What Parents Can Do and What Students Need to Do to Complete a Computer Design STEM Fair Project
2019-20

It is very important that a student does as much as he/she can when doing a STEM Fair project. This is how the student learns first-hand what is involved in the planning, the experimenting, and the writing of a science fair project. <u>A rule of thumb is, if the student can do it, the student should do it.</u>

Parents can act as a coach, but they shouldn't be in the "game" playing. In other words, the student should do most all the work that is part of the project. Parents can brainstorm, share ideas, and help bring out the knowledge learned of the student. Parents can help build things that are hard for the student. After the parent help, final decisions should mostly rest with the student. With this idea, the playing field is leveled where students are doing mostly the same work for their STEM Fair projects.

Below are some ideas of ways parents can help the student with the Computer Design Process STEM Fair Project

Pre-STEM Fair Project Help

Parents can help by sharing ideas on how to set up a journal. They can help with brainstorming questions or problems for the Computer Design Project. They can brainstorm with the student of which books, encyclopedias, Internet sites, people for interviews, etc. to use for the research. The parent and student could read the research together if needed. After the reading, parents can help bring out the information of the research so the student can understand it.

STEM Fair Project Help

Parents can help with brainstorming ways to design the Computer Design Project. They can make sure the student is following all the STEM fair rules. They can help the student understand what the design requirements should be. They can coach the student in the coding.

Post-STEM Fair Project Help

Parents can help the student understand the gathered data of what it means. Parents can help bring out the ideas as to what was learned in from the analysis so the student can come up with a conclusion. They can help with brainstorming ways to put together an effective display board, such as, ideas of what to put on the display board and where to effectively place the important information. Parents can help the student practice for the interview.

What the Student Needs to Do Mostly by Themselves
With Some Parent Guidance
For the Computer Design Process STEM Fair Project

- The student should do most or all the writing in the journal whether it is hand written or typed on the computer.
- The student should mostly come up with the final decisions for 1) the need of the computer program, 2) the design requirements, 3) and the computer code design.
- The student should mostly acquire the professional signatures for the project.
- The student should mostly acquire the parent signatures of children used in the experiment.
- If things need to be purchased for the project, the student should mostly be with the parents during the purchase of the supplies.
- If something needs to be built when tools are needed, parents should let the student help as much as possible at the discretion of the parents for the sake of safety for the student. The student should help with measuring, sanding, gluing, building, and anything else the student is able to do. The student shouldn't leave the project for the parent to finish.
- The student should do most or all the writing in the journal whether it is hand written or typed on the computer.
- During the computer code testing, the student should be there the whole time writing down the data in the journal. The parent should oversee the testing for the sake of safety and help with accuracy.
- The student should mostly to do all the computer work when making graphs and tables.
- The student should mostly have the final say for the analysis and conclusion writing.
- The student should mostly come up with the final decisions as to how the display board should look.
- The student should mostly do all the computer work that is going on the display board.
- The student should mostly do all the pasting of the words and pictures on the display board.