

The Voice of Experience

We collect here some tips, suggestions, and strategies contributed by team advisors over the years.

- In late fall, make announcements in upper-level mathematics courses inviting students to participate in the contest. Ask professors and TAs to recommend their most promising students. Emphasize the potential benefits to the participants and the need for a team to include a variety of skills. If there are enough students interested (some institutions have 30 or more), use resumés and interviews as an aid in selection. Look not only for specific skills but also for willingness to work hard and cooperatively in a team.
- Choose team members who have a strong background in writing. The best combination might be two English majors and a mathematics major with an English minor! Each team needs someone who can program well but also someone who knows what canned programs are available. Double majors make good modelers, not only because they have been exposed to a variety of courses and occupations, but also because engineering and physics courses seem to be taught with more of a modeling approach. Someone has to be able to type and be comfortable with the technical word processor available. Also, each team should have some sort of vehicle, if only to get the paper to the post office; I never considered this until one year when one team's sole transportation was a single bicycle among the three members.
- Assign example problems and meet with each team about twice a week during January. If possible, spend a weekend doing a trial run with a problem chosen by the advisor, perhaps from a previous contest.
- If you are offering a modeling course during the spring term, give students who participate on a team appropriate credit toward one of the course projects.
- Chart in advance the hours of the libraries (public and on-campus), scheduled downtime for central computing facilities and networks, and local post offices (including hours for vending postage and dispatch time for express mail service).
- Have students meet with a librarian and go over resources available. Better yet, as part of training, have the team members do a literature search on a particular topic.
- Encourage the team members to write in the first-person plural ("We fit a fifth-degree polynomial to the data. . .") instead of a stilted third-person

passive (“It should be noted that then it was discovered that the data could be fitted by a fifth-degree polynomial. . .”). Encourage them, too, to organized their exposition in logical order; a rambling chronological diary usually doesn’t make for a good paper. In addition to numbering all pages, they should number and caption all figures and tables. Teams may find it helpful to read over Maurer [1991] and Gillman [1987] in advance and keep a copy of each handy during the contest.

- Provide a room for each team’s exclusive use (with a key to each member) during the weekend of the contest. This could be a departmental seminar room, or a faculty member’s office. Arrange with the building support staff for early special attention to cleaning the room on Tuesday morning.
- Provide for 24-hour access to the teams’ rooms, computer facilities, and a photocopier (and either a copier credit card or plenty of change), including making any necessary arrangements with campus security.
- If possible, equip each team’s room with microcomputers (loaded with available word-processing, modeling, computer algebra system, and statistical software) and a printer. Ideally, a team should be able to function completely independently of any campus computer network, in case the network should fail (or be shut down for backups) over the weekend.
- Equip each team’s room with a library of useful modeling resources, including past issues of *The UMAP Journal* and a collection of UMAP Modules. Different teams at the same institution are competing with each other, but it behooves them to share any necessary resources (e.g., relevant library books and modeling resources).
- If possible, provide for all expenses students have during the weekend, including food (e.g., pizza, but the team should get out of the room and eat a decent meal together—or apart—at least once a day), photocopying, any central computing charges, laser printing, and postage.
- Just before the last moment, the team should check the final version of the paper to be sure that all relevant supplements (graphs, figures, tables, program listings) are enclosed.
- After the contest, go over the teams’ work for loose ends or omissions and encourage them to complete it. Have them discuss the contest and present their results in a departmental colloquium. Urge them to present their papers in a local or regional student research symposium, in the student papers session of the spring meeting of your regional Section of the Mathematical Association of America, or at the summer MAA Mathfest.
- Have the college’s public relations department send out the contest results to local newspapers and to the team members’ home-town newspapers.

Acknowledgments

These tips are synthesized from contributions from the following team advisors:

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- Gillman, Leonard. 1987. *Writing Mathematics Well: A Manual for Authors*. Washington, DC: Mathematical Association of America.
- Maurer, Stephen B. 1991. Advice for undergraduates on special aspects of writing mathematics. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies* 1 (1): 9–28.

