



STANDING ON THE SHOULDERS OF STEM

70th Annual Exhibition of Student STEM Research

October 18, 2019

From: Luba Johnson, CPS/CSSF STEM Exhibition Liaison and Communication/Publication Chairperson

To: Principals and STEM Teachers,

Welcome to the 2019-20 school year! The 2019-2020 Exhibition for Student STEM Research on the Regional and City levels are now being planned and organized. It is our hope that your school will participate in the STEM Exhibitions. If your school plans to participate this year, please register your Intent to Participate on-line at the following link:

<https://docs.google.com/forms/d/e/1FAIpQLSdJHvRDqMkcrJfmUy2i71gyhtJhYksPCXkmHEQ0286aJsgcwq/viewform>

As we plan, organize and get information out, your registration will guarantee that you receive updated information by email from the Regional Chairpersons and/or me.

Our 2019-20 theme is Standing on the Shoulders of *Science, Technology, Engineering and Mathematics*.

- Elizabeth Copper (Lindblom High School) is the Executive Director of CPS Student Science Fair, Inc. (CSSF).
- Carrie Kaestner (Von Steuben High School) is the Executive Chairperson of the City Student STEM Exhibition.
- Our Regional STEM Exhibitions will be held during January 2020. The City STEM Exhibition will be held at the Illinois Institute of Technology on March 19-22, 2020. The opening day for the 2020 Exhibition of Student STEM Research will be March 20, 2020.
- The Illinois Junior Academy of Science (IJAS) (State Fair) will be held at Millikin University, Decatur, IL on May 1 and 2, 2020.
- The International Science and Engineering Fair (ISEF) will be held in Anaheim, California on May 10-15, 2020.

The state fair has not changed the rules and regulations regarding exhibitions. This package includes a hard copy of the 2020 *Handbook* with updated deadlines. Our website also offers the 2020 Handbook, please visit www.cpsscifair.org to access the handbook. STEM Exhibition Posters should have been delivered to your school by the first week of October. Also, enclosed are STEM Exhibition State and NGSS Goals and Standards and Regional STEM Exhibition information.

Projects that need endorsements may proceed with using the endorsements on our website. They have been updated for the 2020 STEM Exhibitions. If you have any questions, concerns or need assistance please contact me at ljohnson131@cps.edu. Thank you for supporting STEM Exhibitions!

Luba Johnson



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Commonly Overlooked Safety Regulations

Operating Principle: Sponsors and students should read the 2020 STEM Handbook and fill out safety documents prior to starting the experiment. Safety should not be an afterthought!

- All copies of the paper and the poster board must have a safety sheet that is signed by the sponsor as well as the student. This safety sheet must have all safety hazards outlined and describe how the project was conducted in a safe fashion.
- Any student working with burning materials should perform the experiment under a fume or chemical hood. Students should be informed of this strong recommendation for utmost safety.
- If human test subjects are used for any exercise related projects, the student must have documentation that there is a physical on file for every test subject. This can be in the form of a signature from the school nurse or administrative secretary. This should be addressed on the Humans as Test Subjects Endorsement form.
- Any project using human subjects at all, even for surveys, requires a Humans as Test Subject Endorsement form.
- When human or non-human vertebrates or microorganisms are used, endorsement sheets are required. SRC approval letter and/or endorsement letter from a professional on institutional letterhead should follow endorsement forms, if required.
- Students may not culture ANY microorganisms, unless the cultures were purchased from a reputable vendor. They may not swab people, animals, or objects to determine how much or what kind of bacteria are on a surface. Proof of the source of the bacteria (receipt or invoice or other verification) should be indicated on the Microorganism Endorsement form. It is always good to show that specimens or water have not been taken from a pond or lake
- All projects involving microorganisms must be done in a classroom or laboratory. They may not be conducted at home. (The only exception is baker's yeast: *Saccharomyces cerevisiae*)
- Any projects involving growth of mold or rotting of organic material must be done in science classroom or science facility. The student will need to show that the material involved has been disposed of in the proper manner. Consult Flinn Scientific for guidance.

Students who produce alcohol in connection with a science fair project must obtain permission from the Bureau of Alcohol, Tobacco, and Firearms (1-800-398-2282).

When working with chemicals, goggles must be worn. If students take staged photographs for their poster, make sure all safety protocols are being followed in those photos. There should be no photos displayed of students conducting unsafe experiments, even if the purpose of the photo is just to show the setup and is not of the students actually conducting the investigation.