

THE SCIENCE RESEARCH PROGRAM
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This program affords students the opportunity to participate in the community of scientific research and scholarship as part of their high school experience. It furthers excellence in performance and achievement, while drawing from and developing scientific capabilities in a broad spectrum of the student body. Students taking the course accomplish the following skills:

- Students choose and explore a topic of interest. The topic may come from mathematics, physical science, life science, social science or psychology.
- They develop skills in using the Internet's electronic mail capabilities and conduct on-line bibliographic searches of international databases.

Students find and study several journal articles, eventually choosing one which they will present to the class. Their presentation to the class emphasizes how research described in the article was conducted. Thus, it makes the scientific method, which is the essence of the course, explicit for the student and the class. The elements of this method always include:

- A review of literature
- A statement of the hypothesis or the problem
- Methodology
- A presentation and analysis of results
- Conclusions
- Bibliographic work and footnotes

Students prepare a statement of what they intend to study based on their bibliographic research.

Students contact the author of the journal article they studied. They ask for suggestions for future research that they might undertake. They ask the scientist to serve as a mentor or to help them find an appropriate scientist mentor to assist them in carrying out a research project in their area of interest.

Students then engage in an original piece of research under the guidance of their scientist mentor and their classroom research teacher. The classroom teacher meets with individuals and the research class on a regular basis. The students communicate with scientist mentors, wherever they are, using electronic mail capabilities.

Students make presentations of their findings to their class, their school district, and at regional and statewide symposia. Their presentations are based on the scientific protocol listed above and incorporate visual presentation techniques.

All steps in the student's progress are carefully and systematically monitored to assure that students engage in each phase of scientific research and have attained desired capabilities.

