

*Minnesota*  
**Department**  
*of* **Education**  
**Science Update**  
June, 2011

This periodic update from the Minn. Dept. of Education (MDE) is being sent to a few email lists, including the Minn. Science Teachers Assn. (MnSTA) and district contacts. Please excuse multiple copies. **We encourage you to forward this to other teachers and science leaders.**

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**MDE Science Page:**

[http://education.state.mn.us/MDE/Academic\\_Excellence/Academic\\_Standards/Science/index.html](http://education.state.mn.us/MDE/Academic_Excellence/Academic_Standards/Science/index.html)

**Rolling out the Frameworks**

The *Minnesota Mathematics and Science Frameworks* is entering “crunch time”. Fifty writers are submitting their final versions and the review, editing and entry process is in full tilt. The first views of the future website are spectacular. Teachers will be able to search by standard/benchmarks for big ideas, vignettes of classroom practice, sample assessment items, multiple resources and teaching strategies. The Frameworks resources will be released in stages during July at [www.scimathmn.org](http://www.scimathmn.org).

Several presentations and a toolkit will be provided to help teachers, administrators and other educators use the resources. There will be several conference presentations including the Minn. Assessment Conference Aug 4<sup>th</sup>. A half-day workshop is being planned for Aug 5<sup>th</sup> at MDE and will also be offered at several locations throughout the state in the fall. Watch the calendar at the MDE website for details.

**SciMathMN Policymaker Briefing: “Moving from World Class Standards to World Class Practice”, June 22, Science Museum of Minn.**

This event will launch and preview the *Minnesota Mathematics and Science Frameworks* and STEM Teacher Center, which will go live for the public in July. A panel of STEM education experts led by Dr. Rodger Bybee will discuss the next steps in achieving world-class practice for Minnesota K-12 STEM education. A STEM “Best of the Best” showcase will feature top students and teams from a variety of Minnesota STEM competitions and organizations.

2:30 - 4:00 p.m., STEM Best of the Best Showcase, 6th Floor

4:00 - 4:45 p.m., Networking, Discovery Hall

4:45 - 6:00 p.m., Panel presentation led by Dr. Rodger Bybee, a leader of the *National Science Education Standards* project.

RSVP: Participation is \$20 per person. Fee includes light appetizers, and parking in the Science Museum lot. Register online by June 15, <http://www.scimathmn.org/>

### **Mathematics and Science Teacher Academy**

The topic for the 2011-12 school year is the Nature of Science and Engineering in Life Science grades 7-12. Learn about new developments in life sciences and how to put standards into classroom practice. This year-long professional development program is delivered in 9 regions across the state. Each region is a partnership of an education service cooperative, a higher education school and a local high-needs school district. Contact your local service cooperative for details of enrollment and dates.

### **MDE Looking for Regional Environmental and Outdoor Education Specialists**

Help Minnesota schools develop and deliver environmental and outdoor education activities at their school sites through teacher trainings, on-going mentoring of teachers and school staff, and serving as a community environmental and outdoor education resource expert. The Minnesota Department of Education (MDE) is now accepting applications for individuals interested in serving as regional specialists for the “Integrating Environmental and Outdoor Education in Grades 7-12” project. Three regional environmental and outdoor education specialists will be contracted for a \$2500 stipend over the approximately two years to support the delivery of the project. A limited amount of funds may also be available for travel related to trainings.

Individuals interested in receiving the full notice describing the position requirements, minimum qualifications and directions for applying, should send a request to [terry.alvarado@state.mn.us](mailto:terry.alvarado@state.mn.us). More information on the project is available at [http://education.state.mn.us/MDE/Academic\\_Excellence/Academic\\_Standards/EnvironOutdoorEduc/index.html](http://education.state.mn.us/MDE/Academic_Excellence/Academic_Standards/EnvironOutdoorEduc/index.html). **Applications are due by June 28, 2011.**

### **Win a Professional Development Scholarship—Apply by Aug. 1**

Now entering its fifth year, the New Science Teacher Academy, one of NSTA’s premier programs providing professional development and mentoring to second- and third-year secondary science teachers, is open for applications. Two hundred teachers will become Fellows in the 2011 Academy, a cost-free program that offers consistent, online professional development activities along with face-to-face experiences. The Academy provides each teacher with a year-long, discipline-specific mentor, web-based content development courses and other resources, membership in the NSTA, and an opportunity to attend the National Conference on Science Education. The Academy has supported more than 600 teachers nationwide and this exciting opportunity is waiting for you. **Apply by Aug. 1.** Visit [www.nsta.org/academy](http://www.nsta.org/academy)

### **The National Academies Press Makes All PDF Books Free to Download**

All PDF versions of books published by the National Academies Press (NAP) are now downloadable to anyone free of charge. NAP is the publisher of the *National Science Education Standards* and support materials. This offer includes a current catalog of more than 4,000 books plus future reports produced by the Press. The free PDFs are available exclusively from <http://www.nap.edu/>.

### **STEM Day at the State Fair, Thursday, August 25**

Science Technology, Engineering and Math Day at the State Fair will be located in Carousel Park, just outside the grandstand, from 8 a.m.-5 p.m., Thursday August 25<sup>th</sup>. Visitors will be able to engage in hands-on activities and interactive demonstrations from a diverse array of exhibitors and organizations. A performance stage will entertain and educate audiences with amazing and fascinating experiments and demonstrations.

This year’s roster of STEM Day at the State Fair participants includes: 3M STEM Wizards, The Bakken Museum, Bell Museum of Natural History, FIRST Robotics, ExploraDome, Future City, KidWind, Microsoft, Minnesota 4-H, the Raptor Center, Science Museum of Minnesota, SciGirls, STARBASE Minnesota, The Works and many more. There will be additional STEM education exhibits at other parts of the fair. For more information, visit STEM Day at the State Fair on Facebook: <http://www.facebook.com/pages/STEM-Day-at-the-Minnesota-State-Fair/213598361997441>

### **UM Soudan Physics Lab Resources**

The University of Minnesota is search for clues to some of the fundamental mysteries of the universe by using the half-mile deep Tower-Soudan iron mine in northern Minnesota. Learn how they study exotic forms of matter such as neutrinos, WIMPS and dark matter. The Soudan outreach program is available statewide for no-cost presentations to school groups, summer science camps, civic groups, teacher programs and other opportunities. Contact Allen Lipke at [alipke@d.umn.edu](mailto:alipke@d.umn.edu)

### **Summer Workshops for Teachers**

(not previously mentioned)

#### **Elementary Engineering at The Works!** June 16, 8 am – 3pm

Resources, lesson plans, and hands-on learning from The Works' experts in elementary engineering. See what engineering is and where it's included in Minnesota's science standards. You'll enjoy activities and design challenges that you can do in your classroom. And we'll show you step-by-step how to do the engineering design process. Contact

[http://www.theworks.org/fb/teachers/fb/teachers/professional\\_development.html](http://www.theworks.org/fb/teachers/fb/teachers/professional_development.html)

#### **Schoolyard Ecology Explorations for Secondary Teachers.**

The workshop is FREE and is held June 20-24 and July 11-14. It includes a stipend and 3 free credits. Contact Lis Young-Isebrand [young142@umn.edu](mailto:young142@umn.edu)

#### **College Readiness in Science Wilderness Retreat,** June 23 – 26, Ely.

Spend an extended weekend at the Will Steger Homestead interacting and discussing how to prepare students for college readiness in science. This workshop, coordinated by Anoka Ramsey Community College is aimed for K-16 teachers and features activities related to learning goals, instructional strategies, and adventure learning with arctic explorer Will Steger. A grant provides graduate credit and covers all expenses for this experience at Steger's rustic wilderness retreat center. More information is at:

<http://webs.anokaramsey.edu/CRR/>

#### **Aerospace Workshop for Teachers,** June 20-23, St. Paul

Raise the level of excitement in your class with aerospace. This FREE workshop for teachers of grades 3 – 10 is sponsored by the MN/DOT Office of Aeronautics. It includes daily field trips and training on a Science of Flight curriculum which also supports standards for math, language arts and social studies. Each participant receives a kit and curriculum valued at \$650. Contact [Janese.thatcher@state.mn.us](mailto:Janese.thatcher@state.mn.us).

#### **Colloquium on P-12 STEM Education Research,** August 15-16, Univ. of Minn. St. Paul

Join researchers, teachers, practitioners, legislators, and other STEM professionals from the state of Minnesota and around the nation for a unique interactive colloquium focusing on sharing problems and creating solutions for those involved with P-12 STEM Education. The colloquium features three "tracks" one may follow: research, research to practice, and workshops. More information and registration is at

<http://www.cehd.umn.edu/stem/colloquium2011/default.html> .

#### **More Minnesota Science Events, Resources and Competitions**

<http://www.mnsta.org> – Minn. Science Teachers Assn.

<http://www.getstem-mn.com> – Connections between teachers and businesses/industry

<http://www.mnacadsci.org> – Science Fair, Science Bowl, events and other resources

<http://www.mn-stem.com> – STEM ideas, resources and links for students and teachers