



***AISES
Virtual Mentoring
Project***



University of New Mexico AISES Chapter

AISES Virtual Mentoring Project

It is the stated mission of The American Indian Science and Engineering Society to "nurture building of community by bridging science and technology with traditional Native values." (<http://www.aises.org>) With this goal in mind, the AISES Virtual Mentoring Project facilitators seek to build an on-line community of learners by bringing together college and elementary school students in the pursuit of science education. We hope to develop a successful long distance relationship between college mentors in the UNM AISES chapter and Santa Clara Day School's sixth grade students.

Every year Phyllis Jenkins' class participates in the AISES Science Fair. It proves to be a daunting challenge for her, as many of her students don't have the level of home support needed to design a top-notch science fair project. Even with home support, much of the work on science fair projects is done in the classroom, with class sizes ranging from 13-20 students, it's difficult to ensure a sufficient amount of one-on-one guidance for the children. Despite these challenges, the annual AISES science fair is a beneficial part of the school's science curriculum. Many Native schools sponsoring students in the AISES Science Fair experience the same challenges facing Ms. Jenkins. It was the need to resolve these issues that inspired the AISES Virtual Mentoring Project.

Our Plan: Providing Science Fair Support Through Telementoring

AISES UNM Chapter students have a history of supporting the Native community through their work. Many of the students donate their limited spare time by tutoring children on their reservations and in the Albuquerque Public Schools. It is this spirit of community service that is desperately needed in Indian education. Unfortunately, it's not always possible for the students to commute to reservation schools or even local public schools due to time constraints and transportation issues. Still, these students are willing to serve the community if these obstacles can be overcome.

Through the Virtual Mentoring Project UNM students are able to provide assistance to Santa Clara students through e-mail, video conferencing, and online chats. This enables college students to mentor the children at a time that suits their busy schedules. College students provide assistance to the elementary students with science fair procedures, research and advice via e-mail. As most of the college students have experienced AISES Science Fair first hand, they are uniquely qualified

to mentor the elementary children in this project. The benefits of virtual mentoring are substantial for both groups of students:

Elementary Student Benefits

- Develop bonds with caring, supportive adult role models
- Receive higher level of one-on-one support for Science Fair
- Improve technology skills through “real world” application
- Learn to view college as something Indians can achieve

College Student Benefits

- Telementoring enables students to participate in community service not otherwise possible due to schedule and transportation constraints
- Experience satisfaction from helping a child achieve
- Gains a deeper understanding of the importance of science education

Our plan will be executed in three main phases. (See Figure 1) Phase I will consist primarily of introductions and “getting acquainted” between mentors and mentees. A visit to Santa Clara Day School by the mentors is recommended to establish a bond with the children. After the teacher introduces science fair to the children, mentors will be able to begin a more formal relationship. At this point, usually in October, mentors will be able to help mentees brainstorm topics and evaluate experiment procedures and hypothesis writing. Mentors will also be able to help students with research during this phase.

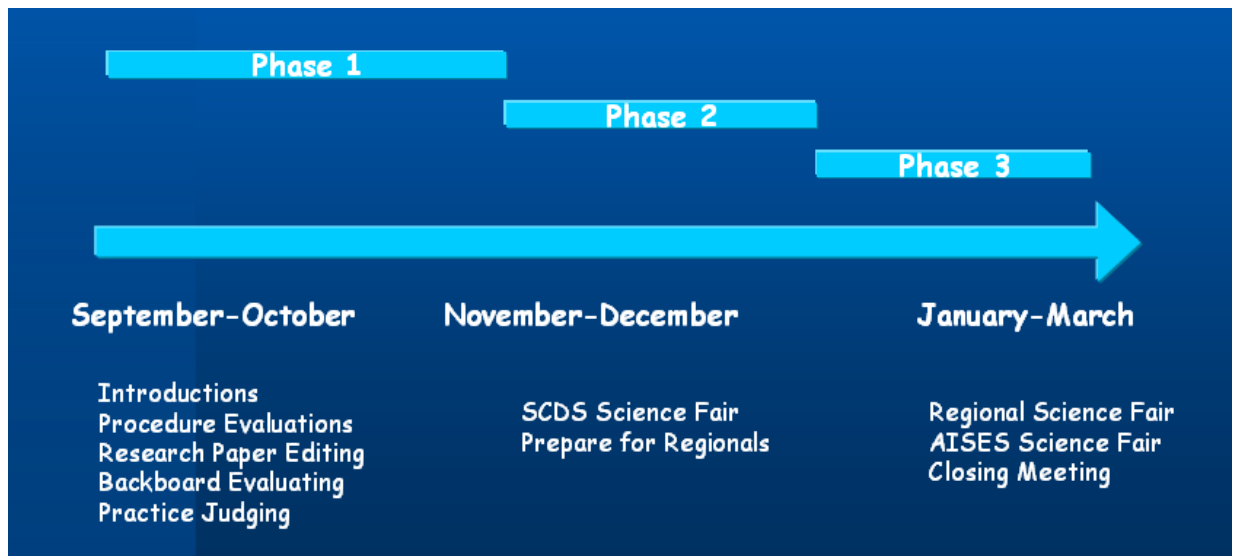


Figure 1 - Project Timeline

Phase II occurs in approximately November through January. The primary role of the mentors is to help the children prepare for the regional science fair. Mentors can evaluate their mentees backboard displays via videoconferencing. If it is possible to schedule a visit to Santa Clara, the mentors can role play science fair judging to familiarize the children with the process.

Phase III concludes the project with the actual AISES National Science Fair. During this phase Santa Clara students will visit Albuquerque to meet with their mentors for a closing event. Regional science fair winners will, of course be competing in the national fair. At this point it would be beneficial to present the project, participants and facilitators to the AISES National membership. Showcasing the project will enable other schools to learn about, and possibly replicate, the benefits of Virtual Science Fair Mentoring.

Research has shown that mentoring, both telementoring and face-to-face, is beneficial to children and adults. This has been the experience of the project facilitators who have conducted several telementoring projects prior to this effort. However there are challenges to organizing a successful mentoring project. It is extremely difficult for college students to fulfill their mentoring obligations on a strictly volunteer basis. Schoolwork is (and should be) their number one priority. Students must have some kind of concrete incentive to stick with the mentoring program. The project's success is assured if college students can count on receiving one or more of the following:

1. Course credit for science fair mentoring.
2. Scholarship funding tied to the mentoring.
3. Internship work tied to the mentoring.

The cost of implementing this exciting, innovative program is minimal considering the return on investment. We hope to procure funding to purchase mentoring curriculum materials, pay for photocopying of resources, fund UNM AISES student scholarships and reimburse participants and facilitators travel expenses. The University of New Mexico's Technology and Education Center has generously volunteered the use of its computer labs and webcam equipment, thus helping to keep costs down. Additionally, Katrina Coker, Education Technology Specialist, is donating her time and expertise to the project.

Please feel free to contact us by phone or e-mail for additional information:

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