

Advice for Teachers

Science fair can be a wonderful experience for students and teachers alike. It opens up doors for students and encourages them to explore the world with curiosity and scientific vigor. Participating in science fair can also be an excellent way for students to develop communication and time management skills as well as critical and analytical thinking. But the reason that students can reap so much from participating in science fair is because it is difficult. Science fair would not be possible without the support and guidance of caring teachers and mentors. A supportive mentor can make the difference between an abandoned project and a successful one.

My greatest tip for mentors would be to foster curiosity and resilience in their students. The best science fair projects are born out of questions students have about something they are passionate or curious about. If a student has even remote interest in what they are studying they are much more likely to perform well than a student who is not. A good way of helping students come up a research idea is to note which assessments and topics they performed well on or seemed to enjoy. For example, if a student has shown interest or asked questions about genomics or the process of aging, suggest a project that looks at the effects of cell replication on the length of telomeres. You never really know where a great idea for a project will come from. Encourage your students to look outside of the classroom for ideas. The idea for my original project came to me three years ago when I was listening to a podcast that just happened to briefly mention planaria. Three years and two projects later I was fortunate enough to be chosen to attend the Intel international science fair.

A thing that students often neglect but can be critical to performing well at CASEF is a neat and diverse laboratory notebook. Encourage your students to record EVERYTHING they do relating to the project. The notebook is a tool to record what happens over the entire length of the experiment. Tell them to include diagrams of materials, descriptions, visual observations, and anything that might notice that could have affected the data collected that day. A thorough, well organized notebook is something that will make a project stand out.

In my experience a good mentor makes a world of a difference. I was extremely lucky to have some fantastic teachers that took me under their wing and sacrificed time out of their busy schedules to help me. The best way to help your students to produce the best projects possible is to be there for them, whether it's to help them get the ball rolling or give them a little push in the right direction.