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2.007 Design and Manufacturing I
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Milestone #2 – Preliminary Strategy

**DUE: Oral report on Tuesday 17 FEB, during the scheduled lab time 1PM-4PM
Notebook at the normal times we have discussed during the period 18-20 FEB**

DESCRIPTION:

This milestone centers on definition and selection of your preliminary strategy for approaching the contest. Since a *strategy* is plan of action designed to achieve a particular goal, you don't need to describe your design concept yet. The design concept is due at milestone #3. Your preliminary strategy should be documented with about 4-6 pages in your lab notebook. These pages should generally include the items listed below:

1. Overall description – Explain, using words and graphics, what your strategy entails. An annotated sketch of the playing field is often helpful in communicating your ideas.
2. Analysis – Decompose the strategy into various steps or sub-tasks. Include an estimate of how your strategy is expected to perform according to the scoring formula.
3. Sketch models – In some cases, you might make simple physical mock-ups (such as EPS foam models) to support your design work. Please document these in your lab notebook, perhaps by pasting in photos. This part can be considered optional due to the tight timeline.
4. Physical measurements – Show that you can identify key problems and resolve them with physical measurements or demonstrations. For example, in lab we demonstrated that a simple car flipped over at about 45 degrees of incline rather than skidding. You might run another simple experiment to answer a question about which you're curious.

NOTE: You are free to modify your strategy later in the term based on evidence accumulated during your design process. Experience has shown that *strategic thinking* is helpful to the design process at this stage. Even if the particular strategy is not so useful in hindsight, the process of working out a strategy places you in a better position to carry out your design.

FORMAT OF DELIVERABLE:

To share and assess the results of this milestone, you will each make a short oral presentation with some staff, UAs, and your peer group as the audience. Plan on 5 minutes to describe your work and 5 minutes of questions and answers. You can use any format you prefer – powerpoint, chalk board, or simply gathering the audience around your lab notebook itself. The presentation and the associated parts of your notebook will assigned a letter grade (a single grade for the two things jointly) later in the week, when your notebook is collected and reviewed.