Tips regarding competitions from previous research students

The weeks leading up to the science fair…

Presentation and Practicing

- Practice presenting while others are talking in the background to simulate the science fair atmosphere and train yourself not to get distracted.
- Triple check your poster board and have others look over it to avoid typos, misspelled words and any unclear printed material.
- Record yourself practicing and watch it, with a very open mind, to see what others may be seeing and hearing. We often have bad or distracting habits that we don't realize.
- Try presenting more to adults with a knowledge of your area of research to get more useful feedback on your project overall. I would also ask each person I presented to, to challenge me with any question even if it seems unrelated.
- Review your questions and answers from the assignments "Anticipating General Questions in Your Area of Research " and "Anticipating Very Tough Questions in Your Area of Research". Then practice answering questions.
- Make sure to explain the differences between what you did and what your mentor and/or teacher helped with.
- Work on making your presentation more fluid/smooth. While you shouldn't sound like a robot, you should know exactly what you're saying, when, and how. Do this for a 1-2 minute "Elevator pitch" version and a 5–7 minute version.
- Make sure that you cover all parts of the science fair rubric in all versions, short and long, of your presentation.
- Try to figure out a way to communicate all parts of the background, methodology, results, analysis and conclusion in an enthusiastic, less technical and more interesting way
- Cut out anything from your presentation that doesn't help to tell your "story". Always think that the judge really Just wants to know; what was the problem/gap, what did you do, what did you find, what does it mean, what is next.
- Create/find a prop to help explain/teach your research (chemical model, bio part model, mini version of an engineering project, step by step engineering drawings, sample of data chart to show trends etc..). The students that teach better usually win more.
- Practice standing on both sides of the board. I always stood to the right and then all of a sudden, a judge would be standing there and I'd have to stand at the left and it was actually super uncomfortable even though really it didn't make much of a difference.
- Practice getting a judge that interrupts you constantly back on track. Judges may do that for clarification or to test you to see if you know why you did things. Practice answering their questions and then direct them back to the presentation. Sometimes pointing at the poster helps with this.

Clothing and Personal Items

- Make sure you know and are comfortable with what you are going to wear well before the actual day of the science fair.
- Bring a few water bottles with you as well as a few snacks and breath mints. You may be talking for hours and may need these to get through the day. You may also want to bring something to do, if you are allowed, in between long breaks in judging. I used this time to catch up on some homework. Just remember to be aware of judges that may be walking over to see your poster.

Presenting your project the day of the science fair…

- Get the judges excited about your project and that you, a high school student, was determined to make a difference by carrying out a long-term project.
- Show your dedication and enthusiasm and get the judges excited about the potential importance/impact of your project immediately so that they want to hear more.
- Cut way down on the amount of time you spend on your introduction/review of literature. The introduction is usually worth only a few points. It is really only important to give the judge some background and explain, briefly, what has been done but what still needed to be done.
- Point to the different sections of the board a lot more often. That helps the judge to follow along since it will be very noisy and they may not have heard everything I said.
- Make sure you clarify what you did vs. your teacher/mentor especially in the methods section. Emphasize how much work I did myself (independently)
- Focus more on what you did rather than the big picture. No scientist is going to believe that you "cured cancer" but they will be very impressed that you did a long-term project and contributed to the knowledge/ insight that may ultimately make a difference. Application and/or implication wins.
- I would exert more confidence and refer to my statistics more
- Speak louder! Even if you are normally quiet or more "reserved", the students that are more enthusiastic and "teach" better win more often. If a judge is reading your board and not really paying attention to you. I would try to get them to focus on you.
- Explain not only what you did but why. By using phrases such as "… in order to…." and "….. so that…. " it shows that not only did you do certain steps or analyze the results a certain way but you knew what you were doing and why.
- Be prepared for a judge that interrupts you constantly. While they may seem annoying, they may be asking questions because they are interested and really want to be able to follow along. They also may do that to test you to see if you can handle questions throughout the presentation.
- Understand the statistics or analysis of data better. This includes knowing why you (or your mentor) used that specific statistical test. You will be asked about this so you must know what type of statistical analysis was used and why. If you didn't include a statistical analysis then be able to explain why. Do not just say "my mentor did it" or "my mentor told me to do it".
- Spend more time on the applications and conclusion. Application or potential application is what impresses judges. It also shows them that you not only know what you research showed but you understand how it may impact people and/or future research projects.
- Try to not let the gaps in between presentations throw you off. You may have one judging followed immediately by another but you may have a long gap in between sessions too. Some of my friends had the judging's spread out but mine came in waves. I would also have brought some things about my topic to review between judges
- Know your audience, Remember that you are presenting at a competition where the judges may be from a local pharmaceutical company or university or ????. Don't say anything inflammatory such as" the limitations of drug treatments" or that you did a project in a "real lab" as you may offend the very person (judge) that you are trying to impress.
- Remember, people thing that being "successful" when you are involved in science research projects, means winning awards. However, the measure of success is really seen in the dedication that you put into your research and that you cared enough to spend time to try to make a difference. Yes, winning during competitions is a great way to show your hard work paid off but if you did all that you could and don't win an award, do not be discouraged. You will be talking about your research project a lot more in the future than what award you won/didn't win.

Question and Answer section of the presentation…

- Try to encourage as many questions as possible. If the judge doesn't ask anything, have a few interesting topics about your project and/or the research area ready to discuss.

- Try to guide the judge to ask about the most interesting (application) parts of the project
- Answer questions more concisely. If you are vague you increase the chances that the judge won't think you know the answer. You can avoid this by practicing a lot and by anticipating general and tough questions and then preparing answers.
- Be prepared for questions that are not directly related to your research project but are more focused on the general area. Even though you can say "I didn't research that", it's more impressive if you can answer the question and can possibly cite a few related facts.
- If a question is out of scope of your research, tell them you don't understand the question and to provide more information to help give you more "context clues" that may help you answer the question. However, try to answer it of the best of your ability and don't say "that question is out of the scope of my research", They do not like that answer
- It's okay to admit that you're not entirely sure of the answer, but then use background information and other knowledge in order to infer some sort of logical answer in order to demonstrate that you do actually know what you're talking about.
- Reference your poster to try and fill in as much as you can to help you answer the question, or pull together something that you know is close to or can be a valid answer.
- Tell them that it is a great question and that based on …. and then talk about something related on your project that kind of answered the question and make them think you answered it.
- Tell them that is a really good question and that you don't currently know the answer and that you will look into it. Maybe say something about how it is a great idea and that you will research it in the future.
- Say, "That's a good point, as I am still involved in my research, I will take that into account and use that point to work on my project, thanks for the input!"
- Have a note pad next to you and write down what the question was, even if you feel the question is totally irrelevant. This shows you're interested in learning more about your topic and will impress the judge. You can also look up the answer before the next judge comes to you.