Project 2061

Blueprints for Reform

Restructuring the Education System

IF LASTING, MEANINGFUL REFORM OF THE SCIENCE, mathematics, and technology curriculum is to occur, changes are needed throughout the education system. Project 2061 has convened expert groups to prepare a dozen concept papers on aspects of the education system that must change to accommodate the curriculum reforms being proposed by the Project. Many states and a number of urban and rural school districts are now undertaking systemic reform. The *Blueprint* papers are expected to contribute greatly to these efforts and help educators overcome obstacles to curriculum reform. Ideas from these papers will appear in an integrated report, *Blueprints for Reform*. *Blueprints* will cover the following topics:

- **Teacher Education** will identify changes needed in pre-service and in-service teacher education to produce teachers with the knowledge and skills necessary to implement curricula based on Project 2061 goals and principles.
- **Materials and Technology** will identify what new resources are needed, what mechanisms to identify and access them will be effective, and what kinds of policies must be adopted to support the development and use of such resources.
- **Assessment** will specify what immediate and future assessment needs are demanded by Project 2061 curriculum-design principles—from in-class assessment during instruction, to program evaluation by schools, to monitoring education progress at state and national levels.
- **Curriculum Connections** will identify important linkages among the natural and social sciences, mathematics, and technology, and also between them and the arts and humanities, and will suggest how such linkages can be fostered in the curriculum.
- **School Organization** will suggest what alternatives for school organization will best enable Project 2061 curricula to work. This paper will discuss such issues as grade structure, teacher collaboration, control of curriculum materials and assessment, how time and space in school might be organized, and the school as a learning community.
- **Family and Community** will specify what will be needed for family and the community to understand Project 2061 reform recommendations and what kinds of commitment and effort from them are needed.
- **Business and Industry** will examine such issues as preparing students to enter an increasingly technological workplace and marketplace, the role of science literacy in U.S. competitiveness, appropriate partnerships between business and education, and resources and leadership that local business can bring to science instruction.
- **Higher Education** will consider changes needed in admission requirements to accommodate reforms in high-school course structure and assessment methods, and how undergraduate education should build on the science literacy goals described in *Science for All Americans*—especially for college students who may become teachers.
- **Policy** will examine the entire policy picture, including how policy has inhibited past reform initiatives, challenges posed by the current education system for the implementation of Project 2061 reform, changes that may be needed in laws and regulations that govern schools, and how modifications of current policy might be achieved.
- **Finance** will consider the implications of Project 2061 reform recommendations (including those in the other *Blueprint* papers) for the allocation of money and other resources. It will examine the financial base for education and the potential availability of resources for changes needed to implement reform, including possibilities for changing schools without incurring greater costs.
- **Equity** will recommend education equity policies to ensure that science literacy is attainable by *all* students. It will also contribute to other *Blueprint* papers and serve as a check for them on equity issues.

• **Research** will discuss the research questions that arise in other *Blueprint* papers and in *Benchmarks for Science Literacy* and *Designs for Science Literacy*, as well as in initial attempts to implement Project 2061 reform. In addition, this paper will consider what mechanisms can permanently link research with practice.

The 12 reports will be completed in 1995, then integrated, reviewed, and revised for publication in 1997.

About Project 2061

Project 2061 of the American Association for the Advancement of Science is a long-term initiative to reform K-12 education nationwide so that all high-school graduates are science literate. Its 1989 report, *Science for All Americans (SFAA)*, outlined what all high-school graduates should know and be able to do in science, mathematics, and technology. Project 2061 is now creating a coordinated set of reform tools to help educators meet those goals in their own districts. Working with six school-district teams of teachers and administrators, Project 2061 has developed *Benchmarks for Science Literacy*, a curriculum design tool that translates the literacy goals of SFAA into expectations for the ends of grades 2, 5, 8, and 12.

SFAA and *Benchmarks* will soon be joined by *Resources for Science Literacy*, a computer-based tool to help educators improve their own understanding of science literacy and identify and evaluate instructional materials to help students make progress towards it; *Designs for Science Literacy*, a handbook to help educators take a systematic design approach to planning a K-12 curriculum; and *Blueprints for Reform*, recommendations for how various aspects of the K-12 education system must change to accommodate necessary curriculum reforms. Eventually, all of these tools will be pulled together by a computer-based, interactive, multimedia curriculum-design and resource system.

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Project 2061 publications are available from Oxford University Press. For ordering information, please call **1-800/451-7556**.