

AAAS science, mathematics, and technology education seminar Referenced Resources

Session I

1. Joan Abdallah, AAAS Education and Human Resources

Publications:

AAAS, Project 2061 (1994) *Benchmarks for Science Literacy* New York: Oxford University Press.

Full text online: <http://www.project2061.org/publications/bsl/online>

Committee on Science, Engineering, and Public Policy. (2007) *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Academic Future*. Washington, DC: The National Academies Press

Full text online: <http://www.nap.edu/catalog/11463.html#orgs>

The American Imperative: Transforming the Recruitment, Retention, and Renewal of our Nation's Mathematics and Science Teaching Workforce. BHEF, 2007.

Full text online: <http://www.bhef.com/solutions/anamericanimperative.asp>

Web sites:

<http://www.aaas.org/programs/education/>

AAAS Education resources

2. Rita Barger, UMKC

Publications:

NCTM. (2000) *Principles and Standards for School Mathematics*. Reston, VA.

<http://standards.nctm.org/document/index.htm>

NCTM. (1989) *Curriculum and Evaluation Standards for School Mathematics*. Reston, VA.

Web sites:

<http://kcatm.org/>

Official Web site of Kansas City Area Teachers of Mathematics, the local mathematics organization

<http://nctmkansascity.com/>

Official Web site for the regional mathematics conference, sponsored by NCTM, to be held in KC in October 2007

<http://nctm.org/>

Official Web site for the National Council of Teachers of Mathematics, the national organization for mathematics teachers

<http://www.mathimp.org/contacts/nsf.html>

NSF Web site providing information about the NSF-sponsored reform curricula

<http://www.ed.gov/about/bdscomm/list/mathpanel/index.html>

Official Web site for the National Mathematics Advisory Panel appointed by President Bush

<http://gov.mo.gov/mets/>

Web site for Missouri's METS Alliance

3. Barry Burke, ITEA

Publications:

International Technology Education Association (ITEA). (1996) *Technology for All Americans: Rationale and Structure for the Study of Technology*. Reston, VA: Author.

Full text online: http://www.iteaconnect.org/TAA/PDFs/Taa_RandS.pdf

ITEA. (2006) *Technological Literacy for All: Rationale and Structure for the Study of Technology*. Reston, VA: Author.

Full text online: http://www.iteaconnect.org/TAA/PDFs/Taa_RandSSecond.pdf

ITEA. (2000/2002) *Standards for Technological Literacy: Content for the Study of Technology*. Reston, VA: Author.

Full text online: <http://www.iteaconnect.org/TAA/PDFs/xstnd.pdf>

ITEA. (2003) *Advancing Excellence in Technological Literacy: Student Assessment, Professional Development, and Program Standards*. Reston, VA: Author.

Full text online: <http://www.iteaconnect.org/TAA/PDFs/AETL.pdf>

Addenda to technological literacy standards (links to sample pages online):

ITEA. (2005) *Realizing Excellence: Structuring Technology Programs*. Reston, VA: Author.

http://www.iteaconnect.org/TAA/PDFs/Addenda/RE_Appendix_H_Sample.pdf

ITEA. (2005) *Planning Learning: Developing Technology Curricula*. Reston, VA: Author.

http://www.iteaconnect.org/TAA/PDFs/Addenda/PL_Appendix_G_Sample.pdf

ITEA. (2005) *Developing Professionals: Preparing Technology Teachers*. Reston, VA: Author.

http://www.iteaconnect.org/TAA/PDFs/Addenda/DP_Appendix_F_Sample.pdf

ITEA. (2005) *Measuring Progress: Assessing Students for Technological Literacy*. Reston, VA: Author.

http://www.iteaconnect.org/TAA/PDFs/Addenda/MP_Appendix_F_Sample.pdf

National Council of Teachers of Mathematics (NCTM). (2006) *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics*. Reston, VA.

<http://www.nctm.org/standards/content.aspx?id=270>

NCTM. (1989) *Curriculum and Evaluation Standards for School Mathematics*. Reston, VA.

National Research Council. (1996). *National Science Education Standards*. Washington, DC: National Academy Press.

Full text online: <http://www.nap.edu/catalog/4962.html>

Rose, L.C., & Dugger, W.E. (2002). ITEA/Gallup poll reveals what Americans think about technology. *The Technology Teacher*, 61(6).

Rose, L.C., Gallup, A.M., Dugger, W.E., & Starkweather, K.N. (2004). The second installment of the ITEA/Gallup poll and what it reveals as to how Americans think about technology: A report of the second survey conducted by the Gallup organization for the International Technology Education Association. *The Technology Teacher*, 64(1).

AAAS, Project 2061 (1994) *Benchmarks for Science Literacy* New York: Oxford University Press. Full text online: <http://www.project2061.org/publications/bsl/online>

An American Imperative: Transforming the Recruitment, Retention, and Renewal of our Nation's Mathematics and Science Teaching Workforce. BHEF, 2007.

Full text online: <http://www.bhef.com/solutions/anamericanimperative.asp>

Web sites

www.iteaconnect.org

Official Web site of the International Technology Education Association

www.engineeringbydesign.org

Web site with detail information and resources for the Engineering by Design™ Standards-based Program Model

www.iteaconnect.org/cc.htm

Colleague Connection – a free resource for educators (sign-up required)

Session II

Jo Ellen Roseman, AAAS Project 2061

Publications:

American Association for the Advancement of Science. (1989) *Science for All Americans*. New York: Oxford University Press.

Full text online: <http://www.project2061.org/publications/sfaa/online/sfaatoc.htm>

Describes what everyone needs to know and be able to do in science mathematics, and technology—that is, what it takes to be science literate.

AAAS, Project 2061 (2001) *Atlas of Science Literacy*. AAAS Press.

A collection of nearly 100 maps that show how ideas in important science topics relate to each other across and within grade levels. Sample maps are available online:

<http://www.project2061.org/publications/atlas/default.htm>.

NCTM. (2000) *Principles and Standards for School Mathematics*. Reston, VA.

<http://standards.nctm.org/document/index.htm>

Project 2061 Textbook Evaluations, 2000-2005

Reports on Project 2061's evaluations of more than 40 of the most widely used middle and high school mathematics and science textbooks are available online at

<http://www.project2061.org/publications/textbook/default.htm>.

Committee on Science, Engineering, and Public Policy. (2007) *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Academic Future*. Washington, DC: The National Academies Press

Full text online: <http://www.nap.edu/catalog/11463.html#orgs>

National Research Council. (2004) *On Evaluating Curricular Effectiveness: Judging the Quality of K-12 Mathematics Evaluations*. Washington, DC: The National Academies Press.

<http://www.nap.edu/catalog/11025.html>

Provides guidance on the kinds and quality of evidence needed to draw conclusions about the effectiveness of K-12 curriculum materials.

AAAS, Project 2061 (2007) Communicating and Learning About Global Climate Change.
http://www.aaas.org/news/press_room/climate_change/mtg_200702/climate_change_guide_2061.pdf

Web sites

<http://www.project2061.org/>

The project's Web site includes many free resources for science educators and the public, as well as background information and regular updates on Project 2061's research and development activities.

http://www.economist.com/printedition/displayStory.cfm?Story_ID=9339752

"Biology's Big Bang." *The Economist*. June 16, 2007.

<http://www.statestandards.com>

State curriculum standards:

<http://sol.sci.uop.edu/~jfalward/temperatureandexpansion/temperatureandexpansion.html>

Temperature and Expansion explanations:

http://www.sciencekit.com/category.asp_Q_c_E_429628

Thermal expansion science kit:

Session III

Will Friedman and Alison Kadlec, Public Agenda

Publications:

Public Agenda (2007). *Opportunity Knocks: Closing the Gaps between Leaders and the Public on Math, Science, and Technology Education: A Qualitative Research Report on the Kansas City Region*.

http://www.publicagenda.org/pubengage/pdfs/opportunity_knocks.pdf

Web sites

www.publicagenda.org

Official Public Agenda Web site.

Session IV

Joe Villani, NSBA

Publications:

NSBA. 2002. *The Key Work of School Boards Guidebook*. Alexandria, VA.

Full text online: <http://www.nsba.org/keywork2/guidebook/KeyworkGuidebook.pdf>

Web sites

www.nsba.org

Official NSBA Web site

www.esgn.tv

Education Solutions Global Network, streaming video on a variety of education topics.

www.msbanet.org

Official MSBA Web site

www.kasb.org

Official KASB Web site