



Mathematical Association of South Australia



MASA Junior Secondary Mathematics Enrichment Project 2017

Developing Powerful Learners

Jointly sponsored by The Mathematical Association of SA Inc.

and

The Department for Education and Child Development (DECD)

Teaching and Learning Services

Information for students

The Mathematics Enrichment Project is an open-ended mathematical investigation with your choice of topic

- You should aim to choose an original and novel concept. Real world problems are often most interesting.
- Think about how you are going to gain information, collect data and analyse your results.
- You can work as an individual, a member of a group (maximum of five students) or as part of a class.
- Your project must have a title and all references and assistance (including teachers and parents) must be acknowledged.
- You should aim to interest your audience.

What Type of Project Can I Choose?

All entries should be some form of investigation and must include:

An abstract (a brief description of what you did and what you achieved); mathematical aims; observations and results; discussion on relevance of results; conclusion; references, bibliography and acknowledgements.

- Entries may be in whatever format students desire.

Where possible please provide an electronic copy.

Written: Should be typed or **neatly** handwritten, pages should be numbered and securely bound - **no loose sheets**.

Entries can be in the form of: essays; play scripts; collection of poems or letters; booklet-text with illustrations, newspaper format or anything else that you choose.

Posters: Should convey an idea briefly and clearly, and make an impact visually.

It may be necessary to provide a separate written component if it is felt that the poster does not contain enough information.

**Film, Video
or Audio
Tape:**

Entries must have appropriate documentation, be entertaining to listen to or watch, and reinforce a mathematical concept or principle. Choice of medium used is most important in illustrating the mathematical content.

**Photographic
Essay:**

A collection of photographs which tell a story or display a mathematical idea. Each entry should be accompanied by a written description explaining your thoughts.

Models:

May be either static or working. Models requiring construction must have clear instructions for doing so. Models should be original, skilfully constructed and demonstrate a mathematical principle.

Explanatory notes should accompany all models.

Note that fragile projects do risk being damaged in transit.

Games:

Should have clear directions and be of relatively sturdy construction, allowing for ease of transport.

**Computing
Applications:**

You may use programming, spreadsheets, data base, word processing or any other multimedia formats.

How Do I Get Started?

Brainstorm a list of topics that you would like to investigate. It is important that you choose a topic that interests you. You may like to investigate a problem that has affected you, your family, your school, your community or on a global level. Topic could include:

- Investigating the shortest route to school
- How does the weather effect students transport choices to school?
- How have student transport choices to school differed over time?

Once a topic has been chosen, you should think of a big question or idea to investigate. MASA has a number of suggestions on its website.

Get Planning

What type of information or data will you require to complete your investigation? Make a list of all the types of data and information you will need. Create a timeline to ensure you will complete your investigation in time.

Start Investigation

Set yourself some goals and smaller questions. Once you have collected enough data and information you can begin your investigation. You may find that your investigative journey changes along the way - this is fine. Make sure you reset your goals & timeline as needed. Your focus may also change, which can sometimes make a more interesting investigation.

Keeping Records

It is very important that you keep records of your investigation and data. This is a great way to show that the work has been completed by yourself and provides the judges with an insight into your investigation. You can present all of your working and planning in a journal, attached in a folder or your work can be put into in your investigation. Some students find it helpful to keep a journal, however this is not compulsory.

Presenting Your Investigation

It is very important that you keep in mind the rubric judging criteria whilst presenting your information. Make sure your aim, plan and conclusion is clear. Present your mathematical strategies, real world connections and terminology effectively. Ensure you have acknowledged any assistance and resources you have used. Be sure to present your work in a neat and legible manner, demonstrating you value your work.

How Are We Going To Judge Your Project?

Please make sure you consult the 2017 State Judging Rubric for information about the criteria.