

Science & Mathematics

2015 RESOURCES & SERVICES



FEATURED RESOURCES



Math Pathways
& Pitfalls
Curriculum

SEE PAGE 22



Making Sense
of SCIENCE

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Discussion
Builders Posters

SEE PAGE 21

Supporting Science



SOLUTIONS FOR SCHOOLS AND DISTRICTS

“/”

WestEd is committed to the belief that all students should succeed in our schools and that all learners should thrive in our communities, no matter what circumstances they were born into.

— Glen Harvey, WestEd CEO

Well-prepared teachers play an important role in students' success. And with more rigorous college- and career-readiness standards, like the Next Generation Science Standards and the Common Core State Standards for Mathematics, developing science and mathematics content knowledge and academic literacy is more important than ever for both teachers and students.

WestEd offers resources and services for teachers and students in the K–12 classrooms. Our curricula, books, and professional learning courses and workshops feature engaging, standards-based academic content, as well as instructional strategies that build academic literacy skills as an integral part of subject-matter learning.

For example, WestEd's Making Sense of SCIENCE facilitation academies and teacher courses are specifically designed to build a scientific way of thinking in teachers and students. Rigorous studies have shown that students whose teachers participate in Making Sense of SCIENCE courses can outperform other students by more than 40 percent. According to national research studies, our Math Pathways & Pitfalls



and Mathematics Learning and Success

K–8 Curriculum has also been successful in increasing students' achievement on standardized tests. The curriculum was designed with built-in support for teachers and lessons that are aligned to Common Core content standards in relevant domains.

What WestEd Offers

For districts and schools seeking professional learning opportunities for staff, WestEd provides both comprehensive and focused supports that can help achieve success.



AT THE HEART OF WESTED'S WORK ARE THE SERVICES WE PROVIDE, BRINGING LEARNING OPPORTUNITIES, CONSULTING, AND TECHNICAL ASSISTANCE TO OUR CLIENTS.

Featured services in this catalog start on page 4. They include:

- ➔ Math Pathways & Pitfalls Implementation Institutes
- ➔ Discussion Builders Workshop
- ➔ Aim for Algebra Curriculum & Professional Development
- ➔ Algebraic Thinking in the Common Core Teacher Workshops
- ➔ Video Cases for Algebra Professional Development
- ➔ Geometric Transformations in the Common Core Teacher Workshops
- ➔ K–12 Alliance Science and Math Content Institutes
- ➔ Learning to Lead Mathematics Professional Development for the Common Core
- ➔ Making Mathematics Accessible to English Learners Professional Development
- ➔ Making Science Accessible to English Learners Professional Development
- ➔ Teaching-Learning Collaborative
- ➔ Making Sense of SCIENCE
- ➔ Assessment-Centered Teaching: A Reflective Practice for Formative Assessment
- ➔ PASS: The Partnership for the Assessment of Standards-Based Science
- ➔ Evaluation of Programs in Science, Technology, Engineering, and Mathematics

This catalog also introduces an array of WestEd-developed publications and resources that can be used either on their own or as supporting material with our services. Publications and resources begin on page 15.

Math Pathways & Pitfalls Implementation Institutes

Math Pathways & Pitfalls (MPP) Implementation Institutes help K-8 teachers learn to use the proven MPP principles, practices, structures, and materials with their district-adopted curriculum. The Institutes enhance the implementation of MPP and support the development of effective and equitable mathematical teaching practices.

These practices are aligned with the Mathematical Practices in the Common Core State Standards, and participants learn to implement these both in MPP lessons and lessons from the district curriculum.

Over a period of three days, participants will:

- ➔ Understand how to turn stubborn pitfalls into pathways for learning
- ➔ Understand the role of academic language development in academic success
- ➔ Practice facilitating productive discussions in mathematics
- ➔ Investigate how to develop mathematical language
- ➔ Discuss how to develop a community of respectful learners
- ➔ Identify how to address multiple modalities
- ➔ Learn how to foster risk taking in diverse classrooms

“/”

I'm advocating for my school to adopt Math Pathways & Pitfalls. It helps our students, including second language learners, participate in academic discourse.

— K-8 school principal



LEARN MORE AT

WestEd.org/mpp



RESOURCES

See page 22 to order the **Math Pathways & Pitfalls Curriculum**.



CONTACT INFORMATION

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Discussion Builders Workshop

This one-day workshop is ideal for K–8 teachers who would like to help students with diverse academic, linguistic, and cultural backgrounds participate in and successfully learn from discussion-based lessons. Although originally created for mathematics, the discussion tools and theories can be applied within any subject area and are especially beneficial for English learners.

The Discussion Builders Workshop provides a quick but invaluable look inside effective classroom discussions, and prepares teachers to implement immediately several evidence-based, effective teaching strategies that foster oral and written academic language. Participants will return to their classrooms comfortable in leading effective discussions that boost collaborative and respectful critical thinking among students.

Alma Ramírez and Jose Franco, co-directors of Math Pathways & Pitfalls at WestEd, lead the workshops.



The Discussion Builders give the students who are usually non-participants in class discussions a place to start and a way to express their ideas.

– Third grade teacher



LEARN MORE AT

[WestEd.org/mpp](https://www.wested.org/mpp)



RESOURCES

See page 21 to order *Discussion Builders Posters* and teaching guides.



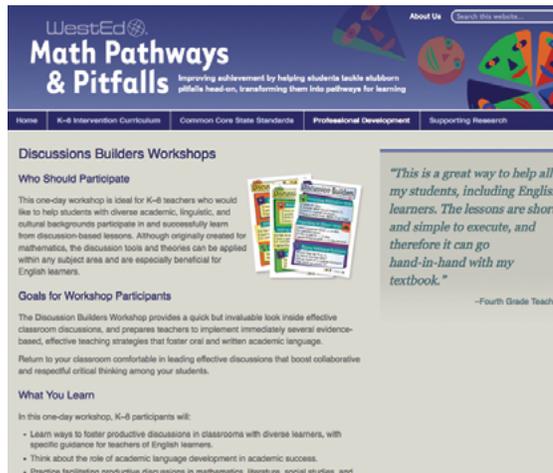
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Visit Math Pathways & Pitfalls at [WestEd.org/mpp](https://www.wested.org/mpp) to learn more about Discussion Builders workshops and the Math Pathways & Pitfalls program.



WestEd
Math Pathways & Pitfalls
 Improving achievement by helping students tackle stubborn subjects head-on, transforming them into pathways for learning

Home | K-8 Intervention Curriculum | Common Core State Standards | Professional Development | Supporting Research

Discussions Builders Workshops

Who Should Participate

This one-day workshop is ideal for K-8 teachers who would like to help students with diverse academic, linguistic, and cultural backgrounds participate in and successfully learn from discussion-based lessons. Although originally created for mathematics, the discussion tools and theories can be applied within any subject area and are especially beneficial for English learners.

Goals for Workshop Participants

The Discussion Builders Workshop provides a quick but invaluable look inside effective classroom discussions, and prepares teachers to implement immediately several evidence-based, effective teaching strategies that foster oral and written academic language.

Return to your classroom comfortable in leading effective discussions that boost collaborative and respectful critical thinking among your students.

What You Learn

In this one-day workshop, K-8 participants will:

- Learn ways to foster productive discussions in classrooms with diverse learners, with specific guidance for teachers of English learners.
- Think about the role of academic language development in academic success.
- Practice facilitating productive discussions in mathematics, literature, social studies, and

"This is a great way to help all my students, including English learners. The lessons are short and simple to execute, and therefore it can go hand-in-hand with my textbook."

—Fourth Grade Teacher

Aim for Algebra™ Curriculum & Professional Development

Aim for Algebra lessons are based on cognitive research and learning theory, with purposeful sequencing and scaffolding of tasks allowing students to bridge the conceptual gaps created by traditional algebra curricula. The lessons engage students in support of the Common Core State Standards for Mathematical Practice.

The curriculum includes 12 modules covering signed number operations; number theory for algebra; exponents; variables and expressions; rational numbers; equations and formulas; ratios and proportions; patterns; the coordinate plane; proportional reasoning; inequalities; and data and probability. Each module includes student materials and a lesson-by-lesson facilitator guide.

The materials were field-tested during the 2005–06 school year with more than 1,000 students in grades 7–10. Students who received instruction using Aim for Algebra modules exhibited substantial, statistically significant increases in student achievement, and the data showed no ceiling effect, meaning that continued student improvement could be expected. Presently, the modules are used both as intervention and as supplementary materials in the classroom, in alignment with the expectations of the Common Core.

Professional Development: On-site implementation seminars with flexible dates are available for school or district teams. Multiple-day seminars, on-site coaching, and technical assistance services are also available.

“ ”

I found the materials easy to use and my students stayed interested longer than they do with ‘book work.’

– Wapato Middle School teacher



LEARN MORE AT

WestEd.org/aimforalgebra



CONTACT INFORMATION

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Algebraic Thinking in the Common Core Teacher Workshops

Algebraic Thinking in the Common Core Teacher Workshops help grades 5–10 mathematics teachers deepen their understanding of how concepts of algebra and algebraic thinking develop in the Common Core, and learn instructional practices to help students understand the content. Sessions use video cases (taken from *Learning and Teaching Linear Functions: Video Cases for Mathematics Professional Development*) and written cases that engage teachers in mathematics problem solving, analysis of classroom practice, examination of student work, discussions, readings, and tasks designed as a bridge to teachers' practice.

During these workshops, teachers will:

- ➔ Strengthen their understanding of relationships between arithmetic and algebraic reasoning
- ➔ Understand how the Standards for Mathematical Practice support algebraic reasoning
- ➔ Increase their ability to identify, describe, and foster algebraic reasoning in their students
- ➔ Prepare and enact lessons that will help students engage the Standards for Mathematical Practice while developing conceptual understanding of algebraic ideas

“/”

Most important, I learned to allow students to discover solutions and give them time to find the solutions. Also, I learned to pay close attention to how students approach their solutions.

– Workshop participant



LEARN MORE AT

[WestEd.org/algebraicthinking](https://www.wested.org/algebraicthinking)



CONTACT INFORMATION

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Video Cases for Algebra Professional Development

WestEd's video-based mathematics professional development resources help grades 5–10 teachers address some of the “problems of practice” in teaching algebra. Developed with funding from the National Science Foundation, the modules equip teachers with the skills to prepare and enact lessons that will help students develop conceptual understanding of linear functions. Available through WestEd, the materials are in CD-ROM format and consist of a total of 54 hours of professional development.

Project staff is available to provide support to those who want to use materials for professional development, and potential users are encouraged to request staff assistance.

**LEARN MORE AT**

WestEd.org/videocases

**CONTACT INFORMATION**

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Geometric Transformations in the Common Core Teacher Workshops

These workshops help grades 6–12 mathematics teachers deepen their understanding of how concepts of proportionality, congruence, and similarity develop from the perspective of geometric transformation in the Common Core and learn instructional practices to help students understand the content.

Sessions use video cases (taken from *Learning and Teaching Geometry: Video Cases for Mathematics Professional Development*) that engage teachers in mathematics problem solving, analysis of classroom practice, examination of student work, discussions, readings, and tasks and applets designed as a bridge to teachers' practice.

**LEARN MORE AT**

WestEd.org/geometrictransformations

**CONTACT INFORMATION**

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K-12 Alliance Science and Math Content Institutes

K-12 Alliance Science and Math Content Institutes for elementary and secondary school teachers address both content and instructional skills. Teachers engage in large and small group work, hands-on activities, and laboratory experiences to enhance content knowledge appropriate to the designated grade span and in alignment with the Common Core State Standards and the Next Generation Science Standards.

The institutes also address pedagogy, including the effective use of instructional materials, differentiated instruction, writing and reading in science and math, lesson design, assessment, and science and math instruction for English learners.

**LEARN MORE AT**

WestEd.org/k12alliance

**CONTACT INFORMATION**

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Learning to Lead Mathematics Professional Development for the Common Core

Learning to Lead Mathematics Professional Development for the Common Core seminars develop the skills, sensibilities, and long-term capacities of leaders working with teachers at any grade, K-12. The seminars focus on important pedagogical and facilitation skills, reflecting the most current research on adult learning and modeling a community of practice.

Participants use video to analyze authentic examples of professional development to develop a repertoire of strategies they can then apply to their own professional development.

**LEARN MORE AT**

WestEd.org/learningtolead

**CONTACT INFORMATION**

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Making Mathematics Accessible to English Learners Professional Development

Using the principles and approaches described in *Making Mathematics Accessible to English Learners: A Guidebook for Teachers*, this professional development for schools and districts helps teachers provide access for all students as they implement the Common Core.

Participants enhance their knowledge and skills to differentiate instruction and assessment for diverse learners, particularly English learners, thereby giving all students universal, equitable access to a rigorous Common Core mathematics program. Participants of the professional development receive a 40% discount off the price of the book.



LEARN MORE AT

WestEd.org/englishlearnersmath



RESOURCES

See page 20 to order *Making Mathematics Accessible to English Learners: A Guidebook for Teachers*.



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Making Science Accessible to English Learners Professional Development

This engaging training applies concepts from *Making Science Accessible to English Learners: A Guidebook for Teachers, Updated Edition*, to support existing and ongoing professional development for grades 4–12 science teachers. The research-based strategies facilitate rich academic language instruction for diverse learners in alignment to goals in the Common Core Standards and Next Generation Science Standards.

Participants enhance their knowledge and skills to plan and differentiate instruction and assessment for varying language levels of English learners.

A hybrid professional development of three days can be tailored with flexible dates for school or district teams of up to 35 people. Participants of the professional development receive a 40% discount off the price of the book.



LEARN MORE AT

WestEd.org/englishlearnersscience



RESOURCES

See page 20 to order *Making Science Accessible to English Learners: A Guidebook for Teachers, Updated Edition*.



CONTACT INFORMATION

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Teaching-Learning Collaborative (TLC)

Through the Teaching-Learning Collaborative (TLC), a type of lesson study, the interaction of teaching and learning is the object of ongoing investigation and thoughtful inquiry as participants collaboratively implement new curriculum, examine student work, refine lessons, and examine cases of student learning.

In Level I, teams of teachers work collaboratively over the school year with a WestEd K-12 Alliance facilitator to design a quality lesson; collaboratively teach, debrief, and refine the lesson; and then reteach and refine the lesson.

In Level II, WestEd/K-12 Alliance facilitators train leaders in the TLC model described in Level I, after which participants shadow a WestEd/K-12 Alliance facilitator on-site with teachers. Finally, participants conduct a coaching session themselves and get feedback from experienced facilitators.

“ ”

I have been teaching for many years and had no idea that my approaches were ineffective. The lessons I teach now reach all students.

— High school life sciences teacher



LEARN MORE AT

[WestEd.org/TLC](https://www.wested.org/tlc)



CONTACT INFORMATION

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Making Sense of SCIENCE

Making Sense of SCIENCE (MSS) offers an approach to teacher learning that combines in-depth science learning with a focus on classroom practices, literacy supports, and pedagogical reasoning. MSS teacher courses, facilitation academies, and custom trainings provide all the necessary ingredients for building a scientific way of thinking in teachers and students.

Teacher Courses for Classroom Teachers of Grades K-12

- ➔ Learn to facilitate hands-on lessons and support evidence-based discussion in the classroom
- ➔ Explore the art of teaching, examine instructional moves and student thinking, and analyze and refine teachers' own practice and instructional strategies
- ➔ Learn how to develop students' academic language, reading, and writing skills

Facilitation Academies for Teacher Educators & Staff Developers

- ➔ Learn to facilitate a Making Sense of SCIENCE course in your area
- ➔ Experience a teacher course firsthand while investigating the art of facilitation
- ➔ Practice facilitation and receive one-on-one coaching

Custom Trainings for Districts and Sites with Unique Needs

- ➔ Customize the learning experience to meet your needs, with options such as short courses or workshops with a targeted focus (e.g., formative assessment, science practices, literacy supports, standards implementation)
- ➔ Choose dates and a location convenient to your school or district



LEARN MORE AT

WestEd.org/mss



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Visit WestEd.org/mss to watch this video about how the Making Sense of SCIENCE approach to teacher learning is different from other professional development, learn about our services and supporting research, and find other MSS resources.



Assessment-Centered Teaching (ACT): A Reflective Practice for Formative Assessment

Participants in Assessment-Centered Teaching: A Reflective Practice for Formative Assessment will:

- ➔ Learn about assessments for Next Generation Science Standards and Common Core State Standards-English Language Arts Literacy in Science
- ➔ Design an assessment system for units of instruction
- ➔ Learn how to modify assessment and instruction based on student work
- ➔ Experience tools and processes that support best practices and professional learning communities
- ➔ Become a knowledgeable consumer of assessment programs

The Assessment-Centered Teaching service is ideal for teacher leaders, principals, district administrators, and science specialists. Custom-designed, the service can include: institutes, lesson studies, grade-level meetings, professional learning communities, and extended services with repeated follow-up and reflection.



LEARN MORE AT

[WestEd.org/actservice](https://www.wested.org/actservice)



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PASS: The Partnership for the Assessment of Standards-Based Science®

Funded by the National Science Foundation in 1996, PASS builds on research on the properties of science assessment and current approaches for development and scoring. PASS assessments are aligned to national standards and consist of three components: 1) hands-on performance tasks; 2) constructed-response investigation; and 3) enhanced multiple-choice questions.

PASS uses multiple measures to get a more complete picture of what students know and can do. Combinations of different PASS measures can be aligned to Next Generation Science Standards. PASS offers training in test set-up, administration, and scoring, and provides customized professional development in the interpretation and use of data to improve instruction.



LEARN MORE AT

[WestEd.org/pass](https://www.wested.org/pass)



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Evaluation of Programs in Science, Technology, Engineering, and Mathematics

WestEd provides quality services in both formative and summative evaluation to clients conducting a wide range of formal and informal programs in science, technology, engineering, and mathematics education. WestEd will produce an independent evaluation that will:

- ➔ Be highly credible to the program's various stakeholders
- ➔ Enable program staff to gain increased knowledge and skills regarding program evaluation
- ➔ Promote greater internal capacity to design and implement effective evaluation plans

WestEd's evaluators are senior staff members, well-grounded in evaluation theory, design, and implementation. Our evaluation teams include expertise in STEM education as well as the fields of professional development, organizational change, and program implementation. Our nationwide staff has evaluated a variety of STEM programs funded by the National Science Foundation, private foundations, and state and local sponsors. WestEd can provide the best configuration of staff for any specific program.

Format

Our evaluator works with your program staff to develop the framework and plan—including evaluation questions, methodology, and timeline—and carry out the implementation.



Over the last decade, your collaborative approach to evaluation has helped us steadily advance the quality of our NASA-funded products and programs in science education. It helps that you have people with backgrounds in science as well as science education and evaluation!

— Dr. Lynn Cominsky, Chair of Physics and Astronomy, Sonoma State University



LEARN MORE AT

[WestEd.org/stemevaluation](https://www.wested.org/stemevaluation)

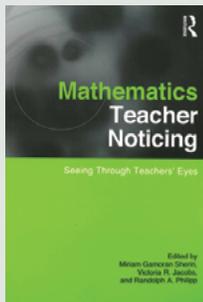


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 Perspectives from Research


Mathematics Teacher Noticing: Seeing Through Teachers' Eyes

EDITED BY MIRIAM GAMORAN SHERIN, VICTORIA R. JACOBS, AND RANDOLPH A. PHILIPP

WestEd's Nanette Seago and Catherine Carroll co-wrote key chapters in this groundbreaking collection that examines research on the particular type of noticing done by teachers—how teachers pay attention to and make sense of what happens in the complexity of instructional situations. The editors present the current state of research and provide ideas for how future work could further the field.



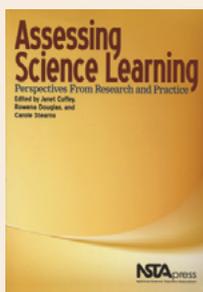
FREE RESOURCE

Download *How the Common Core Shifts the Focus of Mathematics Learning* at WestEd.org/commoncoreshifts



DETAILS

\$56.95 • 250 pages • 2010
Routledge • 978-0-415-87863-0



Assessing Science Learning: Perspectives From Research and Practice

EDITED BY JANET E. COFFEY, ROWENA DOUGLAS, AND CAROLE STEARNS

This book describes National Science Foundation-funded research projects that illustrate the strong link between assessment and improved student learning. Edys Quellmalz, Director of Technology Enhanced Assessments & Learning Systems at WestEd, coauthored a key chapter on exploring the role of technology-based simulations in science assessment in this new resource.



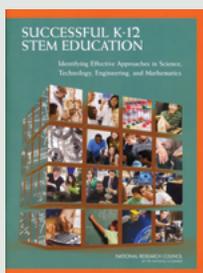
FREE RESOURCE

Download *Simulations Signal a New Era in Science Assessment* at WestEd.org/simulations



DETAILS

\$31.45 • 350 pages • 2010
NSTA Press • 978-1-93353-140-3



Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics

PRODUCED BY THE NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES

What can schools do to ensure a high-quality STEM education? This useful guide tackles this question with a focus on the science and mathematics aspects of STEM and criteria for identifying effective STEM schools and practices. The book looks at various school models, highlights research on effective STEM education practices, and identifies conditions that promote and limit school- and student-level success in STEM.



FREE RESOURCE

Download *Using Flexible Technology to Meet the Needs of Diverse Learners: What Teachers Can Do* at WestEd.org/flexibletechnology



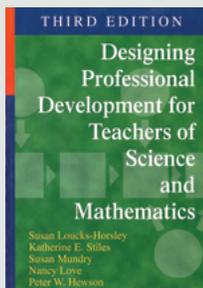
DETAILS

\$12.95 • 48 pages • 2011
National Academies Press
978-0-309-21296-0





Professional Learning



Designing Professional Development for Teachers of Science and Mathematics, Third Edition

SUSAN LOUCKS-HORSLEY, KATHERINE E. STILES, SUSAN MUNDRY, NANCY LOVE, AND PETER W. HENSON

With an inspiring blend of theory and practical wisdom, this updated and expanded edition demonstrates how to design professional development for teachers that is directly linked to improving student learning. The book reflects current research on professional development design, underscores the influence of beliefs and local factors on professional development design, and illustrates a wide range of professional development strategies. The authors emphasize the importance of continuous program monitoring, combining strategies to address diverse needs, and building cultures that sustain learning.



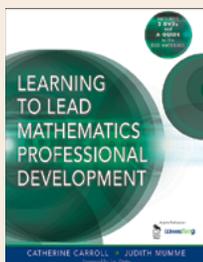
SAMPLE CHAPTERS

Read sample chapters at WestEd.org/designingprofessionaldevelopment



DETAILS

\$43.95 • 424 pages • 2010
Corwin • 978-1-4129-7414-1



Learning to Lead Mathematics Professional Development

CATHERINE CARROLL AND JUDITH MUMME

Designed for mathematics professional development leaders, this multimedia kit helps build facilitation skills, content knowledge, and pedagogy to design and implement effective staff development programs. The case-based kit includes a user's guide, as well as 2 DVDs with 44 seminars arranged into 7 modules containing notes, video clips, participant work, PowerPoint slides, and more. The modules focus on mathematics and facilitation skills, reflect research on adult learning, and model a community of practice.



MEDIA

Watch sample videos from this multimedia kit at WestEd.org/leadingmathpd



DETAILS

\$218.00 • 104 pages • 2007
Corwin • 978-1-4129-1504-5

“ ”

A valuable contribution.... These materials both acknowledge the complexity of the work and provide a carefully designed and sequenced curriculum for understanding it.

— Lew Romagnano, Professor of Mathematical Sciences,
Metropolitan State College of Denver



TO ORDER > 888.293.7833 or WestEd.org/bookstore



Teacher Course Materials



Making Sense of SCIENCE

KIRSTEN R. DAEHLER, JENNIFER FOLSOM, AND MAYUMI SHINOHARA

Making Sense of SCIENCE (MSS) is a comprehensive set of teacher professional development courses that focus on core topics of K–12 earth, life, and physical science.

Rigorous studies show that MSS improves students' science achievement—especially English language learners and students with poor literacy skills.

The materials include everything needed to effectively lead MSS courses:

- ➔ Facilitator Guide with extensive support materials and detailed procedures
- ➔ Teacher Book with teaching, science, and literacy investigations, along with a follow-up component, Looking at Student Work (available as a separate book; see *Making Sense of Student Work* on page 18)
- ➔ CD with course participation certificates, handouts, and charts

Soon-to-be-published MSS courses include: Genes & Traits, Organisms, Earth Systems, Weather & Climate, and Plate Tectonics.

“/”

I learned new ways to get kids talking about science in a rich way, ways to analyze student work, and ways to improve my lessons. I also came face to face with some of my own science misconceptions. My teaching practice is changed forever.

— Vicki Baker, National Board Certified teacher, Union City, CA



DETAILS

BUNDLE: Matter for Teachers
\$249.95 • 2012 • WestEd
978-1-938287-02-2

Teacher Book: \$59.95 • WestEd
978-1-938287-01-5

BUNDLE: Force & Motion for Teachers
\$249.95 • 2011 • WestEd
978-0-914409-77-9

Teacher Book: \$59.95 • WestEd
978-0-914409-80-9

BUNDLE: Energy for Teachers
\$249.95 • 2011 • WestEd
978-0-914409-78-6

Teacher Book: \$59.95 • WestEd
978-0-914409-86-1

Published in collaboration with NSTA Press.



MORE ONLINE

Visit WestEd.org/mss for more information or email mss@WestEd.org



TO ORDER > 888.293.7833 or WestEd.org/bookstore



Professional Learning for Teachers

NEW RESOURCE

Making Sense of Student Work A Protocol for Teacher Collaboration

KIRSTEN DAEHLER, JENNIFER FOLSOM, AND JENNIFER MENDENHALL

When teachers closely examine words and drawings created during the learning process, they gain a valuable window into their students' thinking. By examining student work, teachers can identify what students understand and where gaps in their understanding can be leveraged as opportunities for improvement.

Making Sense of Student Work is a self-facilitated protocol, ideal for collaborative groups of 3–24 teachers. It is divided into five 2-hour sessions, each with a specific focus—exploring mental models, investigating learning gaps, thinking through instructional next steps, analyzing tasks, and modifying tasks.

The *Making Sense of Student Work* protocol provides a framework to help teachers:

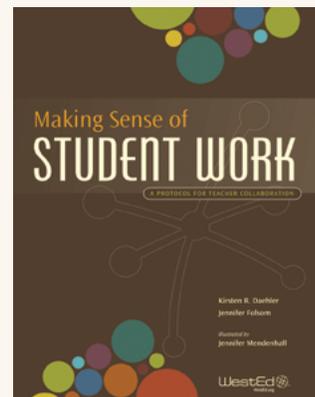
- ➔ Have evidence-based discussions about students' work and students' thinking
- ➔ Examine and come to understand students' ideas and the logic behind these ideas
- ➔ Strengthen their abilities to make instructional choices in response to the specific ways students are thinking
- ➔ Analyze and improve the formative assessment tasks they use with students

Teachers in a variety of contexts, including formal professional learning communities, weekly grade-level team meetings, and informal teacher-to-teacher collaborations, have successfully used this protocol.



Great teachers decide what and how to teach based on what their students already know and think. But making sense of student ideas is complex and challenging intellectual work. This protocol supports teachers who want to understand what their students know and how they reason so that they can leverage learning in productive ways.

— Linda Darling-Hammond, Professor of Education, Stanford University



DETAILS

Print: \$19.95 • 2014
WestEd • 978-1-938287-12-1
eBook: \$16.95 • 2014
WestEd • 978-1-938287-21-3



MORE ONLINE

Visit WestEd.org/mssw
Formative Assessment Task Banks that complement the protocol are also available at WestEd.org/mssw



TO ORDER > 888.293.7833 or WestEd.org/bookstore



Formative Assessment Tasks



NEW RESOURCES

Formative Assessment Task Banks in Science and Mathematics

KIRSTEN DAEHLER, JENNIFER FOLSOM, AND JENNIFER MENDENHALL

Formative assessment is an ongoing process that involves gathering and analyzing evidence of students' thinking, then using what is learned to inform instruction. This collection of formative assessment tasks is specifically designed as a tool to allow students to share their thinking.

These tasks:

- ➔ Go beyond facts or simple recall and encourage students to think
- ➔ Require students to decide what knowledge to apply when
- ➔ Can be solved in a number of ways
- ➔ Give students a chance to explain their thinking and ways of figuring things out
- ➔ Ask students to communicate in several modes (e.g., words and drawings)
- ➔ Are accessible and interesting

There are many ways to use these tasks to augment existing instructional activities. The tasks are not intended for use as end-of-unit tests or final assessments, nor are they a complete curriculum. These tasks are an ideal complement to WestEd's *Making Sense of Student Work* protocol—a guide that supports groups of teachers collaboratively analyzing and interpreting student work to inform their instruction.




DETAILS

SCIENCE

Energy for Grades 6–8

\$6.95 • PDF • 44 pages • 2014
978-1-938287-16-9

Matter for Grades 6–8

\$6.95 • PDF • 44 pages • 2014
978-1-398287-18-3

Force & Motion for Grades 6–8

\$6.95 • PDF • 46 pages • 2014
978-1-938287-17-6

MATHEMATICS

The Number System for Grades 6–8

\$6.95 • PDF • 25 pages • 2014
978-1-938287-19-0

Equations & Expressions for Grades 6–8

\$6.95 • PDF • 25 pages • 2014
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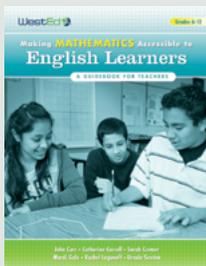




Professional Learning



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SAMPLE CHAPTER

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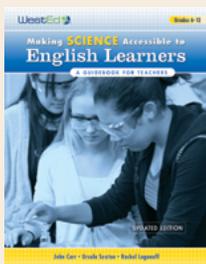


DETAILS

\$24.95 • 128 pages • 2009
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Making Science Accessible to English Learners: A Guidebook for Teachers

JOHN CARR, URSULA SEXTON, AND RACHEL LAGUNOFF

This best-selling guidebook helps middle and high school science teachers connect with English language learner students. The guide offers practical guidance, powerful and concrete strategies, and sample lesson scenarios that can be implemented immediately in any science class. Topics include understanding language development, teaching the language of scientists, scaffolding science learning, and applying strategies in the classroom.



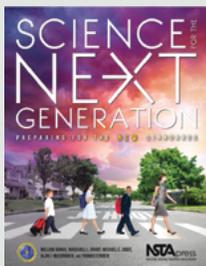
SAMPLE CHAPTERS

Read “Chapter 1: Teaching Science” and “Chapter 6: Assessing English Learners” at WestEd.org/makingscienceaccessible



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\$24.95 • 132 pages • 2007
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EDITED BY WILLIAM BANKO, MARSHALL L. GRANT, MICHAEL E. JABOT, ALAN J. MCCORMACK, AND THOMAS O'BRIEN

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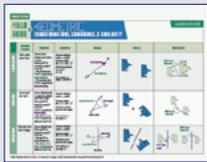
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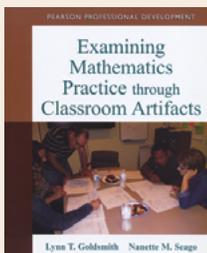
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DETAILS

\$4.95 • 2 laminated pages • 2012
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LYNN T. GOLDSMITH AND NANETTE M. SEAGO

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SAMPLE CHAPTERS

Read "Chapter 1: Turning to the Evidence" and "Chapter 2: Describing and Interpreting Classroom Artifacts" at WestEd.org/artifacts



DETAILS

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