photo: Elizabeth Crews

WestEd
Improving education through research, development, and service

R&D ALERT

A QUARTERLY PUBLICATION OF WestEd / WINTER 2000

NEW APPROACHES TO SUPPORTING BEGINNING mathematics and science teachers

Wondering how to assist fledgling math and science teachers in making the leap from being students themselves to being effective classroom educators? Consider some tips from abroad.

How about…

…asking many colleagues to observe new mathematics and science teachers deliver a "best possible" lesson?

During a long debriefing session, teachers supportively critique the novice's instructional practices and classroom management. Most especially, they discuss in detail how to help children learn the lesson's mathematics and science concepts. (This is routine practice in China and Japan.)

…having districts bring together new teachers from a dozen schools, on a biweekly basis?

In "reflection groups," new teachers wrestle with their overwhelming challenges under the guidance of a trained facilitator. (Such groups, or similar facilitated meetings of all the new teachers at a single school, are found in Switzerland and New Zealand.)

…providing every school that has a new teacher with funds for 20% release time so the novice can participate in a required professional development plan?

Such plans are tailored to the individual's needs. (This is national practice in New Zealand.)

These and other support practices have been identified in the first two years of a three-year study funded by the National Science Foundation (NSF) to look at exemplary teacher induction in China, France, Japan, Switzerland, and New Zealand. Begun in 1998 as a partnership between the National Center for Improving Science Education (NCISE) at WestEd and Michigan State University (MSU), the study is yielding some practical and provocative ideas.

When induction programs are done right, "new teachers almost immediately perceive that the aim is to assist, not judge," says NCISE Director and Study Co-Director Senta Raizen. "Good induction programs are about support, not accountability."

One result is the enthusiastic participation of new teachers eager to improve. The study found one new mathematics teacher who, during the first month of school, had asked the department head — her mentor — to observe her most difficult class of students. When researchers later asked whether she had felt threatened about letting someone so influential watch as she taught this challenging group, she responded with surprise: "Goodness! They are here to *help*, after all. If you don't let them see what you are dealing with, how in the world will it make a difference where I need it most?"

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INSIDE

From the CEO:

LEARNING (and loving) math and science

Welcome to the Winter issue of *R&D Alert.*

The debates over how and what science teachers should be teaching our children are well-known. Even one of the oldest fights — over the instruction of evolutionary theory — is still raging in some U.S. public schools. Mathematics instruction, too, generates controversy in some states.

At WestEd, our commitment is to make sure kids aren't lost in the fray. While disagreements about curriculum and teaching can be healthy, they often distract from what should be happening in the classroom: discovery, inquiry, and the joy of learning.

We care deeply about math and science for many reasons. In our knowledge-based economy, literacy in mathematics and science has become a requirement for economic survival and success. Further, the reality is that U.S. kids don't fare well in those subjects when compared to students in other countries.

In 1995, the Third International Mathematics and Science Study (TIMSS) compared graduating seniors in the United States to students graduating from secondary school in 20 other countries. U.S. students ranked near the bottom, and these poor results held true in both science and math, and for both typical and top-level students.

Our many initiatives focused on mathematics and science are devoted to helping those goals become a reality. At WestEd we continuously examine the latest research about how teachers can more effectively present complex mathematics and science material, how districts and states can design and implement the best assessment strategies, and how policymakers can make informed decisions.

Nations and politics aside, these results do not reflect an acceptable preparation for the increasingly connected world where our children will live and work.

This issue of *R&D Alert* highlights some of our knowledge and work in mathematics and science. Drawing from TIMSS research, our lead article highlights techniques used in other countries to support mathematics and science teachers. Other articles include looking at an academy where WestEd staff help science and mathematics educators hone their leadership skills to enhance learning, a new textbook that vividly explains ways to understand the environment and the necessary science lessons, and an innovative professional development package for mathematics teachers to help them interpret assessment results.

We hope you will find the articles and approaches included in this issue of *R&D Alert* useful in your work.

Glen Harvey
Chief Executive Officer
WestEd

A comprehensive role for WestEd's Science and Mathematics Program

photo: Elizaebeth Crews

The launching of Sputnik in 1956 seemed to realize Americans' worst fears: Our nation was lagging sorely behind the Soviet Union in science and technology. Today, we are a more global and technology-driven society than previously imaginable, and yet our students continue to struggle with basic math and science skills.

"We are, in a sense, entering another Sputnik-type era," says WestEd Science and Mathematics Program Director Steve Schneider, "as low TIMSS (Third International Mathematics and Science Study) scores call people's attention to our crisis in mathematics, science, and technology education."

WestEd's Science and Mathematics Program is designed to address this urgent need by offering comprehensive educational research, services, and products in the areas of:

- research, evaluation, and policy;
- assessment;
- curriculum and instruction;
- technical assistance; and
- professional development.

Program clients range from individual teachers to the U.S. Department of Education and the National Science Foundation. They come to WestEd with a varied set of goals — from improving students' basic skills, to enhancing critical thinking abilities, to developing the immense potential of technology in today's classrooms and beyond. Clients can also find numerous K–12 mathematics and science networks, as well as the WestEd Eisenhower Regional Consortium for Mathematics and Science Education.

For more information, call 415/565-3000 or toll-free, (1-877) 4WestEd; or visit WestEd's Science and Mathematics Web site at WestEd.org/sm/welcome.html W

DISCUSSING CASES helps teachers learn to TEACH MATHEMATICS

The Harvard Business School uses them to learn. So do most schools of medicine. They learn by reading and discussing cases of real-life situations. This case discussion methodology is now gaining ground in education, and WestEd's Mathematics Case Methods Project is at the forefront of the movement.

In this project, directed by WestEd Senior Research Associate Carne Barnett, educators analyze specific classroom dilemmas, challenging themselves to understand mathematics more deeply and to examine their own teaching practices.

"One of our ancillary goals," says Barnett, "is to create a *self-sustaining* system by promoting the leadership potential of all teachers."

Seminars are available for teachers, professional developers, principals, and teacher educators. In addition, the project has been so successful that development is underway for a student program, inviting a new level of discourse and learning in the classroom. For more information about the Mathematics Case Methods Project or to be added to the project's mailing list, contact Angela Sackett, Administrative Assistant, at 510/302-4253 or by e-mail, asacket@WestEd.org. Research papers are available upon request.

Products related to math cases are available from WestEd. Visit WestEd.org/wested/pubs/catalog for our online *WestEd Resource Catalog — 2000*, or ask for a free copy (see page 11). W

WestEd Academy BUILDS LEADERSHIP FOR REFORM

When Page Keeley left the classroom three years ago to join the Maine Department of Education as a science and technology specialist, she thought she'd left the isolation of teaching behind.

photo: Susan Brady

Participants of the Leadership Academy's session in Breckenridge, Colorado, in August 1999. WestEd's Kathy DiRanna (with arm raised) leads a session on professional development. In the background are posters from an earlier exercise — "draw an animal that illustrates your leadership style."

What she found was a rewarding job with its own kind of isolation.

"I felt like I spent a year spinning my wheels, there was so much to learn," she says.

That's when Keeley decided to take part in WestEd's National Academy for Science and Mathematics Education Leadership, funded by the National Science Foundation (NSF). The Academy is a collaboration of WestEd and leading science and mathematics professional associations.

During her two years in the program, Keeley met others working to improve learning in science and learned to foster improvements in her state.

"The Academy was the perfect opportunity for me to think about reform efforts and research I didn't have time to get into as a teacher," Keeley says.

Today, Keeley has set up an electronic network and is working to replicate the National Academy for local Maine educators.

Each year, the Academy selects 30 people who are in new leadership roles to become Academy fellows. Each fellow is paired with an experienced leader who serves as a mentor.

Participants have included directors of science museums, teacher leaders, state education agency staff, directors of NSF-funded projects, and university educators.

Participants gather twice a year to learn facilitation skills, how to bring about organizational change, elements of effective professional development, and approaches to leadership.

During the rest of the year they communicate electronically with one another and with their mentors.

"The challenges bombarding mathematics and science education create a great need for leadership," says Kathy Stiles, WestEd Senior Researcher and Academy Co-Director. "We provide the environment for leaders to gain knowledge and skills, reflect on what they're doing, and learn from one another."

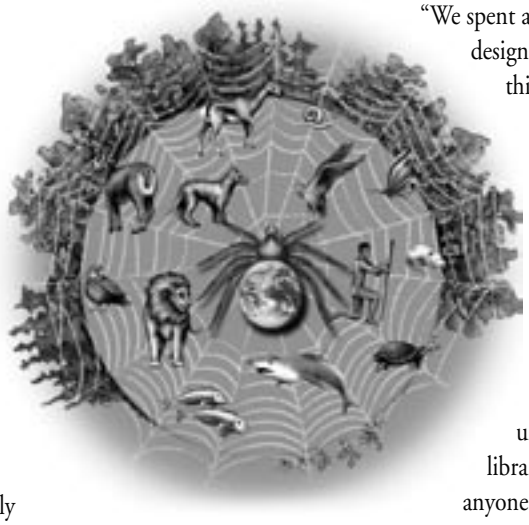
For more information about the Leadership Academy, contact Academy Co-Director Kathy Stiles at 520/888-2838. For information about the Academy's electronic communities, contact WestEd Project Coordinator Jill Forney at 520/888-2838 or by e-mail at jforney@WestEd.org W

Jane Goodall RAVES

Reading the review below, you might conclude that Art Sussman is related to world-renowned scientist and conservationist Jane Goodall, but he claims that's not true. Goodall does love his new book, *Dr. Art's Guide to Planet Earth: For Earthlings Ages 12 to 120:*

"This is an outstanding book. Vividly, clearly, and concisely Art Sussman explains how our planet works and what can happen when the balance of nature is upset. It will capture the imagination of readers of all ages and invoke a sense of wonder. I absolutely recommend Dr. Art's Guide to Planet Earth *— it deserves a place not only in every classroom but also every home. Get it now!"*

Who is "Dr. Art"? And why is his book getting this kind of attention? Sussman directs the WestEd Eisenhower Regional Consortium for Mathematics and Science Education, and one of his roles has been to collaborate in Utah on the development of a new approach to ninth-grade science — a cross-disciplinary course known as Earth systems science. As Sussman explains, the key is to think in terms of Earth as a whole and to apply a systems approach to our planet — especially since, as a species, we have for the first time the power to change or preserve that whole.



"A lot of people in science education," Sussman observes, "like to use the environment as a hook, but their main objective is teaching the science. My approach is the opposite. I want kids and adults to understand the *environment,* and I focus on the science skills and understandings that they need to meet that objective."

Perhaps Sussman's greatest pleasure as an author, as well as a source of some frustration, is the way his book looks.

"We spent a lot of time on the book's design," he says. "Some people think it must be a kid's book because it is beautiful and understandable. Others pigeonhole it as a textbook. But I hope that most people see it as I intended it to be — beautiful, engaging, and true to the science — and that they understand it's not just for libraries or classrooms, but for anyone, for Earthlings."

For information on ordering *Dr. Art's Guide to Planet Earth: For Earthlings Ages 12 to 120,* see page 9 of this newsletter and the product order insert. W

illustrations: Emiko Koike

LEARNING FROM Assessment

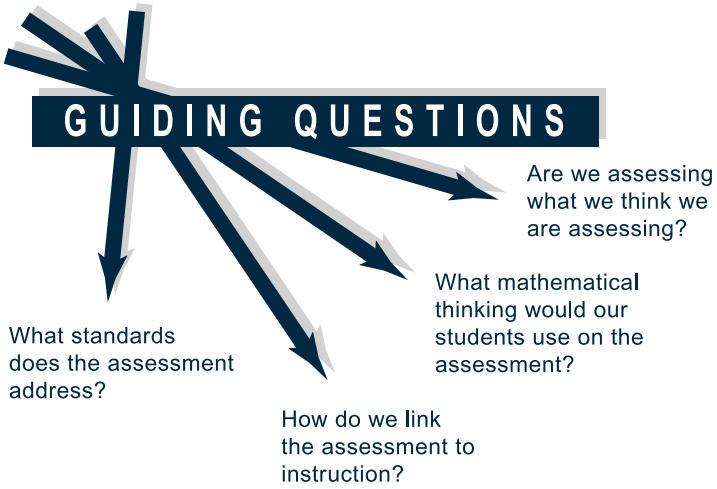
The model of successful education is often described as a triangle, with one leg each representing standards, instruction, and assessment. The image is simple, but getting the three legs to align is another story.

"Translating standards into instructional practice — and then being sure your assessment is actually measuring what you've taught — is no easy task," says WestEd Senior Research Associate Tania Madfes. "We've found that teachers appreciate being able to work with their colleagues to develop this proficiency. And we realized that a professional development package was the way to help teachers efficiently."

Learning from Assessment: Tools for Examining Assessment Through Standards (LfA) is a comprehensive professional development package for mathematics teacher leaders. Co-published by WestEd and the National Council of Teachers of Mathematics and funded by the U.S. Department of Education, *LfA* draws on middle school content and focuses on what teachers can learn by examining items from existing assessments and linking them to established standards.

The four guiding questions pictured below lead to a number of specific skills that help teachers to:

- interpret standards;
- choose or modify assessments aligned with given standards;
- identify gaps and overlaps in testing of specific goals;
- plan student learning experiences; and
- examine instructional materials and assessments with an eye to standards alignment across grade levels.



Response to the training, says Madfes, who directs *LfA*, has been tremendous. *LfA* materials are already in use in Iowa, Texas, New Mexico, Washington, DC, and Oklahoma. "What a powerful tool you have created!" remarked one participant.

The package includes scripts, blackline masters, standards, and a video. It is designed with items culled from the Third International Mathematics and Science Study, the National Assessment of Educational Progress, and other state and national projects, and it is easily customized for local needs by using local standards and assessments. The model also translates across content areas and grade levels. In addition, schools and districts can call on a national cadre of trainers to facilitate sessions. For information on ordering the *LfA* materials, see page 9 of this newsletter and the product order insert.

For more information about *LfA,* visit the Web site at WestEd.org/lfa; or contact Madfes at 415/615-3103 or e-mail, tmadfes@WestEd.org

LfA Trainer-of-Trainers Institute May 1-3

The WestEd Eisenhower Regional Consortium for Mathematics and Science Education will present A Learning from Assessment Trainer-of-Trainers Institute on May 1-3 at the Radisson Berkeley Marina Hotel in Berkeley, California, and a follow-up session in the Fall. Institute participants will receive a complete package of Learning from Assessment (LfA) materials; in-depth experience with the LfA tools; technical assistance in developing an LfA action plan; and access to a network of LfA facilitators. The $200 fee includes the Fall follow-up session. Participants must register by April 1. For more information, contact Tania Madfes, LfA Director, at 415/615-3103; or e-mail, tmadfes@WestEd.org

MEASURING the science LEARNED

During the past decade, many states, school districts, and individual schools have made substantial efforts to improve their science curriculum and instruction, in most cases by moving toward standards-based programs. But how do they know their efforts are making a difference?

PASS, the Partnership for the Assessment of Standards-based Science (formerly the California Systemic Initiative Assessment Collaborative [CSIAC]), provides effective, easy-to-use, reasonably priced science assessments to help reform-minded educators answer that question. In fact, PASS is the only widely available assessment product designed specifically for standards-based science programs. All PASS assessments are aligned to the *National Science Education Standards* and to the *Benchmarks for Science Literacy*. They are available at the elementary, middle, and secondary levels in both English and Spanish.

PASS assessments have been used successfully with more than 144,000 students in 14 states and Puerto Rico. They are valid and reliable, and use a balance of measures — hands-on performance tasks, constructed response investigations, open-ended questions, and enhanced multiple-choice items — to provide more meaningful results than the typical multiple-choice test. All PASS items are developed by teams of teachers, scientists, and curriculum and measurement specialists.

Using PASS reports, schools and districts can measure their growth from year to year against national and local content standards. Results can be used to inform curriculum and instruction, guide professional development, and communicate program impact.

PASS also provides comprehensive training and professional development services to help districts with any of their standards-based science assessment needs. Research and development for PASS continues, including plans for interdisciplinary assessments, samplers, an interactive Web site, and more.

Gabby Leibin (from left), Andrew Kozimor, and Ian Liu-Johnston work with the PASS Light and Shadows hands-on performance task.

photo: Carmen Urquiza

For more information about the PASS Assessment, including PASS products and services, call 415/615-3106, or e-mail, PASSinfo@WestEd.org

Visit WestEd's Web site!

The WestEd Web site <WestEd.org> is a great source of information for education leaders everywhere. Visit the "What's New" section for the latest publications and links: WestEd.org/wested/news.html

Beginning Mathematics and Science Teachers

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Support Specific to Mathematics and Science

Most programs being studied abroad serve teachers at all levels and in all subjects, but some aspects are specific to teachers of mathematics and science. In New Zealand (also in England and Australia), for example, secondary school science departments have laboratory technicians who prepare solutions and equipment, repair apparatus, and order supplies. This enables novices and veterans alike to teach hands-on science virtually every day, a long-held and chronically unfulfilled goal of the U.S. science education community.

photo: Elizabeth Crews

Many middle-grades science teachers in the United States face the common problem of being expected to teach broad science courses, like physical or earth science, while their own training has been in a narrow science specialty, such as biology or chemistry. One Swiss district solves this problem by requiring all middle-grades science teachers to participate, during school hours, in a three-week course that diversifies their science knowledge.

Still Mostly Sinking in the U.S.

Historically, U.S. districts and schools have not established beginning teacher support programs. Study Co-Director Ted Britton, of WestEd, remarks: "We leave novices to 'sink or swim,' and a lot of them drown." In this, the United States is not alone, Britton adds. "Among 15 countries that performed well on mathematics and science in the Third International Mathematics and Science Study (TIMSS), most have no systems, or only weak ones, for supporting beginning teachers."

But teacher induction is attracting increasing attention in the United States. A number of states and districts are experimenting with new programs. The issue has been taken up in the 1999 National Goals Panel report, in *Education Week*'s January 2000 "Education Counts" issue, and in an upcoming WestEd brief, *Lifelines to the Classroom.* NSF urges its grantees to extend the scope of teacher preparation reforms to address teacher induction, and the U.S. Department of Education is funding an intensive study of three U.S. sites that emphasize beginning teacher support.

Nonetheless, the great majority of newcomers still teach without any targeted assistance, which helps explain why almost 25% of them quit within four years of starting.

Retaining New Teachers; Improving Teaching Quality

Supporting new teachers can help keep them in the profession.

"I doubt I ever would have come back this year if I hadn't had such great support last year," said one of the study's teachers, echoing the sentiments of many colleagues.

Effective programs can also improve teaching quality. Study Co-Director Lynn Paine, of MSU, observes: "Helping novice mathematics and science teachers face the universal difficulties of *all* new teachers — such as classroom management problems and communicating with parents — frees them to focus more on their subject's instructional methods and practices."

Beyond Mentoring

While most U.S. support efforts emphasize mentoring, Britton notes that the countries being studied use a greater variety of mentoring strategies. They also use other approaches seldom seen in here. Most notable is the facilitated peer reflection mentioned earlier. Others include incorporating more types

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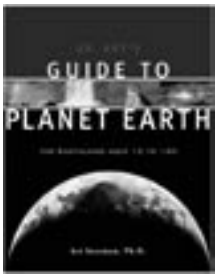
WestEd Products:

MAKING science and mathematics work for you

The following provides a sampling of WestEd science and mathematics products. Our new *WestEd Resource Catalog — 2000* provides a complete list of our products. See page 11 for more information.



Dr. Art's Guide to Planet Earth: For Earthlings Ages 12 to 120

Art Sussman
Co-Publishers: Chelsea Green Publishing Company & WestEd, 2000

This full-color, engaging book introduces three easy-to-understand principles that explain how Earth works, and what we can do to protect it as global and local citizens. Also, see article in this newsletter (page 5) and/or visit planetguide.net

120 pages Price: $14.95 Order #: ERTH-00-01

Test Administration Manual
PASS (Partnership for the Assessment of Standards-based Science)

Kathy Comfort, 2000

This manual is part of a complete standards-based science assessment package for the elementary, middle, and secondary levels. PASS is described in more detail on page 7 of this newsletter. For information about purchasing and administering the PASS Assessment, call 415/615-3106, or e-mail, PASSinfo@WestEd.org

Connecting Mathematics and Science to Workplace Contexts: A Guide to Curriculum Materials

Edward Britton, Mary Ann Huntley, Gloria Jacobs, & Amy Shulman Weinberg
Corwin Press, Inc., 1999

This review of 23 exemplary mathematics and science curricula is an easy-to-use guide for tying classroom instruction with workplace experiences.

254 pages Price: $29.95 Order #: L-9823

A Mathematics Source Book for Elementary and Middle School Teachers: Key Concepts, Teaching Tips, and Learning Pitfalls

Debra Coggins et al.
Arena Press, 1999

Each chapter of this source book for elementary and middle school teachers describes the underlying mathematics of the topic based on research and best practice, advice on how to strengthen the teaching of the topic, and the common ways that students misunderstand the mathematics.

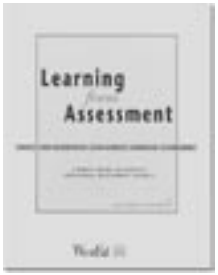
126 pages Price: $15 Order #: MATH-99-01

Learning from Assessment: Tools for Examining Assessment Through Standards

Tania J. Madfes & Ann Muench
Co-Publishers: WestEd & National Council of Teachers of Mathematics, 1999

This comprehensive training package for middle-school mathematics staff developers provides a collegial process for clarifying the meaning of standards, evaluating assessments in terms of their alignment to standards, and planning student learning experiences that reflect standards-based teaching practices. *Learning from Assessment* is described in more detail on page 6 of this newsletter. For more information, visit WestEd.org/lfa

196 pages Price: $31 ($25 plus $6 shipping and handling [S&H]; omit $2.50 S&H on product order form)
Order #: LFA-99-01



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For ordering information, please refer to the product order insert.

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Enhancing Program Quality in Science and Mathematics

Joyce Kaser & Patricia Bourexis, with Susan Loucks-Horsley & Senta A. Raizen
Corwin Press, Inc., 1999

The evaluation tools in this book draw upon current research, and were used to evaluate and improve dozens of mathematics and science education programs. These profiling techniques can improve programs for teacher development, teacher research, student research, systemic programs, and more.

224 pages Price: $24.95 Order #: L-9827

Additional WestEd mathematics and science titles

Designing Professional Development for Teachers of Science and Mathematics

Susan Loucks-Horsley, Peter W. Hewson, Nancy Love, & Katherine E. Stiles
Corwin Press, Inc., 1998

325 pages Price: $29.95 Order #: D7800-6662-8

Facilitating Systemic Change in Science and Mathematics Education: A Toolkit for Professional Developers

Regional Educational Laboratories, 1995

600 pages Price: $65 Order #: L-9095

Technology Education in the Classroom: Understanding the Designed World

Senta A. Raizen, Peter Sellwood, Ronald D. Todd, & Margaret Vickers
Jossey-Bass, Inc., 1995

249 pages Price: $37.95 Order #: S-5115

The Preparation of Elementary School Teachers in Science: Reporting on 142 Preservice Programs

Simon Hawkins & Arie M. Michelson
The Network, Inc., 1995

103 pages Price: $24.95 Order #: S-5097

The Future of Science in Elementary Schools: Educating Prospective Teachers

Senta A. Raizen & Arie M. Michelsohn (eds.)
Jossey-Bass, Inc., 1994

182 pages Price: $27 Order #: S-5079

Examining the Examinations: An International Comparison of Science and Mathematics Examinations for College-Bound Students

Edward D. Britton & Senta A. Raizen (eds.)
Kluwer Academic Publishers, 1996

278 pages Price: $37.95 Order #: S-5073

Bold Ventures: Case Studies of U.S. Innovations in Science and Mathematics Education (3 volumes)

Volume 1: Patterns Among U.S. Innovations in Science and Mathematics Education

Senta A. Raizen & Edward D. Britton (eds.)
Kluwer Academic Publishers, 1997

250 pages Price: $30 Order #: S-5025

Volume 2: Case Studies of U.S. Innovations in Science Education

Senta A. Raizen & Edward D. Britton (eds.)
Kluwer Academic Publishers, 1997

594 pages Price: $42 Order #: S-5031

Volume 3: Case Studies of U.S. Innovations in Mathematics Education

Senta A. Raizen & Edward D. Britton (eds.)
Kluwer Academic Publishers, 1997

376 pages Price: $32 Order #: S-5037

For ordering information, please refer to the product order insert.

What's new, hot, useful

Designing Support for Beginning Teachers

Knowledge Brief
Kendyll Stansbury & Joy Zimmerman, 2000

This Knowledge Brief provides the rationale for giving new teachers explicit support, identifies the critical challenges for new teachers, and describes the components of both a low-intensity support effort and a high-intensity effort.

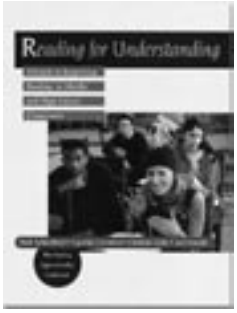
16 pages Price: $6 Order #: KN-00-01

Reading for Understanding: A Guide for Improving Reading in Middle and High School Classrooms

Ruth Schoenbach, Cynthia Greenleaf, Christine Cziko, & Lori Hurwitz
Jossey-Bass, Inc., 1999

This guidebook provides concrete lessons for middle and high school teachers about how to support students' reading in their disciplines, as well as the theoretical underpinnings of the approach.

224 pages Price: $19.95 Order #: READ-99-01



For ordering information, please refer to the product order insert.

WestEd Resource Catalog — 2000

For a free copy of the new WestEd Resource Catalog — 2000, call 415/565-3000 or toll-free, (1-877) 4WestEd; or write:

WestEd
730 Harrison Street
San Francisco, CA 94107-1242

For a complete online list of WestEd products, visit WestEd.org/wested/pubs/catalog

Beginning Mathematics and Science Teachers

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of observation, giving beginners optimal teaching assignments, and providing them access to professional conferences:

- Experienced teachers observe new teachers, but new mathematics and science teachers also observe experienced teachers in their same subject and in other subjects. If teachers are the lone subject expert in their school, they go to a different school for observation.
- Beginning teachers are not assigned the most difficult courses, students, or facilities. At one large, overcrowded school where science teachers have to share classrooms, science faculty voted that experienced teachers rather than new ones would rotate among different classrooms. They wanted first-year science teachers to have a dedicated classroom so they could more easily learn to teach hands-on science. Schools take pains to locate new teachers next door to their assigned mentors.
- Professional conferences are not treated as a perk for teachers with seniority. Schools send first-year mathematics teachers to regional or national mathematics education conferences.

This article is based on a briefing paper, available from WestEd Publications, that was prepared for U.S. Senator John Glenn's National Commission on Mathematics and Science Teaching for the 21st Century (ed.gov/americacounts/glenn). A book reporting this research is expected to be completed in Summer 2001; its availability will be announced on WestEd's Web site, WestEd.org W

R&D Alert covers issues affecting schools in WestEd's four-state region — Arizona, California, Nevada, and Utah — and nationwide.

Your letters are welcomed. Please send comments to Colleen Montoya, WestEd, 4665 Lampson Avenue, Los Alamitos, CA 90720-5139; fax, 562/799-5138; or e-mail, cmontoy@WestEd.org

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Information from regional labs with a click

Find out everything researchers at WestEd plus the other nine Regional Educational Laboratories (RELs) know about any topic. A new Web site makes it easy to search the thousands of documents on educational research and best practices that are developed at all of the RELs. Retrieve information addressing either a national or specifically regional focus. Take a minute and take a look: relnetwork.org

WestEd is a research, development, and service agency working with education and other communities to promote excellence, achieve equity, and improve learning for children, youth, and adults. Drawing on the best knowledge from research and practice, we work with practitioners, policymakers, and others to address education's most critical issues. A nonprofit agency, WestEd, whose work extends internationally, serves as one of the nation's designated Regional Educational Laboratories — originally created by Congress in 1966 — serving the states of Arizona, California, Nevada, and Utah. With headquarters in San Francisco, WestEd has offices across the United States.

For more information about WestEd, visit our Web site at WestEd.org; call 415/565-3000 or toll-free, (1-877) 4WestEd; or write:

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