

Hints and tips for creating a great OSA Scientific Inquiry project

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Choosing a topic:

The subject of a scientific inquiry entry doesn't have to be something enormous that takes several years to do (although I am guilty of doing this). One scientific inquiry entry that I did started as an observation that the copper strips around the strawberry pots at home didn't seem to be stopping snails from reaching the plants like they were supposed to. (Turns out you need to put double the width of the copper strip to make it effective.) On the other hand, scientific inquiries aren't something that can be done and typed up in just an hour or two, especially as you get into higher years.

Planning the entry out:

Before you get to the actual experiment, I've found it's much better to plan it all out, and maybe run some preliminary trials, so you're prepared. Also make sure you plan in case of accidents, such as broken glassware or miscalculated quantities of materials. It helps to have all the equipment laid out ready to access before starting.

When planning it out, think about how you'll test your hypothesis, and what equipment or facilities you'll need. This is where you do your preliminary trials, to make sure your equipment both works, and is appropriate for the experiment you're doing. Also make sure your experiment is measuring something relevant to your hypothesis. Using that example about the snails, don't study something like how fast snails move, just because it's easy to measure. It's irrelevant.

It's a good idea to repeat the experiment several times, to make your results more reliable. This is also why you plan in advance – so you have enough time to repeat the experiment several times.

Log book:

Don't forget to keep a log book. Whenever you work on your project, note it down (at the time) so you don't forget what you were doing. A log book is basically like a diary or journal of what you did, researched or realized and when. It's also very handy for things like the CSIRO CREST program, where you need to keep a track of how many hours you spend on the project.

Before submission:

Make sure you double check the requirements for a scientific inquiry entry before you submit it. You don't want to forget something big like the logbook or the signed risk assessment form. Make sure you've got the Oliphant Science Award ID/Cover Sheet attached.

General tips:

Scientific inquiry entries tend to take time. Don't leave them to the last minute. They're also far more enjoyable when you haven't been up till three the last several days trying to get it done in time.

Remember: no matter how well you plan, there will always be something unexpected that comes up. Leave extra time for this. And for proofreading!