

# 8<sup>th</sup> grade STEAMBlock STEAM Fair Information for Volunteers

## Simpson STEAM Fair is December 20<sup>th</sup>

We at Simpson want to thank you very much for being part of our STEAM Fair workdays! Below are the dates we are having STEAM Fair workdays (3:10pm – 4:10pm) and we welcome your help.

- a. Q1: 9/19, 10/10
- b. Q2: 10/24, 10/31, 11/14, 11/28, 12/5, 12/19, 12/20
  - i. Students have been told to be finished with the bulk of their project by 12/5 and put final changes/additions on their project on 12/19 to be ready to present in the Simpson STEAM Fair on 12/20.

**Students are not required to submit their project in the Cobb/Paulding County level science fair**, BUT if they are... each person in the group must submit the proper paperwork and meet all Georgia Science & Engineering Fair (GSEF) requirements.

- ✓ Forms can be found directly at: <https://www.georgiacenter.uga.edu/sites/default/files/gsef-2019-required-forms-approvals.pdf>
- ✓ Georgia Science & Engineering Fair (GSEF) for all requirements: <https://www.georgiacenter.uga.edu/youth/academic-special-programs/georgia-science-and-engineering-fair>

There are MANY strict requirements needed for students who are submitting their project in the county level science fair and some students have yet to decide if they are going to enter their project. The sooner they decide the better because the requirements are extensive! If you see a group whose project looks as if it would be great in the county level science fair, encourage them to submit it!

**\*\*Please Note\*\*** The ONLY time students have to work together on this project is on the designated STEAMBlock STEAM Fair workdays. The GOAL is for students to use this time to complete their project. Many students will do some work outside of school on this project, especially if they are choosing to submit it to the county science fair.

This is a **JOURNEY** for the students! For EVERY group! Students need to keep record of all aspects of their finding. They need to report everything that happens during their experiment or construction of an invention. Understand that if an experiment or invention “fails” ... that is ok... the group needs to report on what went wrong and how to improve it for the future. TRYING is the key and the path to success! In other words, just because their results do not meet their expectations, this does not end the process and mean failure. Students need to document what went wrong and what can be fixed to make it better. Remember, Steve Jobs’s first computer was not the final product!

**Ways to help our groups...**

**First**, identify if the group is planning on going to the Cobb/Paulding County Level Science Fair with their project... if not, then the requirements are not as strict. We want to give the opportunity and means to be able to qualify for county level if a group wants to.

**Understand** that we are trying to encourage and bring out their passion for their topic. If a group is not planning on going to the county science fair, it is ok for them to educate about a topic (simply display and give information). Our Simpson Science Fair is an opportunity for every student to learn about something and there are many different ways this can be accomplished through this project. Some students are not ready and do not aspire to be at the county level but some definitely are and want to be.

**Encourage** and **Brainstorm** with the students! Sometimes students will limit themselves because they cannot see or understand the possibilities or avenues they can take to achieve their goals. If we are there to encourage them and show them ways they can accomplish their ideas then they will be more apt to go for it and make it happen. Also, if a group wants to invent something but it already exists, they can research the current product and then improve upon it and go for it!

**Support** the groups by offering ideas and help with the organization and construction of their display.

**Plan** with the groups. Sometimes students get overwhelmed with their idea and cannot quite organize themselves with a plan. With your guidance, help them through the scientific or engineering process. Below are basic outlines of the scientific and engineering processes.

Scientific Process (simplified)	Engineering Process (simplified)
<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Question to answer</li> <li>• Research</li> <li>• Hypothesis</li> <li>• Variables – independent (what is changing), dependent (controlled)</li> <li>• Materials – should be written as the procedures are written</li> <li>• Procedures/Experimental Design – Step by Step</li> <li>• Data – what happens during the experiment</li> <li>• Data Analysis – explaining the data/observations</li> <li>• Conclusion</li> </ul>	<ul style="list-style-type: none"> <li>• Defining a problem – purpose, goal</li> <li>• Generating Concepts – brainstorming all possible solutions</li> <li>• Develop a solution</li> <li>• Research – Does your idea exist? Required technology/materials? Is the technology needed available?</li> <li>• Plan – Sketch out a picture of your idea</li> <li>• Construct and Test prototype – keep track of ALL data! What worked? What didn't work? How can it be improved?</li> <li>• Evaluate solution – Does it work? Does it solve the problem? What needs to be changed/improved?</li> <li>• Present/Communicate/Market/Sell – Target Audience? How to promote?</li> </ul>

Again, THANK-YOU for your assistance through this process! Please communicate with the classroom teacher so we can all work together to keep the groups on track and moving forward!