

## **Models and Inventions**

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Students who have won a bursary in the Models and Inventions section are to be commended on their achievement. This year 12 major and 28 minor bursaries were awarded in the Models section, and 8 major and 13 minor bursaries were awarded in the Inventions section.

It is a very difficult process every year to moderate and select the outstanding entries. Those awarded must first fulfil all criteria and guidelines before being considered for a bursary. Exceptional understanding of the scientific principles involved in their endeavours was crucial to scoring highly and to the decision process in being selected for a bursary award.

Although a model may be simple in design, there could be original use of parts or in the way it is designed. However, reports written that show research and understanding along with the students' ability to explain and demonstrate the science through their models is essential. For example, an excellent looking model that is sturdy and well made, may look on the surface to be eligible for a bursary, but had failed to work on the day and the science was not well explained to the judges would mean that the entry would not receive a bursary. In contrast, a model that also looks good but might not be spectacular in its finishing touches may be selected for a minor bursary if in the judging process, the entrant(s) have shown a depth of knowledge in the science behind their construction, not just in one area but many areas that apply to their model, with appropriate research in their report to back it up.

A reminder on the guideline, when considering safety precautions, rockets are discouraged and some models may not be appropriate to enter as judging occurs in a closed classroom environment. For example, the use of fire and matches should be avoided in the design. Furthermore, a common problem is that some models become damaged in the transportation to the venue. In this case, it is important that entrants consider the design and construction to improve the sturdiness of the model or invention, as the section is a WORKING model and invention, and the entry may be eliminated from receiving a bursary on this basis alone.

I would like to encourage student entries in the future to explore all facets of their models/inventions including design process, construction,

and the applied science in the real world. For example, a student may enter a model which shows the circulatory system (information model). Some questions to consider are: what were the materials used in the construction? Do I need to explain electricity and circuits as a part of my project if used in the model? What is an innovative way to make the model that allows it to be WORKING? Do I have instructions on how to operate my model? Have I done enough research, and included the references in my bibliography?

I would like to thank all the students who entered and enjoyed their science! Thanks also go to all the staff at MLC who provided invaluable help with the set up and organisation of the venue. With their assistance, Judging Day for Models and Inventions has proceeded more smoothly than ever! Finally, thank you to all the teachers and student teachers who volunteered their time to judge all the entries which allows our competition to keep running.