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Keywords:

Model Solar Vehicles (Boats)
- Designing & Making,
Science Inquiry Skills,
Design Technologies &
Engineering,
Mathematics & Literacy,
Parent Involvement.

Learning areas:

Design & Technology,
Integrated STEM

Workshop: Model Solar Vehicle Challenge – An Approach to STEM

Conference themes addressed: Teaching approaches, strategies, activities, or resources relating to STEM subjects and/or entrepreneurship.

Suitable for primary and secondary teachers. Resources for producing model solar boats and testing them will be provided.

Key words: Science inquiry skills, design technologies and engineering, mathematics and literacy, parent involvement.

The model solar vehicle challenge has been running in Victoria for over twenty years and involves teams of students designing, producing, testing and racing their model vehicles. It is open to all year levels from year one to year twelve. The competition is usually held at Scienceworks Museum in October of each year. There are two types of vehicles involved, cars (kit cars and student designed cars) and boats. The boat competition has two divisions, a junior and advanced division, to cater for the broad age range and level of experience. This workshop will focus on boats to allow participants to experience the rich learning across all areas of STEM. We shall also explore the practicalities of running a program within a school and how parents can be an essential part of the team.

Links to several curricula areas will be discussed during the workshop with a particular focus on science and mathematics. We will be working through the design and technologies process of creating designed solutions: Investigating, Generating, Producing, Evaluating and Planning and managing. Opportunities to test and modify boats will be provided to replicate the iterative nature of the process.

At the conclusion of the session the role of parents as potential team mentors will be discussed, drawing on earlier research conducted during one of Deakin University's professional learning programs with the Victorian Education Department for Primary Mathematics and Science Specialists.