

# Scientific Inquiry

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*Scientific inquiries build our understanding of how the world works, and how science makes a difference to our everyday lives. Wow – your inquiry could change the world!*

## A successful SASTA Oliphant Science Awards Scientific Inquiry entry:

- Will follow a scientific method of investigation.
- Will communicate ideas clearly.
- Will be an original inquiry.
- Will include evidence of reading on the topic.
- Scientific Inquiries that show a hypothesis is not supported are just as likely to win as Scientific Inquiries that show a hypothesis is supported. (You will not know the answer until you do the work!).

## Rules for SASTA Oliphant Science Awards Scientific Inquiry:

- A group of up to 3 students can do a Scientific Inquiry entry. The highest year level in the group will determine the year category of the entry.
- The inquiry must be your own work.
- If you plan to use animals in your inquiry, then you must comply with animal ethics requirements. Check with your science teacher before you start.
- You must keep a science journal or log book containing dates for your on-going ideas, raw data, notes and where needed a completed Risk Assessment for Scientific Inquiry Form (remember your science teacher needs to sign this form).
- **Your scientific report should include the following sections:**
  - Questioning and predicting: What is the question that you are investigating? What do you predict will happen?
  - Planning and conducting: Explain why you chose the particular method for your investigation. What are the possible variables in your investigation? Which variable will you change? Which variable will you measure? Is your investigation a 'fair test'? Describe all the steps of your investigation so that someone else could do it again exactly as you did it.
  - Equipment and materials: List all the equipment and materials that you used in your investigation. List any possible risks that may result from the investigation, and describe how they were controlled.
  - Processing and analysing data and information: Present the measurements or observations from your investigation in suitable ways.

Depending on the year level, these may include tables, graphs and photographs or sketches. Analyse your results. What patterns and relationships can be seen in the data? What conclusions can be made? Do your results support your predictions?

- Evaluating: How could your investigation be improved? How could your findings be useful to others? What other related questions could be further investigated?
- Communicating: Present your science investigation using scientific terms where this is appropriate. Represent your findings in a number of ways. These may include various texts, charts, graphs, tables, and may include the use of digital technologies. Relate your investigation to any research that you have done from other sources. Your report must include a References section containing all the sources of information you researched (all the books, websites, magazines and any people you have talked to). If you quote directly from a source, you must use quotation marks and include a reference to the source of the quote.
- The expected detail in addressing the above criteria depends on your year level.

## In presenting your Scientific Inquiry entry (online submission ONLY):

The following documents will need to be uploaded for your project:

- Cover sheet with your Student ID Label attached (your Coordinator will give you this label)
- Electronic copy of your scientific report in either A4 'scientific article' style, or maximum size A2 'scientific poster' style
  - Entries will be accepted as PDF, Word documents or an image (.jpg or .png) only. We cannot guarantee judges will be able to access any other file types.
- Completed risk assessment form
- Electronic copy of your journal/log book

For full details on electronic submission, see

[www.oliphantscienceawards.com.au/participant\\_information/online\\_project\\_submission](http://www.oliphantscienceawards.com.au/participant_information/online_project_submission).

