Project 2061
American Association for the Advancement of Science

2061 today

The Science Curriculum

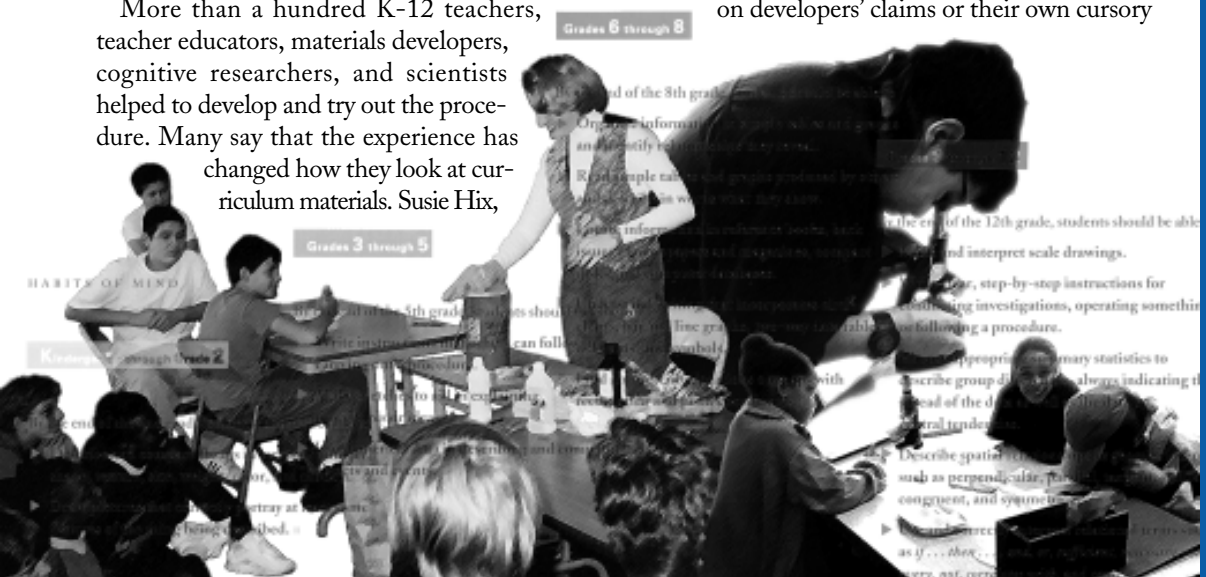
Evaluating What and How We Teach

Faced with unfocused and overstuffed science and mathematics textbooks, teachers feel compelled to teach "a little bit of everything," according to a recent report from The Third International Mathematics and Science Study. To concentrate instead on a coherent and carefully selected set of student learning goals, teachers need curriculum materials that are aligned with *Benchmarks for Science Literacy* and national standards in science and mathematics. Project 2061 has developed a procedure to help educators identify the best materials available and improve promising ones. Educators can use the evaluation criteria to make better judgments about how well a material will help students achieve literacy in science, mathematics, and technology. A more detailed look at the procedure is provided below.

More than a hundred K-12 teachers, teacher educators, materials developers, cognitive researchers, and scientists helped to develop and try out the procedure. Many say that the experience has changed how they look at curriculum materials. Susie Hix, a middle-school science teacher who evaluates materials for schools in Howard County, Maryland, says her training in the systematic procedure "organized for me a lot of isolated ideas I had about what curriculum should do." She would now like to see "surface evaluations" replaced by deeper analyses of every material the county considers adopting. Another Maryland middle-school teacher trained in the procedure, Marsha Lauck, is a member of Cecil County's curriculum renewal committee. That committee is using a shortened version of Project 2061's procedure to select materials for its revised K-8 science program.

A Critical Consumer

Teachers who have used the procedure report that they become less likely to believe that a material aligns with *Benchmarks* or standards based on developers' claims or their own cursory



Science Literacy for a Changing Future

Mathematics

Natural Sciences

Social Sciences

Technology

Spring 1997
Volume 7, Number 1

Teachers Look at Curriculum *continued*

review. Furthermore, they can better distinguish between effective and ineffective instruction for specific learning goals. Maine teacher Page Keeley says the procedure helped her to become "a much more discerning consumer of curriculum materials." As a 7th-grade teacher, she used the procedure to evaluate the materials she uses in the classroom; as the district's science curriculum coordinator, she used it to make recommendations about purchasing materials. Now a science specialist for the Maine Mathematics and Science Alliance, Keeley is adapting the procedure to evaluate materials against state standards that were based on *Benchmarks*, as Project 2061 is doing in Kentucky. She finds that her colleagues "are very excited about learning and using this process" and foresees its "impact on the quality of instruction and assessment in our schools."

Project 2061's curriculum-evaluation procedure is rigorous. "Unlike other evaluation tools, it requires very close attention to the meaning of learning goals," says Dr. Jo Ellen Roseman, the project's curriculum director. "We've learned from workshops with educators that people often read too much—or too little—into benchmarks or standards. This allows them to credit materials that have excessive, un-matching content." Also, people tend to be impressed with particular pedagogical techniques—hands-on-activities, for example—regardless of what these techniques are being used to teach. "Our procedure keeps the focus on specific learning goals and how well students are helped to learn them," says Roseman. "It draws on what research tells us about effective teaching and learning of those specific ideas."

Better Curriculum Decisions

Teacher educators, too, are finding the evaluation procedure valuable. Dr. Norman Lederman of Oregon State University uses the procedure in both inservice and preservice education. It helps the preservice teachers to consider the curriculum "in terms of both subject matter and pedagogy," he says, and to become "more reflective and thoughtful in the decisions they make about instruction." For K-8 teachers, the procedure offers "a framework for thoughtful decisions about textbook and curricula adoption…. It provides the inservice teachers with a systematic approach to what was previously a rather casual selection of materials." Similarly, Dr. Kathleen O'Sullivan of San Francisco State University has introduced a modified version of the procedure into her science methods course as "a type of culminating experience for students."

A Boon to Developers

The procedure also has implications for the development of new curriculum materials. Dr. Henry Heikkinen, a professor at the University of Northern Colorado, develops high-school chemistry materials and has found the project's analytical procedure an "eye-opener." One particularly valuable insight, he reports, was discovering how important it is to be clear and explicit in both student materials and teachers' guides about what is supposed to be learned.

Another curriculum developer, Cary Sneider, describes how the procedure has helped him and his colleagues at the Lawrence Hall of Science to revise their middle-school module *River Cutters*. When his analysis of the material showed that it did not provide adequate opportunities for students to compare their systems models to the real world (as one grade 9-12 benchmark on models suggests) they came up with a solution. "We got on the Internet and found a great many photographs of rivers to illustrate the revised teachers guide. We also included suggestions for teachers about how to find local examples of river systems." Other developers have invited Project 2061 to train their writers and editors as they begin to work on new materials.

Because it is rigorous, the curriculum-evaluation procedure takes time both to understand and apply. But, as Dr. O'Sullivan put it, "I found the experience to be worth the time (considerable!) even in the middle of a very busy semester." Indeed, this rigor is necessary to understand whether or how well instruction will help students achieve science literacy. And only with this rigor will developers get the information they need to revise materials. Still, for the many educators pressed for time when selecting materials, Project 2061 is considering ways to streamline the procedure.

Detailed instructions for using the Project 2061 curriculum-evaluation procedure, along with sample analyses of a variety of curriculum materials, will appear on the *Resources for Science Literacy: Curriculum Evaluation* CD-ROM, scheduled for release in 1998.

Learning Goals are Key

Looking at both **content** and **instruction** *together* is essential when deciding whether a curriculum material aligns well with the learning goals in *Benchmarks* (or the *National Science Education Standards)*:

Analyzing content. After selecting *specific benchmarks* (or standards) to serve as a focus of the analysis, reviewers make sure they understand the intent of each benchmark, studying its relationship to other benchmarks, accompanying commentary, and research on student learning. With a better grasp of the substance of the benchmarks and the level of student understanding they demand, reviewers work through a series of questions to determine whether the material treats the selected benchmarks extensively enough to merit further analysis.

Analyzing instruction. Next, reviewers examine how well the instructional and assessment strategies in the material explicitly support student learning of the benchmarks identified in the content analysis. To do so, they measure the material against a list of criteria derived from research.

At each stage of the analysis, the Project 2061 procedure emphasizes collecting explicit evidence in the material (citing page numbers and other references) of its alignment with learning goals. This helps reviewers to later justify the decisions they make about curriculum materials.

TIMSS and Project 2061

Results from the Third International Mathematics and Science Study (TIMSS) have focused new attention on U.S. student achievement and raised important questions about why student performance varies from country to country. To find out more, Project 2061 staff member Mary Koppal talked with Dr. William H. Schmidt, the national research coordinator for TIMSS in the U.S. and a professor of applied statistics at Michigan State University.

MK: What is the history of the TIMSS project?

WS: In the past, the mathematics and science studies were conducted separately. They were last done in the early 80s. When the U.S. became involved in plans for the third study, it pushed to include both math and science. In terms of the number of participating countries, the complexity of design, and the sophistication of its methods, the current study is the most ambitious of all.

MK: What special implications do the TIMSS data have for Project 2061 and other reform initiatives?

WS: *Benchmarks* came out just when we were collecting a lot of our data, so TIMSS doesn't have much to say about its impact. But what we've learned is that reform efforts like the National Council of Teachers of Mathematics standards, for example, seem to be viewed by teachers as add-ons to what is already being taught. This is a very important point. The problem with standards and benchmarks is the lack of a national mechanism by which they become the dominant vision. Without that, they simply become another set of demands on the teachers. I believe that the TIMSS results clearly show that the U.S. needs national standards.

MK: How likely do you think that will be?

WS: Well, I'm very optimistic these days. I speak frequently to governors, state legislators, members of congress and their staff, teachers and parents. They don't reject the argument out of hand. I think there is a chance.

MK: How was the TIMSS assessment instrument put together?

WS: Very carefully! It was a process that helped me to appreciate the difficulties of negotiating treaties. The study required all 41 countries to buy into it and to be held accountable for the results. We looked at all the curriculum materials from all the countries to design a blueprint representative. Our goal was to design a test that was equally unfair to all countries.

MK: In terms of the curriculum analyses, did you look at textbooks primarily?

WS: No, we looked at curriculum frameworks and then textbooks. In fact, we also analyzed *Benchmarks*, the math standards, New Standards, and the National Research Council's science standards. We used the same methods that we used for our curriculum analyses. We haven't done anything with the data yet, but eventually we should be able to cross-reference *Benchmarks* with the science standards.

MK: We've compared *Benchmarks* to national standards in science, math, and social studies for our new *Resources for Science Literacy* CD-ROM. In the context of your work on TIMSS, what do you think you'll learn about *Benchmarks* or *National Science Education Standards*?

WS: I'm not prepared now to give any definitive answer, but I would suggest that both documents may still have more things in them compared to curriculum guidelines in other countries. I think the next challenge for you will be paring them down still further.

MK: As we think about revising *Benchmarks* over the next few years, that would certainly be a consideration. The TIMSS data provide some powerful evidence in support of our "less is more" approach to the curriculum.

WS: The main task now is focus. *Benchmarks* and standards provide the coherence. *Benchmarks* presents ideas that fit together in a scientifically coherent way. But the next step will be getting people to focus on those ideas. If you look, for example, at the textbooks of some of the top-performing countries in science, they have students studying only five to ten topics a year. In this country, we try to cover everything or people will think students aren't doing enough. We have to do a better job of convincing parents that having kids focus on fewer but more important ideas is not "watering down" the curriculum.

continued on page 4

William Schmidt

What we teach and how we teach it are not two separate things but are instead closely interwoven threads.

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 first report, *Science for All Americans*, 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 developed *Benchmarks for Science Literacy*, a curriculum design tool that expands the literacy goals of *Science for All Americans* into specific learning goals for the ends of grades 2, 5, 8, and 12. To help educators improve their own understanding of science literacy, Project 2061 has released its first CD-ROM tool, *Resources for Science Literacy: Professional Development*. And to engage a wide audience in discussions about systemic reform, Project 2061 has released on the World Wide Web *Blueprints for Reform*, which recommends how various aspects of the K-12 education system must change to accommodate necessary curriculum reforms.

These tools will soon be joined by three more: a curriculum evaluation tool to help educators identify curriculum materials that meet the science literacy goals outlined in *Benchmarks*, and *Designs for Science Literacy*, a guide that will encourage educators to take a systematic design approach to planning a K-12 curriculum. Eventually, Project 2061 intends to integrate all of its tools via a computer-based, interactive multi-media curriculum-design and resource system.

Project 2061 is supported by grants from the Carnegie Corporation of New York, the John D. and Catherine T. MacArthur Foundation, the Andrew W. Mellon Foundation, the National Science Foundation, the Pew Charitable Trusts, and the U.S. Department of Education.

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Project 2061 print and electronic products are available from Oxford University Press. For ordering information, please call 1-800-451-7556.

SCHMIDT *continued*

MK: How do educational practices in the top-ranking countries differ from those in the U.S.?

WS: The simple answer is this: they have fewer topics at each grade level and more coherence. The content they teach fits together more reasonably.

MK: How have textbook publishers received the TIMSS data?

WS: They are somewhat skeptical. They say that to sell a textbook in the U.S. they must put everything in it so that it can be adopted in any one of the fifty states. The nature of the system helps to create this chaotic situation.

MK: What do you think organizations like Project 2061 should be doing to move people in the right direction?

WS: I strongly endorse President Clinton's call for a set of national standards and hope others will too. A great deal of careful thought has already been put into this. In science, for example, we are already well on our way with *Benchmarks* and *NSES*. These (or revisions of them) need to be elevated in status to become essentially our national standards.

MK: How might that happen?

WS: I think the responsibility for bringing about that kind of change lies with the states, the governors, the National Goals panel, and similar groups. The president's support, of course, is very important. The new entity Achieve, which developed out of the 1996 National Education Summit, might be a catalyst. Once this kind of change begins in earnest, Project 2061 will continue to have a major role to play.

MK: Our efforts will be directed toward developing new tools for reformers working in many different areas. Teacher education, for example. What can the TIMSS data tell us about that?

WS: The TIMSS results show the need for a vision of what we want K-12 mathematics and science to be. Then, teacher preparation programs can be organized around that vision. For example, what is the role of freshman survey courses—which many prospective teachers take—in contributing to the fragmented way we think about math and science in this country? Ideally, teachers' training in pedagogy would flow from a coherent view of what we want K-12 students to learn.

MK: We're trying to show how learning goals like benchmarks can guide change. Will the TIMSS videotapes of teachers in their classrooms help with this?

WS: The answer isn't just to show teachers how to teach better. We need to help teachers understand the vision of science and mathematics that we want them to have and then help them to teach for a deeper more conceptual understanding. But if we continue to have state frameworks, textbooks, and so forth that pack in lots of random topics with no focus or coherence, then it would be silly to expect teachers to change. There aren't any simple ways to do this. If we solve the core problem, then we can address other problems like teacher training and professional development. What we can learn from Japan, for instance, is that theirs is not some kind of magical sort of pedagogy that produces good results. It's the coherence of their curriculum and the way it unfolds in the day-to-day pedagogy.

MK: In our work on curriculum analysis, we've learned to look carefully for evidence that textbooks and other materials will actually help the students learn specific content. Is this what you mean?

WS: Yes. In addition to the classroom video data we've collected for TIMSS, we also have a lot of information from questionnaires used in the curriculum part of the study. That's the beauty of TIMSS—it forces us to see that what we teach and how we teach it are not two separate things but are instead closely interwoven threads. When you look at the curriculum data and you look at the videos, they are so consistent that it will be hard for people to miss the point.

MK: The TIMSS data are going to be helpful for a very long time to come. They support many of our own efforts.

WS: Yes, the TIMSS message seems consistent with much of the philosophy of Project 2061.

MK: You'll be releasing the 4th grade data soon. What will it show?

WS: Here in the U.S., we don't think we do very much science at that level, but we may actually be doing more science than a lot of other countries. We'll know more about it by the time we release these next reports.

Blueprints for Reform

Debating Systemic Reform On-Line

Current efforts to reform education are often billed as systemic. But just what does systemic mean? For Project 2061 it means that serious efforts to reform the K-12 science curriculum require an understanding of the whole of education. To gain this kind of perspective, Project 2061 commissioned outside experts to prepare reports on a dozen areas of the education system that would have implications for the implementation of Project 2061-style reforms. This spring, Project 2061 will release on the World Wide Web summaries of those papers, along with some questions about the issues they raise. *Blueprints for Reform On-Line* offers teachers, parents, policymakers, business leaders, and others a starting point for their exploration of the education system and its response to reform.

Getting Involved

"This is a wonderful way to begin a conversation about these important issues. I can already think of one discussion topic: How do we capture the voices of those who couldn't or wouldn't turn to the Internet?" says Sharon Lynch, co-coordinator of the blueprint report on equity. Through *Blueprints for Reform On-Line,* anyone with a stake in improving science education can share experiences with peers, find information on interrelated facets of the education system, or air their views on how best to go about systemic change. They can use the *Blueprints* forum as a springboard for their involvement in science education reform.

To spark the kind of thoughtful debate that can lead to meaningful change, *Blueprints On-Line* poses questions about each area and how it relates to the rest of the education system. For example, what are the costs associated with adopting policies that emphasize science literacy for *all* students? How can we ensure that tests measure what educators, parents, and others want them to? How can universities set admissions policies that motivate K-12 institutions to produce science literate graduates? The on-line presentation of the summaries and a full-text search engine make it easy to see connections among topics and to move from topic to topic.

As an added benefit, visitors to *Blueprints On-Line* will find a database of bibliographies, exemplary projects, and science- and education-related organizations and agencies. Web users can add to the database, respond to surveys about reform, suggest future activities or discussion topics related to *Blueprints,* and provide feedback to Project 2061.

Blueprints for Reform On-Line explores the following topics:

Equity Can science literacy for all be achieved given the current distribution of financial resources?

Policy What is the balance between the power of the purse and the power of the courts in shaping state and local policies that bear on education equity?

Finance What research-based principles are there to guide how best to spend whatever money is available?

Research How can research link standards-based reform efforts in a way that focuses on learning and policy questions about equity?

School Organization How can organizational fads be avoided?

Curriculum Connections What does it take to align curricula with standards?

Materials and Technology Which way will the spread of home computers and Internet access cut educationally?

Assessment How should science and mathematics education respond to calls for "first in the world" performance?

Teacher Education Given the amount to be learned and the technical skills to be developed by prospective teachers, how long should pre-service education take?

Higher Education What can be done to build coherent teacher education programs that span the full range of higher education institutions?

Family and Community How do we secure widespread support of families for standards-based reform?

Business and Industry Does the reform of American industry in recent decades provide a model—or anti-model—for education?

Contact Us

Be sure to visit Project 2061's Web site at http://aaas.org/project2061/. In addition to *Blueprints for Reform On-Line*, visitors to the site can get the latest information about Project 2061 and its products, access the *2061 Today* newsletter, browse the full text of *Benchmarks for Science Literacy On-Line*, and contact Project 2061 with comments and suggestions.

Resources for Science Literacy: Professional Development

USING SCIENCE LITERACY GOALS

Feedback

"I'm pleased that Project 2061 has taken the step to provide resources for educators to work toward science literacy. The information on the CD-ROM will help them rise to the challenge put forth by your project." So wrote Dr. William F. McComas, Director of the Center to Advance Science Education at the University of Southern California. McComas is among the many educators and teacher educators who are already using Project 2061's new CD-ROM *Resources for Science Literacy: Professional Development*. So far, the reaction has been consistently positive, and educators are discovering new ways to put the CD-ROM to work.

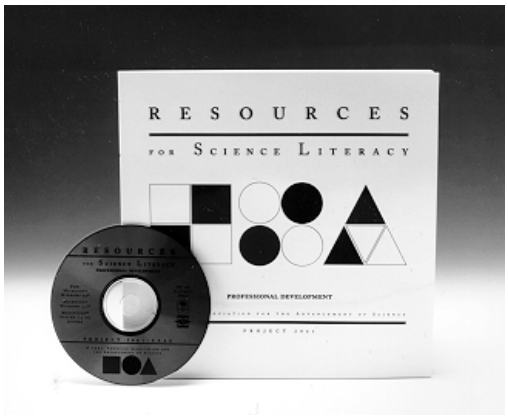
Marlene Hilkowitz, director of Project 2061's Philadelphia School-District Center, uses *Resources* to develop workshops for teachers throughout her district. Having participated in the research and development of Project 2061 workshops, and often taken the role of Worshop Leader, Hilkowitz is familiar with the components and goals of the *Project 2061 Workshop Guide*. She said, "The CD-ROM makes organizing workshops a breeze. I can make my handouts and transparencies straight from the *Workshop Guide*." Hilkowitz indicates that she plans to expand her use of the CD soon. "Next, I'll look at the trade book and research components. I think they could make for some interesting seminars."

With the release of its new CD-ROM, *Resources for Science Literacy: Professional Development*, Project 2061 introduces in science the first professional development tool to focus on standards-based teaching and learning. *Resources* offers six components that will provide science educators with an understanding of Project 2061's science literacy goals, what they require of students, and how teachers can help students achieve them.

Project 2061 envisions that educators will use *Resources* to:

- **Expand their knowledge of science, mathematics, and technology content.** The **Science Trade Books** component can help teachers at all levels to fill in gaps in their knowledge of the topics in *Science for All Americans* and how they interconnect. This database can be used as a guide for teachers' reading and discussion groups; as an acquisitions aid for libraries and teacher, resource centers; as a source for recommended supplementary reading in undergraduate courses; and as part of any in-service professional development program that focuses on science content.

  Developers of pre-service and in-service programs aimed at science literacy can also use the **College Courses** to guide their efforts. Teachers might use these descriptions to explore on their own a specific area of science, mathematics, or technology.
- **Use *Benchmarks* and national standards more effectively.** The **Comparisons of *Benchmarks* to National Standards** in science, mathematics, and social studies can help educators gain a broad perspective of what different groups recommend. In particular, the comparison of *Benchmarks* to *National Science Education Standards* makes it easier for educators to work with both benchmarks and standards when making decisions about curriculum, instruction, and assessment.
- **Study difficulties students have in learning *Benchmarks* concepts and skills.** Teachers and curriculum developers can use the **Cognitive Research** component as a guide to reports on how students understand and learn or misunderstand and fail to learn specific concepts that are essential to science literacy.
- **Design workshops to prepare teachers for reform.** The ***Project 2061 Workshop Guide*** focuses attention on helping educators apply benchmarks and standards to the most immediate tasks at hand: crafting curriculum frameworks, selecting or designing curriculum materials, and planning instruction. Teachers can use the background materials as the basis for self-guided study of Project 2061 and its tools.



Order *Resources* Today!

Use the enclosed card to receive a 30% discount on *Resources for Science Literacy: Professional Development*.

If you already have a copy, use the card to let Project 2061 know how you are using this exciting new tool.

Director's Notes

Tools of Our Trade

We declared in 1989 (correctly I think) that "*Science for All Americans* has little to say about what ails the educational system, points no finger of blame, prescribes no specific remedies." Nor has Project 2061 gone on to develop curricula, train teachers, set policies, or otherwise have a direct hand in effecting the changes needed to bring about actual reform. What, then, *does* the project do? Perhaps the best short answer is this: It creates tools to be used by others in their efforts to reform K-12 science, mathematics, and technology education.

Take the case of *Benchmarks for Science Literacy*, for instance. It is *not* a curriculum or a plan for a curriculum; it *is* an instrument for guiding curriculum analysis and reform. Although it is not a set of standards, it has served as the main source in drafting the national science education standards and many state frameworks. It is not a textbook, yet it is being used in many teacher education programs to help future teachers understand the nature and application of specific learning goals. It is not a research report, but developers of instructional materials find it enables them to take research findings conveniently into account when making content placement decisions. And although *Benchmarks* is not a test instrument, it is being used for both test analysis and test development.

Getting the Job Done

An interesting thing about tools is that they often turn out to have all sorts of uses that were not foreseen at the time of their creation. Our growth-of-understanding maps offer a case in point. Strand maps, as they were originally called, were conceived as tools for deciding on the expression and grade-level placement of individual benchmarks or learning goals. Somehow, they had to incorporate both the logical deconstruction of major concepts from *Science for All Americans* and what was known about how and when students gain their understanding of those concepts. Nothing "off the shelf" would do the job; an entirely new tool was required. In the end, the teachers and others who helped to develop *Benchmarks* found the maps to be essential aids to their work.

Since then, many other uses for the growth-of-understanding maps have been found. For example, they are used in both professional development programs and in undergraduate courses to help teachers improve their understanding of science, mathematics, and technology concepts. They are used in school districts to guide efforts to increase curriculum coherence from grade to grade. Some publishers find their portrayal of curriculum connections across grades and disciplines particularly valuable as they develop new instructional materials. And to its surprise, Project 2061 has discovered that the maps (especially those created since the publication of *Benchmarks*) can be turned back on *Benchmarks* itself to show where an interim learning goal is needed or where new links between goals might be made. Indeed, with so many new uses for maps being discovered, Project 2061 has decided to make them available in a new tool—the *Atlas of Science Literacy*.

All in all, I think it makes good sense for Project 2061 to continue developing the tools of our trade and helping educators to use them well. And at every stage of the toolmaking process, we will continue to work closely with our reform-minded and results-insistent colleagues in the schools. They not only help us to create the tools, they also invent new and powerful ways to use them. As we said in *Benchmarks*, "significant, lasting reform in education will happen only when people charged with operating the schools become part of the creative process."

F. James Rutherford
Director

At every stage of the toolmaking process, we will continue to work closely with our reform-minded and results-insistent colleagues in the schools.

FYI

Project 2061 Receives NSF Grant

The National Science Foundation has funded a Project 2061 proposal to develop a coordinated set of tools for science education reform and to foster their effective use. The $4.5 million grant will continue through fiscal year 1999 and will help Project 2061 to expand its work on *Resources for Science Literacy*; develop the *Atlas of Science Literacy*, a collection of strand maps; and pursue a variety of outreach and dissemination activities to inform and support users.

Analyzing Mathematics Materials

Under a grant from the National Science Foundation to the University of Kentucky, Project 2061 is working with university faculty, other Kentucky educators, and curriculum developers to devise a procedure to analyze mathematics materials. Adapted from Project 2061's procedure for evaluating science and technology materials, the mathematics procedure will measure materials against the learning goals in *Benchmarks,* national standards in mathematics, and Kentucky's own standards. Project staff are also planning a summer institute to train Kentucky educators in using the procedure.

Introducing…

Project 2061 welcomes four new staff members. **Sherelle Derico**, a financial analyst, joined the project from AAAS' Education and Human Resources Directorate. **Dr. Francis Molina** is the project's new electronic resources manager. He most recently worked as a research biologist at the American Type Culture Collection, where he helped to develop electronic products. **John Owens**, a Ph.D. candidate in environmental sciences at the University of Virginia, is Project 2061's first webmaster. And **Soren Wheeler**, a recent graduate of the University of Wisconsin at Madison, is a project assistant working on the forthcoming *Atlas of Science Literacy*.

Science Education Reform Internship

This summer, Project 2061 will welcome its first wave of science education reform interns. The project is recruiting graduate and undergraduate students and classroom teachers to work with project staff on a variety of activities aimed at reforming the K-12 science curriculum and changing the way teachers prepare for their work in the classroom. If you or someone you know is interested in becoming a Project 2061 intern, please send a cover letter and resume to Lester Matlock, project administrator.

Reaching Out to D.C. Schools

Project 2061 is increasing its involvement with District of Columbia public schools. In partnership with the D.C. Mathematics, Science, and Technology Initiative, Project 2061 Philadelphia School-District Center member **Carolyn Minor** presented a workshop for elementary teachers during April Outreach Month. More than 20 teachers attended this session at Neval Thomas Elementary on using science benchmarks and standards. Project 2061 has also begun to explore the possibility of long-term collaboration with science and mathematics faculty at D.C.'s Bell Multicultural High School.

2061 *today*

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