

Agenda 2009 National Congress on Science Education (NCSE)

The 3Rs of Science Teacher Retention: Resources - Respect - Renewal

July 15-18, 2009

Hyatt Regency, Miami, Florida

WEDNESDAY, JULY 15TH

MEETING ROOM

7:30 – 8:30am	Board/Council BreakfastHIBISCUS B
8:30am – 3:30pm	Board and Council RetreatJASMINE
3:45 – 4:30pm	Issue Forum Co-Facilitator Meeting HIBISCUS A
3:00 – 7:00pm	RegistrationUNIVERSITY MIAMI HALLWAY
4:00 – 5:00pm	Open Alliance of Affiliates MeetingGARDENIA C
5:00 – 6:00pm	Welcome/Congress OverviewTUTTLE & PREFUNCTION
	 Welcome Address – Pat Shane, NSTA President Welcome to Florida – Tom Medcalf, FAST President Congress Overview – Pat Shane NSTA President Plenary Session – Pat Shane NSTA President <i>"Extending The 3 Rs"</i> Speaker – Francis Eberle, NSTA Executive Director <i>"State of our Association Address</i> Introduction of the AOA - Page Keeley, NSTA Retiring President
6:00 – 7:00pm	CAGs session on NSTA Strategic Goals development - Karen Charles
7:00pm	Dinner on your own – If you would like to join other Congress attendees, there are sign up sheets at the registration desk for various area restaurants. These are optional dinner groups as led by members of your Council and Board.

THURSDAY, JULY 16TH

7:00am – 5:00pm	RegistrationASHE AUDITORIUM LOBBY
7:15 – 8:00am	Breakfast (Seating by Districts)MERRICK
	 Update on Legislative Issues - Jodi Peterson, NSTA Assistant Executive Director, Legislative & Public Affairs
	• District Directors provide an overview of the purpose and procedures of the Congress Forums at their tables
	• Before, during, and after breakfast all attendees are encouraged to participate in the Great CAGs Pin Exchange and exchange pins from their groups with everyone present!
8:00 – 8:15am	IntroductionsDistrict Director Roll Call of Delegates
8:15 – 8:30am	Credentials Committee MeetingASHE AUDITORIUM LOBBY
	 Chair: Pat Shane, NSTA President; Members: District Directors Craig Gabler, Paul Keidel, Melissa Miller, Kelly Price, and Jim Puckett.
8:30 – 9:15am	CONGRESS GENERAL SESSION I ASHE AUDITORIUM
	1) Call To Order, Pat Shane, NSTA President
	 Adoption of Agenda Report of Credentials Committee
	4) Approval of Minutes 2008 Congress
	(Approved by 2009 Congress Members of the Planning Committee: Mike
	 Hickey, Ross Dinwiddie, and Sheila Smith) 5) Review of the Congress Motion Matrix – President Pat Shane and NSTA
	Executive Director Francis EberleAdoption of Operating Policies (Note the change of name from Focus
	Groups to Issue Forums)
	 Acknowledgment of Resolutions from Chapters and Associated Groups previously submitted in 60 day limit
	8) Requests for Additional Issue Forums
	9) Announcements
9:15am	Travel to various Issue Forum Meeting Rooms

9:30 – 10:30am ISSUE FORUM BREAKOUT SESSIONS

(Choose one of the six forums to attend all day.)

ISSUE FORUM 1: RESOURCES FOR RETAINING TEACHERSBOARDROOM Leader - Mike Hickey, Congress Representative, NCSE 09 Planning Committee Facilitator – Jim Puckett, Council Representative, NCSE 09 Planning Committee

Abstract:

Placement and retention of quality teachers in the classroom are essential in preparing students to be competitive and productive in today's modern, global society. There are capable, potentially effective people who can fill that need but are not drawn to the profession or who become dissatisfied and leave. This issue extends from pre-service throughout all experience levels. The focus of this issues forum will be to examine and identify effective ways to address the resource component of the "Three R's" of Teacher Retention.

Guiding Questions

- 1. How can we identify resources that teachers can use on a classroom level?
- 2. What are some ways to increase teacher pay?
- 3. How can teachers find out about grant sources?
- 4. How can community and business support be developed?
- 5. What are some alternatives when you don't have the materials you need?

Resources:

Behlmann, Emily. *Teacher Pay at Issue in Report*. <u>http://www.gctelegram.com/News/Teacher-compensation-9-16-08</u>

- Christian Science Monitor. Change pay, change teaching? http://www.csmonitor.com/2009/0318/p01s02-ussc.html.
- Community Resources for Science. <u>www.crscience.org/pdf/newsletter_spring_05.pdf</u>
- Hess, Frederick. Teacher Quality, Teacher Pay.

http://www.hoover.org/publications/policyreview/3438676.html

Resources for Teaching Science. National Science Digital Library. <u>http://www.leasttern.com/teacher/science.html</u>

Other References:

Free Federal Resources for Educational Excellence, <u>http://free.ed.gov/subjects.cfm?subject_id=41</u>. Free Stuff for Science Teachers. <u>http://scienceinquirer.wikispaces.com/freestuff</u>

- Graziano, Claudia. School's Out: Crisis in Teacher Retention. <u>Edutopia</u>, Feb. 2005. <u>http://www.edutopia.org/schools-out</u>
- Hassel, Brian. *Better Pay for Better Teaching*. http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=110&subsecID=135&contentID=250543
- Philanthropy News Digest, February 28, 2009.

http://foundationcenter.org/pnd/news/story.jhtml?id=244700012

US Government grants http://grants.gov

NSTA Professional Development pages <u>http://www.nsta.org/pd/?lid=tnavhp</u>

NSTA Science Trade Books http://www.nsta.org/publications/ostb

Ohio Resource Center website has professional development, standards based lesson plans and more. Are there similar organizations in other states? <u>http://www.ohiorc.org</u>

Ingersoll, Richard M. 2003. Turnover and Shortage Among Science and Mathematics. Teachers in the United States.

K-12 Science Ed. Resources. http://www.eskimo.com/~billb/edu.html

- Kim's Korner for Teacher Talk. <u>http://www.eskimo.com/~billb/edu.html</u>
- NSTA Learning Center. http://learningcenter.nsta.org/

Rhoton, J and Bowers, P., Eds. Science Teacher Retention: Mentoring and Renewal. (Issues in Science Education) Arlington, VA. National Science Education Leadership Association and NSTA Press. [NSTA Stock Number: PB127X4]

Salzar, James. Perdue Plan: Merit Pay for Teachers.

http://www.ajc.com/services/content/printedition/2009/01/14/legeggs.html

Teacher Explorer & Guide for Science Teachers & Students, ELibary Curriculum Edition. www.proquestk12.com/productinfo/pdfs/eLibCE Sci Teacher Explorer.pdf

Teacher Freebies. http://freebies.about.com/od/teacherfreebies/Teacher_Freebies.htm

ISSUE FORUM 2: SUPPORTING SCIENCE LEADERS......FOSTER 1

Leader: Scott Grumelot, President, North Carolina Science Teachers Association Facilitator: Craig Gabler, Council Representative, NCSE 09 Planning Committee

Abstract:

The data about the retention of teachers of science are alarming. As we think about the career path of teachers of science, we cannot help but wonder what factors sustain them throughout their tenure. Evidence suggests that when teachers perceive support and the potential for role expansion opportunities, they are more likely to remain in the profession. The focus of this session will be to explore the key components of developing and sustaining science leaders and the role that those components may have in retaining teachers of science in their career path.

Guiding Questions and Issues to Consider:

- 1. How can opportunities to serve in leadership roles enhance science teachers' tendency to stay in the profession?
- 2. What system (school, district, state, professional association) structures need to be in place to support science leaders?
- 3. What leadership roles are available for teachers of science?
- 4. Where does leadership fit into the professional growth continuum?
- 5. What does research says about role expansion and teacher retention?

Resources:

Teacher Learning and Professional Growth (http://www.susanneowen.hostrocket.com/)

- Is There Really a Teacher Shortage? By Richard M. Ingersoll University of Penn, September, 2003. A Research Report Co-sponsored by The Consortium for Policy Research in Education and The Center for the Study of Teaching and Policy (http://repository.upenn.edu/gse_pubs/133/)
- Teacher Leadership as Classroom Support: The Challenges of Scale and Feedback in Mathematics and Science Education Reform (<u>http://cllc.edc.org/Papers</u>)
- Short on Power, Long on Responsibility, September, 2007 Educational Leadership, (http://www.gse.upenn.edu/pdf/rmi/EL-RMI-2007.pdf)

Other References:

- Feiman-Nemser, S. (2001) From preparation to practice: Designing a continuum to strengthen and sustain teaching, The Teachers College Record, 103, (6), December 2001, pp. 1013-1055(43), Blackwell Publishing
- Huberman, M. (1992). Teacher development and instructional mastery. In M. Hargreaves & M. Fullan (ed). Understanding Teacher Development, New York: Teachers College Press.
- Ingersoll, R. (2001). Teacher turnover and teacher shortages. American Educational Research Journal, 38 (3), 499-534.

A brief article addressing key considerations when planning professional development, including that in support of leaders.

http://www.teachersourcebook.org/tsb/articles/2009/03/16/02fisher.h02.html

Leader – Jane Hunn, Past President Hoosier Association of Science Teachers, Inc. Facilitator – Paul Keidel, Council Representative, NCSE 09 Planning Committee

Abstract:

American education is facing the greatest diversity it has ever known. New demands and challenges have been created from a changing America. Our schools and workplaces have already been changed dramatically. Educators in America need to work at recognizing the wide range of intellectual and communicative practices from which children of diverse backgrounds carry on their lives. Research shows us that diverse people learn in many different ways. Educators need to keep in mind that students learn at the highest level when they receive instruction according to the type of intelligence that the student has had created within them. American educators need to consider that diverse learners can educate their classmates as well as learn from them. Educating every student is the best thing we can do, it is the moral thing to do. We have moved on from trying to justify inequalities in learning for all in our classrooms.

Guiding Questions and Issues to Consider:

- 1. What is our stance on a teacher 's teaching and a student 's learning as far as diversity is concerned?
- 2. What can diverse learners teach the educator and fellow students?
- 3. What dilemmas do science educators face while educating diverse learners?
- 4. What educational tools are available for diverse learners other than textbook based teacher directed approaches that do not align well with research based design features.

Resources:

Science Educational Tools for Diverse Learners <u>www.successfulschools.org/documents/BigIdeasScience.pdf</u> Science Diverse Learners Research Reviews <u>www.iowa.gov/educate/prodev/science_dl.html</u>

http:://scholarworks.umass.edu/dissertations/AAI321274 www.freedomwritersfoundation.org

Other Resources:

www.crosscultured.com/downloads.asp

http://64.38.12.138/ (Indianz.com)

www.firstpeople.us

www.mcrel.org/topics/products/56/

www.colorado.edu/education/BUENO/

www.colorincolorado.org

www.practicaltheory.org/serendipity

ISSUE FORUM 4: COMPONENTS OF A SUPPORT SYSTEM FOR

SCIENCE TEACHERS PEARSON

Leader: Sheila Smith, Congress Representative, NCSE 09 Planning Committee Facilitator: Marilyn Richardson, District I Director

Abstract:

One of the foundational principles of the No Child Left Behind Act is the idea that teacher quality (educational background, ongoing and sustained professional development, and instructional practices) is the single most important school factor in student achievement. For science educators to be successful, they must have the full support and active participation of school leaders, district administrators, school boards, parents, and students (NSTA). When teachers are not supported, the loss to students, educators, schools, communities and taxpayers is immense. A growing body of evidence suggests that the support teachers receive once they are in the classroom makes a tremendous difference in their performance and their willingness to remain in the classroom. Districts and schools that have created instructional and peer coaching programs for new and veteran teachers have found that student achievement and teacher-retention rates have increased.

Guiding Questions and Issues to Consider:

- 1. What changes should schools make to improve teachers' professional development and job satisfaction?
- 2. How do principals build supportive school cultures in which high student achievement and teacher professional development and retention are cultivated?
- 3. What is "coaching"? What benefits does coaching have on improving student achievement?
- 4. What are the characteristics of an effective coach? What does a coach need to know and be able to do?
- 5. What do we know about effective coaching in terms of duration and frequency?
- 6. What can be done to encourage schools to provide support for grade-level and/or content/pedagogical specific research-based professional development rather than the standard "one size fits all" model?

Readings

What Keeps Good Teachers in the Classroom? Understanding and Reducing Teacher Turnover. Alliance for Excellent Education. February 2008. <u>www.all4ed.org/files/TeachTurn.pdf</u>

Annenberg Institute for School Reform. *Instructional Coaching – Professional Development Strategies that Improve Instruction*.

http://www.annenberginstitute.org/pdf/InstructionalCoaching.pdf

Kowal, J. and Steiner, L (2007). *Instructional Coaching*. The Center For Comprehensive School Reform. <u>www.centerforcsri.org/files/CenterIssueBriefSept07Coaching.pdf</u>

Other References

- <u>http://www.nsta.org/about/positions/leadership.aspx</u>
- <u>http://www.nsta.org/about/positions/professionalism.aspx</u>
- NSTA (2000, April 7). *High Turnover of Science Teachers Requires Schools to Change*. April 28, 2004. <u>http://www.nsta.org/publications/surveys/survey20000407.aspx</u>
- <u>http://www.nsta.org/publications/surveys/survey20000407.aspx</u>
- Boyd, V. & McGree, K. (1995). *Leading change from the classroom: Teachers as leaders. Issues ... about Change, 4* (4). Austin, TX: Southwest Educational Development Laboratory. <u>http://www.sedl.org/change/issues/issues44.html</u>

ISSUE FORUM 5: OPTIMIZING SCIENCE IN THE

ELEMENTARY GRADES ASHE AUDITORIUM

Leader- Ross Dinwiddie, Congress Representative, NCSE 09 Planning Committee Facilitator: Kelly Price, Council Representative, NCSE 09 Planning Committee

Abstract:

The provisions in NCLB have created a critical disparity in our nation's elementary classrooms. The concentration on reading and mathematics instruction has resulted in a significant reduction in students' opportunities to experience and learn science. This not only affects elementary students and teachers but also impacts all levels of science education. If we are to prepare students to be scientifically literate and increase the number of students in the science pipeline, the entire science education community needs to advocate for the crucial role of elementary science education programs. This forum continues the work of the 2008 Summer Congress to investigate how all science educators can muster involvement and support for elementary science education's central role.

Guiding Questions and Issues to Consider:

- 1. How has the amount of time spent teaching elementary science changed as a result of NCLB legislation? What changes can we expect with the current administration?
- 2. What reforms and support are needed at the district, state, and federal levels to make elementary science a core subject?
- 3. How can state chapters, affiliated groups, NSTA, and related educational disciplines (i.e., mathematics, technology, engineering) become better advocates for elementary science?
- 4. What transformation(s) must occur elementary science to become a core subject area in the curriculum?)

Resources:

NSTA Position on Elementary School Science. <u>http://www.nsta.org/about/positions/elementary.aspx</u> Griffith, George and Scharmann, Lawrence. Initial impacts of No Child Left Behind on Elementary

Science Education. Journal of Elementary Science Education. June 2008 <u>http://www.accessmylibrary.com/comsite5/bin/aml_landing_tt.pl?purchase_type=ITM&item_id</u> <u>=0286-35081946&action=print&page=aml_article_print</u>

Pratt, Harold. Science Education's 'Overlooked Ingredient.' http://science.nsta.org/nstaexpress/nstaexpress_2007_10_29_pratt.htm

Keeley, P. Elementary Science Education in the K–12 System. *NSTA Reports*. May 2009. <u>http://www.nsta.org/publications/news/story.aspx?id=55954</u>.

ISSUE FORUM 6: K-8 INTEGRATION OF SCIENCE & MATHEMATICSFOSTER

Leader – Charlotte Bihm, Presiden,t Louisiana Science Teachers Association Facilitator – Melissa Miller, Council Representative, NCSE 09 Planning Committee

Abstract:

In today's world, it is vitally important that students in K-12 classrooms are taught meaningful science and mathematics so that they will be equipped with both skills and knowledge to ensure success in their future. Integration of mathematics and science has been a key issue in education. Many calls for educational reform in the United States tend to lump mathematics and science together. When students make the connections between the disciplines, what they are learning becomes more relevant. However, there are also many obstacles to overcome – one of which is the teacher certification/licensure process. The focus of this session will be to explore how integration of these subjects can possibly lead to more relevant and meaningful learning, and how teacher preparation programs can make integration more successful.

Guiding Questions and Issues to Consider:

- 1. How can integration be accomplished so that each subject area is equally addressed?
- 2. What are the characteristics of a true interdisciplinary program?
- 3. How can you determine the merits of an interdisciplinary program?
- 4. How can teacher preparation programs be more supportive of interdisciplinary teaching at the secondary level?

Resources:

- Furner, J. M. & Kumar, D.D. (2007). The Mathematics and Science Integration Argument: A Stand for Teacher Education. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(3), 185-189. <u>http://www.ejmste.com/v3n3/EJMSTE_v3n3_Furner&Kumar.pdf</u>
- Keeley, P. Elementary *NSTA Reports: Science in the K-12 System*. April 2009. http://www.nsta.org/publications/news/story.aspx?id=55954
- Lonning, Robert A and DeFranco, Thomas C. Integration of science and mathematics: A theoretical model. *School Science and Mathematics*, Apr 1997.

http://findarticles.com/p/articles/mi_qa3667/is_199704/ai_n8767490?tag=rbxcra.2.a.22

Meier, Sherry L, and Nicol, Marsha, Potential benefits and barriers to integration. *School Science and Mathematics*, Dec 1998.

http://findarticles.com/p/articles/mi_qa3667/is_199812/ai_n8808455

Pang, JeongSuk and Good, Ron. A review of the integration of science and mathematics: Implications for further research. *School Science and Mathematics*, Feb 2000. <u>http://findarticles.com/p/articles/mi_qa3667/is_200002/ai_n8882997</u>

- 10:30 10:45AM BREAKASHE AUDITORIUM LOBBY
- 10:45 11:45am **ISSUE FORUM BREAKOUTS** (continued)
- 11:45am 1:15pm LUNCH ON YOUR OWN
- 11:45am -1:15pmAlliance of Affiliates Meeting working lunchMERRICK 2Chair: Page Keeley, NSTA Retiring President
- 1:15 2:15pm **ISSUE FORUM BREAKOUTS** (continued)
- 2:15 3:15PM **GALLERY WALK**.....ASHE AUDITORIUM LOBBY (*Snacks provided*)
- 3:15 5:15pm Open Alliance of Affiliates Meeting...... MERRICK 1 Page Keeley, NSTA Retiring President, Presiding (NSTA Board/Council Directors may attend)
- 3:15 5:00pm **Issue forums** write report summaries and prepare resolutions for submission to the Congress. (*Note: Please use jump drives or other portable media for submissions*)
- 5:00pm Resolutions to be turned in to Michelle Butler Ashe Auditorium Lobby
- 5:30-6:30pm Reception
- 6:30pm Dinner on your own

FRIDAY, JULY 17TH

MEETING ROOM

7:30AM –5:	:00pm	Registration	ASHE AUDITORIUM LOBBY	
7:30 – 8:30a	am	Breakfast (Seating by District) IBIS (Resolutions distributed and discussed within Districts)		
8:30 - 11:30)am	CONGRESS GENERAL SESSION II	ASHE AUDITORIUM	
		 Remarks from Pat Shane, NSTA Presid Vote on resolutions 2010 NCSE Update, Alan McCormack, 2010 Congress Planning Committee Electronic 	, NSTA President-Elect	
11:30am-5:	00pm	NSTA Council Meeting	MERRICK	
11:30am-1:	30pm	(Lunch on your own)		
J T a	Media Tr <i>Jodi Peters</i> This sessionere hot (an	CONGRESS WORKSHOP SESSION I (raining and Hot Topic Issues	FOSTER 1 Legislative and Public Affairs orking with the media, what topics edia to get favorable publicity for	
I I r	E d Rock – Learn how	g Your Chapter for Success –NSTA Associate Executive Director, Mark to market your association in discussions of ailings and mailing lists. (<i>This session is a re</i>	teting f marketing activities and how to	
N I	Mary Ligl Learn how	htary Procedure 101 htbody —National Association of Parliamen to run an efficient and productive board me board meeting. (<i>This session is a repeated i</i>	ntarians Member eeting. You will actively participate	

- D) Chapter Budgeting and Financial AdviceBOARDROOM Randy Johnson—NSTA Treasurer What are the fiduciary responsibilities of your board and the impact of the financial management of your association? Get some tips about Chapter budgeting and financial advice for those responsible for your organization's finances.
- F) Open Council Meeting......MERRICK
- 2:30 3:00pm BREAK (with networking opportunity and snack)ASHE LOBBY

3:00 – 4:00pm CONGRESS WORKSHOP SESSION II (choose one)

- C) Using NSTA's online networking communities to build connections within your own Chapter or Associated Groups and between other Chapters and Associated Groups. PEARSON Howard Wahlberg—NSTA Assistant Executive Director, Membership This session will take you on a tour of our newest professional networking tool. You'll learn how to create groups, calendar events, post forum discussions, upload and download resources, and find, meet, and communicate with others who share your experiences, can provide science education information you need, and/or might need something you can offer. (*This session will be repeated in Workshop Session III & IV*)
- E) Open Council Meeting......IBIS

5:30pm	Gather in lobby and board buses for Miami Science Museum
5:50pm	Buses Depart for Miami Science Museum
9:45- 10pm	Buses depart Miami Science Museum to return to hotel

SATURDAY, JULY 18th

7:00AM-3:00pm	Registration	ASHE AUDITORIUM LOBBY
7:30 – 8:30am	Breakfast	MERRICK

- 8:45 9:45am CONGRESS WORKSHOP SESSION III (choose one)
 - A) Financial Responsibilities of Nonprofit AssociationsBOARDROOM Moira Fathy-Baker—NSTA CFO and COO Learn the ins and outs of budgeting, 501 (C)(3) tax status, financial reports, and fiscal planning.

 - C) Using NSTA's online networking communities to build connections within your own Chapter or Associated Groups and between other Chapters and Associated Groups.PEARSON Howard Wahlberg—NSTA Assistant Executive Director, Membership This session will take you on a tour of our newest professional networking tool. You'll learn how to create groups, calendar events, post forum discussions, upload and download resources, and find, meet, and communicate with others who share your experiences, can provide science education information you need, and/or might need something you can offer! (*This session will be repeated in Workshop Session IV*)

 - E) Open Board Meeting...... MERRICK

10:00–11:00am CONGRESS WORKSHOP SESSION IV (choose one).

Ed Rock—NSTA Associate Executive Director, Marketing

E) Open Board Meeting MERRICK	E) Oper	n Board Meeting		MERRICK
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 11:15am–12:30pm
 CONGRESS CLOSING SESSION AND LUNCHEON RIVERFRONT SOUTH (Lower Lobby)

(Lunch provided)

- Election results for NCSE '10 Planning Committee
- Report on Resolutions sent to Council and Board
- Chapters and Associated Groups Recognitions

Afternoon/Evening—On Your Own

PLEASE DON'T FORGET!!!

We value your opinion. Evaluate this Congress by using the following link:

http://www.surveymonkey.com/2009CongressEvaluation

Thank you in advance, your comments help us improve on the experience.

12:45 – 2:15pm	2009 & 2010 Planning Committee Members	FOSTER 1
•	After Action Review (Facilitator – Ken Rosenbaum)	
12:45 – 5:00pm	Open Board Meeting	MERRICK

SUNDAY, JULY 19th

7:00am-1:00pm	Board Meeting (closed session)	MERRICK
	Open Board Meeting	