany _____ Biochemistry _____ Chemistry _____ Earth & Space Science _____ Environmental & Agricultural Sciences _____ Human Psychology/Social Sciences _____ Medical Science/Health _____ Physics/Energy _____ Zoology _____
Other _____ **OR**

Engineering Design Demonstration Category (Choose one): 3-D Printing _____ Aerospace Modeling _____ Alternative Energy _____ Computer Game Design _____ Computer Science _____ Energy and Motion _____ Engineered Car _____ Invention _____ Remote Operating Vehicle (ROV) _____ Reverse Engineering _____ Robotics _____ Rocketry _____ Rube Goldberg _____ Unmanned Aerial Vehicle (UAV) _____
Other _____

Judging Date and Time: Friday, May 14, 5-6 PM _____ Friday, May 14, 6-7 PM _____ Friday, May 14, 7-8 PM _____
Saturday, May 15, 8-9 AM _____ Saturday, May 15, 9-10 AM _____ Saturday, May 15, 10-11 AM _____
Saturday, May 15, 11-12 AM _____

Mandatory Actions:

Students need to complete the online registration at www.ccstemexpo.org (**STEP 4 on website**) and pledge to work hard and complete their STEM Expo Project when prompted while registering.

If you sign-up for the STEM Expo, we expect you to complete your project. If for reasons outside your control you cannot participate after signing this form (death in family, etc.), notify your teacher ASAP.

Parents need to oversee their student when registering online, including the pledge section. Parents then need to contact their student's teacher by email when registration is complete and indicate that you agree with the registration pledge section.

If you have any other questions notify Mr. Stevens (805) 266-6664, or email: tkstevens1@comcast.net.

Attachment 3

Certification of Humane Treatment of Live Vertebrate Animals

The California Education Code Title 2, Division 2, Part 28, Chapter 4, Article 5 51540 states in part that:

- ...Live vertebrate animals shall not, as part of a scientific experiment, or any purpose whatsoever:
- a. Be experimentally medicated or drugged in a manner to cause painful reactions or induce painful or lethal pathological conditions.
 - b. Be injured through any other treatments, including but not limited to, anesthetization or electric shock.

Live animals involved shall be housed and cared for in a humane and safe manner.

Additionally, vertebrates used must comply with these International Science and Engineering Fair regulations:

1. All live or preserved animals or animal parts must be lawfully acquired from an approved source and their care and use must be in compliance with local, state, and federal laws.
2. The comfort of the animals shall be a prime concern. No research using vertebrate animals shall be attempted unless the following conditions can be assured: appropriate, comfortable quarters; adequate food and water; humane treatment and gentle handling. Care must be provided at all times, including weekends and vacation periods.
3. No experiment involving anesthetics, drugs, thermal procedures, physical stress, organisms pathogenic to human or other vertebrates, ionizing radiation, carcinogens, or surgical procedures, may be undertaken except under the direct supervision of an experienced and qualified biomedical scientist or designated adult supervisor.

Indicate that you have read and agree to the above by emailing your student's teacher to let them know you agree and will enforce the humane treatment of animals if used for your student's project.