

ASSOCIATION FOR SCIENCE TEACHER EDUCATION

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ASTE ASTE Newsletter

President's Newsletter Message Janice Koch, ASTE President

Fifty Years after Sputnik



Fifty years ago, on October 4, 1957, the Soviet Union launched Sputnik, the world's first artificial satellite and the race for space and technological dominance was born. For many, Sputnik was proof that American education, particularly in science, had fallen behind.

The launch of Sputnik spawned a new era for science education with exciting new curricula developed in the earth sciences, physics, chemistry and biology. Funds were directed into science education in unprecedented ways and the mission of the National Science Foundation was clear- to develop materials and programs that would produce the highest quality science teachers and science curricula for America's schools. Tomorrow's scientists and engineers would rival any accomplishments seen to that date by our cold war enemy. Many of the initiatives created through this funding can be felt in current programs in science; however a new crisis exists in science education 50 years later.

In ASTE, our members work to foster the development of bright, competent science teachers and seek to support their journey in every way possible.

Today we are faced with new challenges including marketplace globalization, and the economic and educational landscape dominated by a fast paced Internet Revolution that holds promise and opportunities for tomorrow's future scientists. Environmental crises dominate the global landscape and new and innovative products are created in many parts of the world. Today's science teachers need to reach all of the students in order to help them deal responsibly with decisions affecting the quality of their environment now and for the future. We need to promote scientific literacy and create first class science teachers who can inspire our youngsters to help solve the environmental and health problems with which we are faced.

Sputnik plunged America into a "crisis of self-confidence" (John Noble Wilford, New York Times, 10/4/07) and the most ambitious response to Sputnik was the Apollo program. Many of us can remember where we were – not only when Sputnik was launched, but when the lunar module landed on

(Continued from page 1)

the moon in July, 1969. There was such excitement and energy; people at that time looked to scientific inquiry to launch solutions to the world's most daunting problems.

Sadly, by 1983, *A Nation at Risk* authored by the National Commission on Excellence in Education indicated that "our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world." Twenty years later, this was followed by the 2005 report, *Rising Above the Gathering Storm* written by the Committee on Science, Engineering, and Public Policy of the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine of the National Academies. The report sounded an alarm that we seek new ways to invigorate science education, stating, "in a world where advanced knowledge is widespread and low-cost labor is readily available, U.S. advantages in the marketplace and in science and technology have begun to erode." Hence, we revisit the science crisis in an era of unprecedented technological advancement and unprecedented accountability programs in language arts and mathematics.

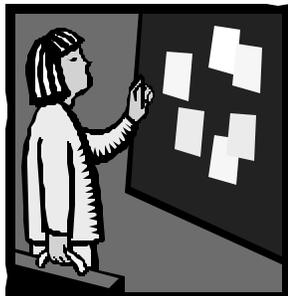
In ASTE, our members work to foster the development of bright, competent science teachers and seek to support their journey in every way possible. Helping future and current teachers understand how the study of science engages students in collaborative problem-solving is part of the work we do and it is a team effort. The mission of ASTE is to promote leadership in, and support for those involved in, the preparation and professional development of teachers of science. Our constituents include educators involved in the professional development of teachers of science, including science teacher educators, staff developers, college-level science instructors, education policy makers, instructional material developers, science supervisors/specialists/ coordinators, lead/mentor teachers, and all others interested in promoting the development of teachers of science.

As we plan to attend the next International Meeting of ASTE in St. Louis January 10-13, 2008, we are honored to host Dr. Shirley Malcom, Head of the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science (AAAS) and Dr. Bonnie Bassler, Squibb Professor and Director of Graduate Studies in the Department of Molecular Biology at Princeton University. Both women represent the best and the brightest that science education produced in the last fifty years in this country. Their remarks will energize you as you learn about their journeys in science and recognize the accomplishments of these two remarkable women as they seek to create a climate for discovery and innovation in our schools and universities.

I take great pleasure in welcoming you in advance to St. Louis in January of 2008 We will be back on familiar ground, at the Hyatt Regency Union Station where we have a wonderful team of conference planners ensuring a remarkable event. I extend my hearty thanks to co-chairs Kathy Trundle and William Newman and sincere appreciation to Meredith Beilfuss for planning excursions and exhibits. As I pass the President's gavel to Warren DiBiase, I want to thank the membership for their support and contributions to ASTE. We continue to expand our thinking, grow in number and offer further opportunities for publication. Looking forward to seeing you in St. Louis!

Sincerely,





Announcements

Eugene P. Wagner is the Executive Secretary of ASTE. He may be contacted at:

Eugene P. Wagner, Ph.D.
Executive Secretary Association for Science Teacher Education
113 Radcliff Dr.
Pittsburgh, PA 15237
phone: 412-624-2861 fax: 412-648-3297
ewagner@pitt.edu

REMINDER:

2008 Membership Renewal and Conference Registration

The 2008 membership and conference online registration form is available at <http://TheASTE.org>. Please note that everyone can use this electronic form. If your institution pays for your membership/registration, fill out the online form, select the pay by mail option, print, and then submit to your institution for payment processing.

You must be a **2008** member in order to receive the discounted member registration rate for the 2008 International Conference in St. Louis, January 10-12. Early-bird registration rates apply through December 7th and pre-registration ends December 24th. Complete details for membership and conference registration can be found on the website.

Questions about your membership status or conference registration? Contact Eugene Wagner at ExecutiveSecretary@TheASTE.org or 412-624-2861.

Join the 2008 Leadership Team

President-elect Warren DiBiase is putting together the **2008** Leadership Team. ASTE has openings on the following committees.

- Awards (1)
- Oversight (1)
- Professional Development (4)
- Publications (2)
- Technology (7)

A description of committee charges is provided in the Standard Operating Procedures located under the *About Us* tab on the ASTE website (<http://theaste.org>).

Please email Warren at wjdibiase@uncc.edu if you are interested in serving on any of the above committees. Appointments to committees are for a period of three years.

Convention information

ASTE 2008 International Conference ***Teacher Preparation and Quality: Interconnections and Strategies*** ***for Science Education***



January 10-13, 2008 ? Union Station Hyatt Regency ? St. Louis, Missouri

Proposals and Program Status

Conference Co-Chair Kathy Trundle, the thread coordinators, and many volunteer ASTE members worked untold hours to assess all submitted proposals and notify authors of decisions. Given the high quality of the paper proposals, there was intense competition for the program slots. Moreover, members submitted a record number of proposals for workshops and paper sets, amplifying the contest for larger segments of limited program space. We hope that all submitters find the feedback from the reviewers to be helpful and encourage all to use that guidance for preparing compelling proposals for the 2009 ASTE conference.

We are looking forward to a stimulating and rewarding ASTE experience at the 2008 conference. Be sure to join us in St. Louis for a guaranteed high quality event, and share your expertise in science teacher preparation and quality. We promise that you too will become perfectly centered and remarkably connected.

Excursions

Thursday, 1/10 Blues Hockey Game 7:30 pm

Cost: \$69 per person (27 minimum; 35 maximum)

Come out to watch some Blues hockey in the comfort of a 'Penthouse Party Room.' The penthouse level private party rooms boast private restrooms, closed circuit televisions, Anheuser-Busch beverages, soft drinks, popcorn, pretzels, message board recognition, and official Blues game notes.

Friday, 1/11 Encore Improv Comedy Club 8:30 pm

Cost: \$8 per person (no minimum; 60 maximum)

Encore is Union Station's original Comedy and Entertainment Club, and is the perfect place to relax and have fun with friends. You will enjoy Improv, Stand-up, and Sketch Comedy in a comfortable DJ Lounge atmosphere. The interactive comedy show will have you laughing and landing on your funny bone!

Saturday, 1/12 Rock Climbing 101- 4-6 pm

Cost: \$25 per person (30 person maximum)

Ever wanted to try rock climbing? This two hour class teaches new climbers how to top-rope, the basic form of rope climbing. Rock Gym 101 provides an introduction to indoor rock climbing, equipment usage, safety procedures, and belay instruction. After the class, you will have the proper knowledge and technique to climb and belay indoors. The price includes two hours of instruction, climbing, rental harness, belay device, and shoes (your own gym shoes are fine). Comfortable exercise clothing is highly recommended.

Convention information Continued

Wednesday, 1/09 Tour St. Louis! 1 to 5 pm

Cost: \$30 per person (* additional entrance fees for some attractions)

Board a trolley and choose your stops! This is a half-day tour that begins right outside Union Station. You select your first destination from 3 choices: The Arch (*tram to the top \$10); the Anheuser-Busch Brewery; or the *Botanical Gardens (\$8). The second destination is the 1890's Central West historic district. A knowledgeable tour guide will provide insights into St. Louis history and architecture.

Keynote Speakers

We are pleased to announce our distinguished Keynote Speakers for the 2008 ASTE Conference:

Bonnie Bassler, Ph.D. Princeton University's Department of Molecular Biology and Howard Hughes Medical Institute. Dr. Bassler studies the molecular mechanisms that bacteria use to communicate with one another, and her aims include combating deadly bacterial diseases and understanding cell signaling in higher organisms. She won a 2002 MacArthur Fellowship for her group's research and was chosen as the 2004 Inventor of the Year by the New York Intellectual Property Law Association. Dr. Bassler will discuss connecting science education to the story of her research as an inquiry process. (http://www.hhmi.org/research/investigators/bassler_bio.html, April 2, 2007)

Shirley Malcom, Ph.D. American Association for the Advancement of Science (AAAS) Directorate for Education and Human Resources Programs. Dr. Malcom is committed to improving public understanding of science, providing technology training for students with disabilities, science literacy for all, and women and minorities in science and engineering. In 2006, she was named as co-chair of the National Science Board Commission on 21st Century Education in STEM. She has served on the National Science Board and the President's Committee of Advisors on Science and Technology, and received the Public Welfare Medal of the National Academy of Sciences. Dr. Malcom will discuss teacher preparation and the improvement of science, mathematics, and technology education for all students, especially underrepresented groups. (<http://www.aaas.org/ScienceTalk/malcom.shtml>, April 2, 2007).

Hotel Information

The ASTE rates for Union Station Hyatt Regency are \$119 per night for single or double occupancy, \$129 triple, and \$139 quadruple occupancy. More information about the hotel and registration, including necessary links, are on the ASTE website (<http://theaste.org>).

On behalf of everyone that has worked towards a successful 2008 ASTE Conference, we look forward to seeing everyone in St. Louis for an eventful and memorable experience.

William J Newman Jr, Illinois Institute of Technology, newmanw@iit.edu

Kathy Cabe Trundle, The Ohio State University, trundle.1@osu.edu **Conference Co-Chairs**

It's Back!

We will be having our third annual Fun Run/Walk to help us start the Annual Conference on the right foot! Please join us for a 3 mile fun run or a 2 mile walk on Thursday morning, January 10, 2008. We will assemble in the conference hotel lobby at 6:45 AM and the run/walk will begin at 7 AM. Usually there are about 30 or so of us ASTERs who join in the fun and comradery of getting in some exercise and perhaps meeting some new people or seeing them in a different light! There is an application form in this newsletter (the next page). . Questions? Contact Tisha Morrell, morrell@up.edu.

Patricia D. Morrell, Associate Professor
University of Portland/School of Education
5000 N. Willamette Blvd. Portland, OR 97203
503-943-8013 (voice mail)
503-943-8042 (fax)

Also at the Annual Convention

The 2008 ASTE

STS

(Science Teacher Shuffle)

3 mile Fun Run/ 2 mile Walk

Thursday, January 10, 2008

7 AM

Meet at 6:45 in the Conference Hotel Lobby

Registration Form/Waiver

Name of Runner/Walker: _____

Affiliation: _____

Address: _____

E-mail: _____

I, the runner/walker, understand that this event has some risks and I hereby agree to waive any claims against ASTE, its members, and any event sponsors in regard to my participation in this event.

Signature (required): _____

Deadline for preregistration: December 30, 2007

Please complete this registration form and send it to:

Tisha Morrell

38464 Highway 99 W

Corvallis, OR 97330

Questions? Contact Tisha at morrell@up.edu

Member Commentary

Addressing the State of Science Education on a Global Scale

In the Summer 2007 newsletter, ASTE president, Janice Koch noted that “science education is once again at the forefront of the education crisis in our country.” A similar sentiment was noted on a global scale during the 2007 WorldSTE (World Conference on Science and Technology Education) held in Perth, Western Australia on July 8 -12. During this conference, more than 1,000 science teachers and academics from 50 countries, agreed that urgent action is required to bridge the gap between science, technology and the public.

Member Commentary continued

They identified five key reasons for a global decline in the level of interest in science:

1. Difficulty finding, training and retaining well-qualified science teachers
 2. Lack of resources devoted to science and science education in some countries
 3. Difficulty keeping up with emerging science and changing teaching practice
 4. Public perceptions related to science
- Difficulty maintaining a relevant science curriculum at all levels.

1 The situation is complex and yet similar to the current state of science education in America. Although more than 30 significant issues were raised by groups of delegates at the 2007 WorldSTE conference, there was strong agreement that the above five issues would have to be addressed at international, national and local levels to build interest in the crucial role of science and technology in the 21st century. At the conclusion of the 2007 WorldSTE conference, delegates issued the *Perth Declaration on Science and Technology Education*, which calls on governments around the world to:

1. Promote critical awareness of the contribution of science and technology to personal, social, economic and environmental wellbeing through building partnerships with national stakeholders and the media;
 2. Initiate revisions of the curriculum for school science and technology that will increase student interest in and recognition of the roles of science and technology in society;
 3. Promote from the primary years onwards the career opportunities that stem from the study of science and technology;
 4. Recruit graduates into science and technology teaching and to value, support and retain them with appropriate rewards;
 5. Resource and promote continuous, effective professional development for science and technology teachers in order to meet changing student needs and societal aspirations;
 6. Recognize and support the significant role of teacher associations in building a quality professional learning community for science and technology;
 7. Resource the development of relevant and effective assessment processes so that learners achieve essential life skills and meet academic and vocational standards and personal aspirations;
 8. Engage in greater international cooperation to ensure the provision of well-trained science and technology teachers to meet current and future challenges;
- Call on UNESCO to integrate its science and technology education endeavor as fundamental to achieving educational, cultural, social and sustainable development goals.

A first step to promote the *Perth Declaration* is the 2007 UNESCO International Science Policy Forum held on July 13, immediately following the 2007 WorldSTE Conference. During this forum, over 50 invited delegates from various organizations worldwide, examined and commented on the document "*Policy Issues for Science Education*" by Peter Fensham (WorldSTE 2007) in order to refine its suitability to inform the direction of Science Education policy in the 21st Century. Currently, delegates of the 2007 UNESCO Forum are making efforts to promote the *Perth Declaration* to their individual governments, UNESCO committees, and other stakeholders. I feel that ASTE is definitely an important stakeholder. Several of your 2008 candidates for various committees expressed the need for ASTE to play a more extensive role internationally and in policy making pertaining to science education.

It is our most fervent hope that the *Perth Declaration* gets on the agenda of the next UNESCO meeting which is being held in Australia on October 2007.

Dr. L. Y. Lew is an assistant professor at the Long Island University CW Post Campus, New York. She is a board member and the North America regional representative of IOSTE (*International Organization of Science and Technology Education*) who participated in the *Perth Declaration* and is one of two invited delegates to represent IOSTE in the 2007 UNESCO International Science Education Forum in Perth, Australia.



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PO Box 6236
Yuma, AZ 85366-6236

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ASTE Promoting Leadership in, and support for those involved in professional development of teachers of science

ASTE Newsletter

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Issue Items due by

Winter	Feb. 15
Spring	May 15
Summer	Aug. 15
Fall	Oct. 15

Editor: Mert Glass

Phone: 928-317-6412

Fax: 928-317-6419

Email: merton.glass@nau.edu

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See more inside!