

Dear STEM students,

The journey you are about to take is an exciting introduction to the practices of the scientific method or engineering design process. From the initial brainstorming of ideas, to the daily execution of a project plan, to the gathering of critical data, and to the analysis of that data to reach conclusions, your journey will be full of surprises, missteps, errors, and finding new paths to a solution. These paths often are extremely circuitous, complex, and perhaps even seeing contradictory results upon replicates of the experiments.

To help guide you through these steps, a lab notebook is a very important tool in documenting the experiments and designs paths taken. If used properly, the lab notebook will contain a detailed account of every step you have taken in executing your project. Looking back at the information recorded often can help you find new solutions or different paths to take and to help you understand the variations of the data

The SCVSEFA is requiring that all students participating in the Science and Technology Championships maintain and be able to produce this primary source and documentation of all your work to the judges evaluating your project. It will be a way of showing the judges that you performed the work, that the data exists, that you followed the scientific process, and that you successfully navigated through experiments and data analysis to reach the conclusions you will show them.

While this can feel like a daunting requirement, the actual creation of your lab notebook is actually quite easy and you will quickly get into the habit of recording your work as it happens. Showing you exactly how to do this is beyond the scope of the material presented in the SCVSEFA web pages. It is incumbent on you to work with your teachers, adult sponsors, research advisors, and/or qualified scientists to help you create this important document and to use it throughout the entire time you work on your project. We encourage you to begin this activity the very same day you get the idea for a project or engineering design. The notebook can be a hard copy notebook that you bring with you to the fair, or it can also be an electronic version of the work with the caveat that you follow the same rules that are suggested for a hard copy notebook.

Good luck and enjoy the challenges that lie ahead.