CNECT-ing Mathematics and Career Technical Education

Welcome!

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CNECT-Math II and LEARN Mathematics!

Math and CTE teachers and students come together for exciting lessons integrating practical applications and theory.

U.S. Department of Education Mathematics and Science Partnership (MSP) Program

- No Child Left Behind Act of 2001, Title II, Part B
- State administered competitive grant program
- Goal is to increase student achievement through increasing teachers' content knowledge and pedagogical skills
- http://www2.ed.gov/programs/mathsci/index.html
- http://hub.mspnet.org

CNECT-Math II

Year 3 of Phase I

Creating
a Network
of Educators
to Communicate About
Teaching Math II

A partnership between Midcoast School of Technology (MVR #8), RSU #13, MSAD #40, University of Maine Farmington and Maine Mathematics and Science Alliance

CNECT-Math II

Year 3 of Phase I

- **Eight Career Technology Education (CTE) teachers**
- **Two high school mathematics teachers**
- **Three middle school mathematics teachers**
- **One Title IA elementary mathematics specialist**

LEARN Mathematics!

Year 1 of Phase II

Learn
Experience
Apply
in a Regional
Network

A partnership between United Technologies Center (MVR #4), RSU #34, Brewer School Department, Bangor Christian Schools, University of Maine Farmington and Maine Mathematics and Science Alliance

LEARN Mathematics!

Year 1 of Phase II

- Three Career Technology Education (CTE) teachers
- Two high school mathematics teachers and one high school science teacher
- Two high school special education teachers
- One high school administrator

Our Vision

"A learning environment where students experience standards-aligned lessons integrating application and theory and where educators collaborate to deepen content and pedagogical expertise in a student-centered curriculum."

Goals

1. *To improve teachers' knowledge and instructional skills in the areas of measurement, data analysis, statistics, and probability*
2. *To build capacity for lateral collaboration in a regional learning community defined by a CTE region or center in Maine*
3. *To improve student achievement in the areas of measurement, data analysis, statistics, and probability*

Outcomes

- *Middle school and high school teachers include a substantial amount of practical examples and applications for how topics of measurement, data analysis, statistics, and probability are used "in the real world"*
- *CTE instructors use measurement, data analysis, statistics, and probability skills and are explicit about these topics in their courses*

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Professional Development

- Improving teacher content knowledge and content specific pedagogical knowledge in the areas of measurement & approximation, data analysis & statistics, and probability

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Professional Development
continued

- Integration of instructional technology such as SMART interactive white boards, graphing calculators, and Fathom® dynamic data software, etc.

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Professional Development
continued

- Curriculum topic study of standards and research
- Examining student misconceptions to inform instruction
- Book studies
- Leadership, facilitation, and classroom management skills

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Professional Discussions & Collaboration Across Schools

•PLCs of career technical educators & middle and high school math teachers meet monthly for 2 hours throughout the school year

•PLC sessions are used to make connections among content knowledge, standards, research, and classroom practice

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Co-planning & Co-teaching

- Pairs or teams of teachers develop and teach multi-day lessons that emphasize practical examples and real life applications
- Sample lessons include building and road construction, race car design, measurement, fabrication, horticulture, landscape and interior design, health and nutrition, genomics, and school accreditation
- Pre-/post-assessments and student projects measure achievement of the lessons' learning goals

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Contact Hours & Compensation

- ~ Twenty Five Contact Hours per Year for 3 Years
- Teacher Stipend Compensation @ $25 per hour spent Outside Teacher Contractual Day
- School District Reimbursement for Substitute Pay and Transportation Costs
- Classroom Technology Purchases (SmartBoards, TI Graphing Calculators, Fathom® Software, etc.)
- Mini Grants to support Classroom Activities

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Testimonials

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Question & Answer

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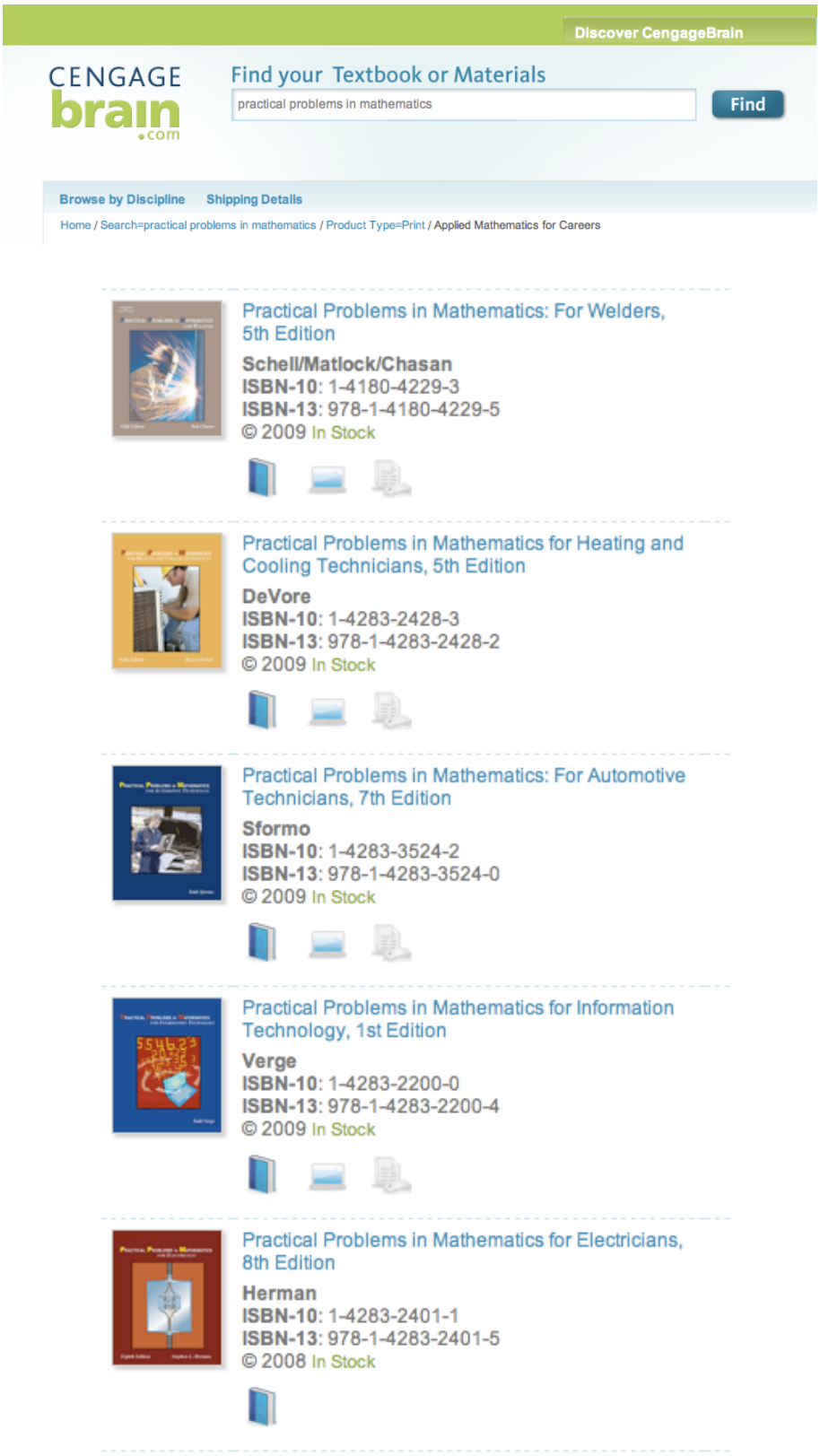
One Possible Source for Lesson Ideas



(more over)

http://www.cengagebrain.com/shop/index.html

One Possible Source for Lesson Ideas

Practical Problems in Mathematics for Carpenters, 8th Edition

Huth
ISBN-10: 1-4018-7215-8
ISBN-13: 978-1-4018-7215-1
© 2006 In Stock

Practical Problems in Mathematics for Electronic Technicians, 4E, 6th Edition

Herman
ISBN-10: 1-4018-2500-1
ISBN-13: 978-1-4018-2500-3
© 2004 In Stock

Practical Problems in Mathematics for Heating and Cooling Technicians, 3rd Edition

DeVore
ISBN-10: 0-8273-7948-X
ISBN-13: 978-0-8273-7948-0
© 1998 On backorder

Practical Problems in Mathematics for Manufacturing, 4th Edition

Davis
ISBN-10: 0-8273-6710-4
ISBN-13: 978-0-8273-6710-4
© 1996 On backorder

Practical Problems in Mathematics for Industrial Technology, 1st Edition

Boatwright
ISBN-10: 0-8273-6974-3
ISBN-13: 978-0-8273-6974-0
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http://www.cengagebrain.com/shop/index.html

Programs

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- Recursos en español
- Web Survey

MATHEMATICS AND SCIENCE PARTNERSHIPS

Office of Elementary and Secondary Education Home

Purpose

Program Office: Academic Improvement and Teacher Quality Programs

CFDA Number: 84.366B
Program Type: Formula Grants
Also Known As: MSP

ED PROGRAMS

Search or print all Department programs.

MORE RESOURCES

MSP.net website

PROGRAM DESCRIPTION

This program is designed to improve the content knowledge of teachers and the performance of students in the areas of mathematics and science by encouraging states, IHEs, LEAs, and elementary and secondary schools to participate in programs that:

- Improve and upgrade the status and stature of mathematics and science teaching by encouraging IHEs to improve mathematics and science teacher education;
- Focus on the education of mathematics and science teachers as a career-long process;
- Bring mathematics and science teachers together with scientists, mathematicians, and engineers to improve their teaching skills; and
- Provide summer institutes and ongoing professional development for teachers to improve their knowledge and teaching skills.

TYPES OF PROJECTS

The program supports projects to improve math and science education through partnerships, which include, at a minimum, a high-need LEA and the mathematics, science, or engineering department of an IHE.

ADDITIONAL INFORMATION

The Mathematics and Science Partnership (MSP) program is intended to increase the academic achievement of students in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. Partnerships between high-need school districts and the science, technology, engineering, and mathematics (STEM) faculty in institutions of higher education are at the core of these improvement efforts. Other partners may include state education agencies, public charter schools or other public schools, businesses, and nonprofit or for-profit organizations concerned with mathematics and science education.

The Math and Science Partnerships program is a formula grant program to the states, with the size of individual state awards based on student population and poverty rates. No State receives less than one half of one percent of the total appropriation. With these funds, each State is responsible for administering a competitive grant competition, in which grants are made to partnerships to improve teacher knowledge in mathematics and science.

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How Do I Find...?
- Student loans, forgiveness
- Pell grants
- Accreditation, schools
- Grants
- No Child Left Behind
- More

Teachers LEARN MORE
P-12 Reform LEARN MORE
College Completion LEARN MORE

Related Topics
- No Related Topics Found

- Media advisories
- Secretary's schedule
- Video
- Newsletters
- Blog

How do I find...

- Student loans, forgiveness
- Pell grants
- Accreditation, schools
- Grants
- No Child Left Behind
- More

- Contract opportunities
- Forecast of funding opportunities

Research & Statistics

- Institute of Ed Sciences
- Education statistics
- Evaluation reports
- Nation's Report Card
- Doing What Works
- State information
- State ed data
- State ed performance

- Recent guidance
- Guidance documents
- Policy by program
- NCLB policy letters
- No Child Left Behind

Programs

- By subject
- By title
- By CFDA#
- Search

- Senior staff
- Political appointees
- Contact
- Boards, committees
- Budget, performance
- Annual reports
- Jobs at ED
- Inspector General
- FAQs
- Online services
- Open Government
- White House Initiatives
- Recursos en español

- Privacy
- Security
- Information quality
- Non-Discrimination, No FEAR Act
- Improper payments
- Help

Other Sites

- Whitehouse.gov
- Recovery.gov
- USA.gov
- ExpectMore.gov
- Benefits.gov

MSPnet

MSPnet Hub

Welcome, the Hub connects all projects

Home
Showcase
Projects
People
Library
Resources
Hub Working Groups
Voices from the Field
Conferences
Events

The Math and Science Partnership Network

MSPnet is an electronic learning community for the Math and Science Partnership Program. With the MSP program, the National Science Foundation implemented an important facet of the President's No Child Left Behind (NCLB) vision for K-12 education. A major research and development effort, the MSP program responds to concern over the performance of the nation's children in mathematics and science. Institutions of higher education partner with K-12 districts and others to effect deep, lasting improvement in K-12 mathematics and science education.

MSPnet LIBRARY

The MSP Library contains over 1,400 articles of interest to leaders engaged in science and mathematics reform. Browse the Library

NEW IN LIBRARY

Ed Change and Policy

Teacher and Leader Effectiveness in High-Performing Education Systems, Linda Darling-Hammond, Robert Rothman (Eds.), SCOPE. March 2011

Ed Change and Policy

Building a High-Quality Teaching Profession: Lessons from around the world, OECD. 2011

Ed Change and Policy

What the US Can Learn from the World's Most Successful Education Reform Efforts, Steven L. Paine. March 2011

See More

Featured Project Presentations

This week we highlight the three paper sessions that were presented at the LNC conference.

Mathematically Connected Communities - Leadership Institute for Teachers
Rice University Mathematics Leadership Institute
Louisiana Math and Science Teacher Institute

View All Conference Proceedings

PROJECT SHOWCASE

Math and Science Family Night Video and Planning Guide: The Partnership for Reform in Math and Science in Georgia (PRISM) has developed a short video about running a successful Math and Science Family Night. In

TERC NSF

ABOUT MSPnet

MSPnet is created and facilitated by the Center for School Reform at TERC. This site is supported by the National Science Foundation. Opinions expressed on this site are those of the contributors and not necessarily those of the Foundation.

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WHAT'S NEW ON MSPNET?

See MSP News for weekly updates to MSPnet's Library, Resources, and Showcase.

ANNOUNCEMENTS

Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)
Nominations close April 1, 2011

Teachers needed to pilot survey questions for the 2012 National Survey of Science and Mathematics Education

NSF NEWS FEED

A Glimpse of the Archives of the Future

Capturing the Fugitive...in Art

President Obama Highlights Success of Technology-driven TechBoston Academy

What Lies Beneath? Understanding Art Using Science

Strange B Meson Studies at LHCb Provide New Tools for Discovery

More

addition to the tips given in the video, there are supporting documents offered, such as timeline, budget, and evaluation forms.

RESOURCES

The Resources section contains Useful Websites, the MSPnet Toolbox with assessment instruments, MSP Program Information, Policy Updates, and News from NSF and ED.

Go to Hub Resources

USEFUL WEBSITE

New TIMSS video public release website launches!

We are pleased to announce that the 53 public use lessons collected as part of the TIMSS video studies are now available for everyone on timssvideo.com.
