

How To Find an Advisor

Dr. John Sohl
Department of Physics
Weber State University

The notes are provided to add depth to this presentation and pass along the links.

Why Get Help?



- **Fact:** Very few top projects are done alone.
- **Fact:** There are people who know more than you do about your topic area.

ScienceBuddies has an excellent **Ask An Expert** online resource:

<https://www.sciencebuddies.org/science-fair-projects/ask-an-expert-intro>

- You can have more than one advisor.
 - Should include a professional in the field.
 - It is OK for parents to help! (But not “**do.**”)
- <https://www.sciencebuddies.org/blog/parent-perspective-understanding-your-role-in-your-students-science-project>

ScienceBuddies has a great website with helpful guidelines and suggestions:

<https://www.sciencebuddies.org/science-fair-projects/science-fair>

ScienceBuddies has an excellent Ask An Expert online resource:

<https://www.sciencebuddies.org/science-fair-projects/ask-an-expert-intro>

If parents have questions about how much they should help their students, here is a good article:

<https://www.sciencebuddies.org/blog/parent-perspective-understanding-your-role-in-your-students-science-project>



Advisor vs. Mentor

- **Advisor**
 - Gives advice
 - Answers questions
 - Points you towards resources
- **Mentor**
 - Everything an advisor does and also assists and guides you in how to carry out and complete your project



Ritchey SEF will try to find an “Advisor” for you if you need help. Remember that this person is there to help you answer questions and give you suggestions for directions your project might go, NOT to do your project for you! For information on finding an advisor, send a message to sciencefair@weber.edu



Finding an Advisor

- Parents – the fruit often falls close to the tree
- Teachers – they didn't pick their career randomly
- Local Universities/Industry/Labs – Check information on their websites
- Distant Expert—who may be able to provide some assistance remotely by email. (Many science fair students find advisors by contacting authors of the science journal papers they read.)
- Recommendations from Others—discuss your project ideas with a variety of people

The worst thing you can do is send a sloppy email to someone. You are representing your school and community. Spelling, grammar, and content all count, especially when communicating with advisors at universities and business professionals.

Some of our most successful science fair students have found scientific journal articles describing experiments/engineering projects that are very close to their own ideas. They contacted the first author to see if they would answer questions and give suggestions. If that did not work they then contacted the second author, etc. until they finally found an advisor who would help them. Occasionally this method has led to scientists in distant labs (Jet Propulsion Lab in California) or other countries. In several cases the science fair student was eventually invited to visit the distant lab—even in another country—as an intern.

Professional Advisors

- Find out if there is someone nearby.
- Most are over-worked, have a backup plan.
- Not available? Ask them for suggestions of others to contact, including colleagues, graduate students, undergraduates, etc.
- To find an advisor at Weber State University, send an email to sciencefair@weber.edu.



<https://www.societyforscience.org/content/spp-blog/winning-top-award-intel-isef-2012-kicks-amazing-year-jack-andraka>



Fact is: you are an additional work load. Many are willing to help, but many just simply don't have the time. Don't take it personally.

Success is more likely if you are a "young colleague" rather than a "random student." Be prepared, do your homework, know something about the field before you ask for help.

To find an advisor at Weber State University, send an email to sciencefair@weber.edu.

Jack Andraka image:

<https://student.societyforscience.org/sites/student.societyforscience.org/files/main/blogposts/eesha%20and%20jack.png>

<https://www.societyforscience.org/content/spp-blog/winning-top-award-intel-isef-2012-kicks-amazing-year-jack-andraka>

"I was motivated to find a new method of detecting pancreatic cancer after a close family friend died from pancreatic cancer. When I learned more about the disease, I was shocked at the statistics. My idea was to find a method of detecting the cancer early and thus reduce mortality rates. I determined the sensor would have to be inexpensive, rapid, simple, sensitive, selective, and minimally invasive. I decided to use a mixture of single walled carbon nanotubes (because of their interesting electrical properties) and antibodies to the cancer biomarker mesothelin (because it is overexpressed only in pancreatic cancer and not pancreatitis). I then chose to coat strips of filter paper with this mixture to provide support for the network. After contacting and being rejected by 199 labs, I finally was accepted into a lab and began refining my procedure. After 7 long months of experimenting, I created a sensor that can detect mesothelin and thus pancreatic, ovarian and lung cancer for 3 cents in 5 minutes. It is 168 times faster, more than 26,000 times less expensive, and more than 400 times more sensitive than the current method of detection!"

“Sure, come to my office...”

- **First impressions are key!**
- Before your first meeting:
 - Read about basic information and news related to ***their*** field.
- Always be on Time!
 - Arrive a little early so you can orient yourself.
- Be professional!
 - Speak clearly and look at them
 - Write well
 - Address them by title: Dr., Ms., Mr.



These suggestions may sound stiff and formal, however, they are good guidelines for you to practice as you move towards the professional world. Think of it as training to eventually finding the job of your dreams.

An Advisor has Accepted You!

- Be honest when you don't understand.
- Respond to email within a couple of days.
- Use intelligent email subject lines.
- Use complete sentences, appropriate capitalization, etc. in email correspondence.
- Read about the idea that they proposed.
- Be reliable!
- Follow through.
- Bring your **notebook** with you and use it to **take notes** during your meeting.

It is frustrating to have someone who clearly doesn't understand something but won't admit it. You are a student and advisors expect to need to explain complicated subjects to students, however, they are unaware of your current level of understanding in a particular topic and you need to let them know.

The Dust has Settled



- So, you are all done, the fair is over and you won or didn't.
- Send a brief but well written thank you note to your advisor. Tell them how you did and that you would not have done as well without them.
- Have your teacher or parent approve the note.
- Never burn a bridge for yourself or a future mentee.

If you are unsure what to say in a thank you note, just keep it simple and short.

Online Resources

- How to Find a STEM Mentor
<https://www.sciencebuddies.org/science-fair-projects/competitions/how-to-find-a-stem-mentor>
- Ask an Expert
<https://www.sciencebuddies.org/science-fair-projects/ask-an-expert-intro>
- Science Project Resources
<https://student.societyforscience.org/science-project-resources?mode=blog&context=4472>

Questions? sciencefair@weber.edu

How to Find a Mentor <https://www.sciencebuddies.org/science-fair-projects/competitions/how-to-find-a-stem-mentor>

Ask an Expert <https://www.sciencebuddies.org/science-fair-projects/ask-an-expert-intro>

Science Project Resources <https://student.societyforscience.org/science-project-resources?mode=blog&context=4472>

Questions? sciencefair@weber.edu