Taking New Goals for School Science Seriously

A new trend in science education is emerging. School leaders are planning science programs to include features from four general goal areas:

1. Science for Meeting Personal Needs. Science education should help students use science to improve their lives and cope with an increasingly technological world. Students must identify and deal with problems; they may not "solve" any. They must also learn to make decisions and take actions based on information and evidence. School science must be viewed as practical as well as intellectual. It should affect the way individuals live their lives.

2. Science for Resolving Societal Problems. Science education should produce informed citizens who can deal responsibly with science-related societal issues. To prepare for this, students must be introduced to issues and arguments. They must study the views of others while taking and justifying their own positions. They need to identify and involve themselves with current issues, even when using traditional content to help resolve those issues.

3. Science for Career Awareness. Science education should make all students aware of the assortment of science and technology-related careers open to students with varying aptitudes and interests. This is especially true today, when one considers the many careers related to science and technology. Resource persons should be invited into the classroom, and students should study the community as they would a natural habitat.

4. Science as Preparation for Further Study. Students who are likely to pursue science academically, as well as professionally, must acquire appropriate academic interests, knowledge, and skills. This does not mean acceleration or college level courses. Students need opportunities to study in depth, experiment, explain, and test. (Unfortunately, this is the only goal area considered in typical science programs.)

Science Literacy. Although national science leaders do not agree on the relative importance of these four goal areas, there is consensus that all must be included in K-12 science offerings designed to meet general education requirements. While some grade levels or courses emphasize goals in one of the areas, a total school program must be balanced to include all four components to achieve true science literacy.

Examples of Meeting New Goals

Project Life Lab, an exemplary elementary school program in Santa Cruz, California, uses a garden as a laboratory where nutrition, environmental concerns, and science applications are emphasized. Students experience science in a way that affects their daily lives, focuses on major societal issues, and involves people in the community whose careers are associated with science and technology.

The Human Ecology program at Brandywine High School in Delaware focuses on problems and issues in the local community. Topics include health-related issues, such as drug abuse, teenage suicide, proper nutrition, and genetics. Students participate in a community service activity concentrating on a variety of careers and providing direct experience with community improvement.

Topics in Applied Science, a middle-school program in the Jefferson County Schools in Colorado, provides experiences with energy audits, the accuracy of advertising, personal rele-
vance, and community service. Again, the emphasis is on meaningful content designed to affect practices involved with daily living, environmental issues, community, and career choices (Penick and Meinhard-Pellens, 1984).

School science can be more than academic preparation. These notable programs represent major efforts undertaken in three goal areas rarely included in typical programs.

*Project Life Lab, Human Ecology, and Topics in Applied Science* were identified in the Search for Excellence program of the National Science Teachers Association.

**References**


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**Social Studies**

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**Community Inquiry**

The essence of social studies, as the name implies, is the study of society. Social studies programs, however, often ask students not to study society but merely to listen to or read the results of studies conducted by others (especially their teachers and the authors of their texts). To revive the notion of social studies as active inquiry into social life, many schools are creating firsthand opportunities for students to study their own communities.

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