Focus Group Resources and References

#1 Elementary Science in the K-12 System – Julie Taylor

Guiding Questions

1. Discover what the state of elementary science is in your school district or state.
2. How has No Child Left Behind influenced elementary science?
3. What are some suggestions that would help us recognize the importance of elementary science?

Resources.

1. Science Education's 'Overlooked Ingredient' by Harold Pratt
   http://science.nsta.org/nstaexpress/nstaexpress_2007_10_29_pratt.htm
2. The elements of Science Education Reform by Gerald Wheeler
   http://www.nsta.org/publications/news/story.aspx?id=54559

#2 21st Century Skills - Ruth Rudd

Guiding Questions

1. What skills do the 21st Century Learner need to become effective citizens?
2. What do we need to do to create the 21st Century Classroom?
3. What is the pivotal role of technology in a 21st education system?
4. What learning processes do you see in the 21st Century Classroom?
5. What is the impact of using the 21st Century skills in the classroom?
6. What are obstacles to implementing the 21st Century skills in the classroom?

Resources

1. http://curriculalessons.suite101.com/article.cfm/21st_century_learning_initiative
2. www.ncrel.org/engauge
3. http://davidwarlick.com/2cents/archives/1396
4. (I could not open this one)http://www.eschoolnews.com/news/top-news/index.cfm?i=53093;_hbguid=fc2b6af0-33eb-4063-95c4-81824cbb071e
5. http://curriculalessons.suite101.com/article.cfm/21st_century_learning_initiative
6. http://www.21learn.org/arch/articles/brown_seely.html

#3 Teaching Science to Students of Poverty – Gail Sinkule

Guiding Questions

1. How can the actions of teachers in the classroom enhance the learning process of students of poverty?
2. What home factors, for a student in poverty, contribute to a poor background in science?
3. Why is science education an excellent vehicle to help students break the cycle of poverty?

Resources

1. "The Impact of Poverty Upon Schools"
   http://www.wcpss.net/evaluation-research/reports/1999/9920_poverty.pdf
2. "Poverty and Education - Overview, Children, and Adolescents"
   http://education.stateuniversity.com/pages/2330/Poverty-Education.html
3. "The Effects of Poverty on Teaching and Learning"
   http://www.teach-nology.com/tutorials/teaching/poverty/6/

4 Transforming Science Teacher Practice Through Professional Learning Communities – Laura Rutledge

Guiding Questions

1. What should a Professional Learning Community look like for Science Teachers?

2. What are the current impediments to the successful implementation of Professional Learning Communities?

3. What attitude and/or policy changes are needed at the school, district, state, and national levels to successfully promote Professional Learning Communities?

4. How can the Chapters and Associated Groups, Alliance of Affiliates, and/or National Science Teachers Association work to promote Professional Learning Communities?

Resources

1. *Professional Learning Communities: Communities of Continuous Inquiry and Improvement*
   http://www.sedl.org/pubs/change34/
2. "Educational Leadership". May 2004 | Volume 61 | Number 8
   Schools as Learning Communities Pages 6-11
3. http://www.teachersnetwork.org/tnli/readings/Professional%20Learning%20Commuities.pdf
4. ***What is a "ProfessionalLearningCommunity"*** **http://pdonline.ascd.org/pd_online/secondary_reading/el200405_dufour.html**
5. *Professional Learning Communities: Professional Development Strategies That Improve Instruction*
6. http://www.annenberginstitute.org/pdf/proflearning.pdf

Sustaining School Improvement: Professional Learning Community

7. http://www.mcrel.org/PDF/LeadershipOrganizationDevelopment/5031TG_proflrncommfolio.pdf

#5 STEM (Science, Technology, Engineering, and Mathematics)- Critical to America's Prosperity – Jim Puckett

Guiding Questions

1. What obstacles currently impede the successful implementation of STEM literacy programs?
2. What attitude and/or policy changes are needed at the district, state, and national levels to successfully promote STEM literacy?
3. What actions need to be taken by the various stakeholders (students, parents, teachers, school districts, business leaders, as well as the state and federal governments) to promote quality STEM literacy programs?
4. How can the Chapters and Associated Groups, Alliance of Affiliates, and/or National Science Teachers Association work to promote STEM literacy?

Resources

1. 0702INNOVATIONSTEM.pdf(833KB)
   www.nga.org/Files/pdf/0702INNOVATION**STEM**.pdf
2. Attributes_of_STEM_Education.pdf(121KB)
   www.tiesteach.org/documents/Attributes_of_STEM_Education.pdf
3. CRS RL33434.pdf(463KB)
   fas.org/sgp/crs/misc/RL33434.pdf
4. http://www.edweek.org/ew/toc/2008/03/27/index.html

#6 Bridging the Gap from Research to Practice and from Practice to Research – Mary Lightbody

Guiding Questions

1. To what degree does (and should) research inform practice in science education in the United States?

2. How can the researchers and the practitioners make stronger connections with each other?

3. How can the science education community (including NSTA) help develop a structure for "research, development, and implementation in science education that will explicitly address problems of educational practice in schools while advancing fundamental understanding of children's learning in science"? Taking Science to School, p 351

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Resources

1) National Research Council. (2007). Ready, set, science! Putting research to work in the K-8 science classroom. Washington, D.C.: National Academies Press. ISBN-13: 978-0-309-10614-6. Available online at http://www.nap.edu/catalog.php?record_id=11882
Chapter 2: 4 Strands of Science Learning, p 18-21
Chapter 8: A System that Supports Science Learning, p 149 – 166

The above can be viewed on-line.

2) Sabelli, N. and Dede, C. (??). Integrating educational research and practice: Reconceptualizing the goals and process of research to improve educational practice. Available online at http://www.virtual.gmu.edu/SS_research/cdpapers/integrating.htm