Experimental Research - Junior

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This year we received approximately 160 junior experimental research projects. The standard of the bursary winning entries was very good. Some examples of topics that were interesting and researched creatively included ones that attempted to solve a problem such as:

Where can I get the best sound?
Newtonian Laws of Cooling
The most water efficient roofing.

Students should remember that in their experimental design they need to carefully think about the hypothesis they are testing, control of variables and that accurate and comprehensive measurements are used to collect results. In particular, experiments should be repeated to ensure accuracy and consistency in data being collected.

Students in general presented results using tables, graphs and photographs/drawings where appropriate. However, the discussion of these results required further development. There needs to be a detailed analysis of the results including their implications and validity as well as a link back to the hypothesis. It was useful if the student researched the topic, defined key terms and linked this research to their discussion of results.

Please encourage students to be involved in the real work of the scientist, which is research. Encouraging students to think about areas of interest and hence science and technology related problems is a good way to get started. Brainstorming in class is a useful tool to get lots of ideas, which can be further explored by students.