



Maryland Engineering Challenges™ ELEMENTARY SCHOOL INFORMATION SHEET

How to Prepare for the Competition

- **Form a team of interested students.** Each team must have at least one coach—a teacher or other adult to help and advise—though a single adult may coach more than one team.
- **Recruit other adult helpers.**
- **Plan the timing of the project.** Make sure everyone knows the due date for the written report and recognizes that all major development work should be finished before then.
- **Consult library books and other resources.**
- **Test and improve the design continuously.**
- **Keep careful records** of meetings and working drawings and share responsibility for different sections of the final report.

Notes to Adults

- ***The Maryland Engineering Challenge organizers would like to stress that the majority of the work on all phases of the project is to be done by the students.***
- **Adult assistance is to be limited** to: mentoring students; teaching principles applicable to the project; assisting in production of the report and drawings; overseeing manufacturing of the project; performing any process that may pose a safety hazard to students (taking due account of their ages).
- **Guidance should be in the form of questions** (leading questions, if necessary) to promote creative thinking by the students.
- **Consider attending a Coaches' Workshop** to get assistance for your team(s).

Grading Criteria

The points awarded for each section varies from challenge to challenge and are listed in the individual challenge guide. The information below gives an overview of what judges look for in each section.

NOTE: the criteria established by any challenge takes precedence over these general guidelines.

- **Design Report**

Each team must complete a written Design Report. This should follow the pattern provided with the challenge and be submitted by the specified date. Answers may be handwritten or typed, but should be the work of students. The completed Report will be used by the judges during the oral report.
- **Oral Report**
 - Poise of representatives
 - Knowledge and preparation of representatives
 - Each team must identify one or more representatives, who will be given 5 to 10 minutes to make a presentation and answer questions on how the team designed and tested their entry. Supporting materials, such as a display board with photographs of the work in progress, are often helpful.
- **Design & Construction**
 - Achievement of design specifications
 - Creativity of structural design
 - Quality of construction
 - Finished enhancements
- **Performance**
 - Achievement of performance goals
 - Ease of operation
 - This is the most exciting part of the competition, where each team tries to demonstrate to the judges (and an interested audience) that their entry is easy to use and really works!