



2014 Brock International
Prize in Education Nominee

Laurie Ruberg

Nominated by Robert Starr



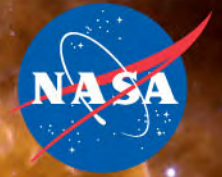
Laurie Ruberg, received her Ph.D. in curriculum and instruction from Virginia Tech. She joined the Center for Educational Technologies at Wheeling Jesuit University in 1995 as a senior instructional designer and later (2005) became associate director. She manages the *NASATalk* online collaborative, where she actively blogs, directs research, and leads several groups that draw diverse educational audiences. The Exploring the Environment–Global Climate Change collaborative on *NASATalk* bridges Ruberg’s recently completed climate science web curriculum with live

discussions and science teacher-focused blogs. Teachers from 42 states and 17 countries already have registered for the six Global Climate Change problem-based learning modules completed this year as part of a NASA Global Climate Change Education project she led.

Ruberg’s extensive background in education outreach, instructional design, and program evaluation reaches across both educational and technical/professional settings. She has received national awards for her multimedia curriculum design and program evaluation efforts.

“Continuous learning is an integral part of my work in instructional design, integration of new technologies, and program evaluation,” she says. “Each project involves a partnership with teachers who are open to trying new modes of instruction and who share an interest in finding ways to enhance and improve student learning.”

National Aeronautics and Space Administration



NASA TALK





NASATalk: **An E-learning** **Mission Experience**

Laurie Ruberg
NASA Talk Explorer
2008-2013



Mission

- Expand our understanding of how a web-based collaborative can help teachers become more aware of NASA STEM educational resources and how to use them with their students
- Use the resources of Web 2.0 to engage teachers in online discussions about NASA STEM education products and opportunities

Use *NASATalk* to explore new perspectives for collaborative professional development

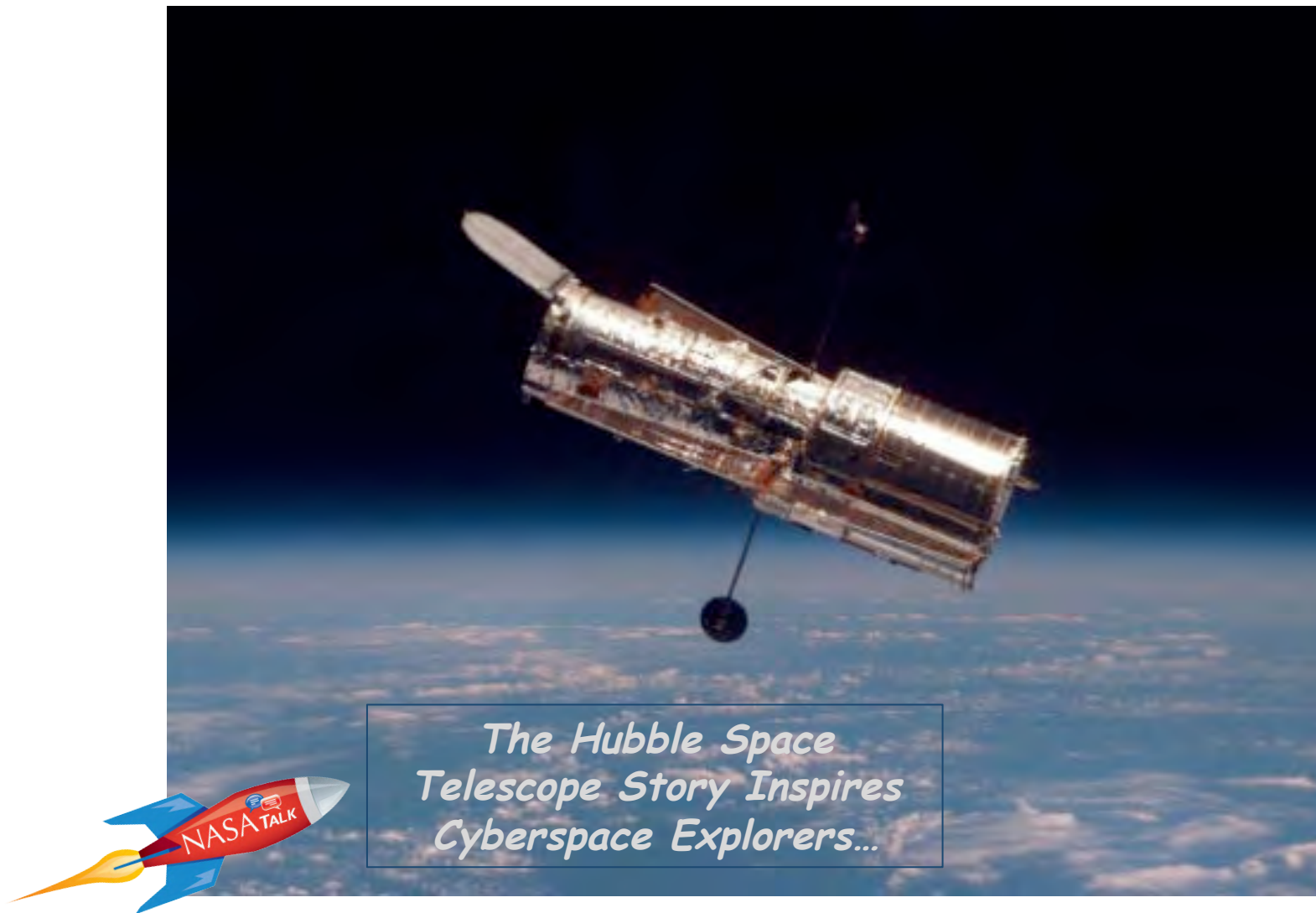


Image credit: Hubble Space Telescope: [NASA.gov](https://www.nasa.gov)

Wednesday, May 20, 2009 - Today is allegedly the 400th anniversary of Galileo's use of a telescope to confirm the Copernicus proposition that the planets, including Earth, revolve around the Sun. The NASA Hubble repair crew also makes their contribution to telescopic history today. The excitement, magnificent photos, and technological feats of the Hubble repair mission provide a great story to stimulate youth interest in science, technology, and engineering topics and careers. Your students can track the progress and access great images about the STS-125 mission on [NASA's website](#). For quick facts and a rationale for all the excitement about this mission at [today's Concord Monitor Editorial](#).



One of 20 stories
about the Hubble
Space Telescope
featured on...

**NASA TALK**

The image above shows NASA astronauts John Grunsfeld, rear, and Andrew Feustel at work to upgrade the Hubble Space Telescope during a spacewalk, Monday, May 18, 2009, with Earth shining over their shoulders. During this fifth and final visit to Hubble, the shuttle Atlantis astronauts outfitted Hubble with two updated science instruments, new batteries, and gyroscopes. The \$220 million worth of new instruments should allow the telescope to peer even deeper into the cosmos—perhaps as far back as 13 billion years. Read more in "[Astronauts Wrap Up Hubble Work](#)" by AP writer, Marcia Dunn.



Who funded the development of *NASATalk*?



The NASA-sponsored Classroom of the Future, which has served as the space agency's principal research and development center for educational technologies, received funding to develop the [NASATalk](#) web-based collaborative.

Laurie Ruberg serves as project manager and lead designer for *NASATalk*.



Goals and Objectives

Develop a web 2.0 collaborative website to

- Share user-generated content
- Feature NASA programs and emerging educational technologies
- Disseminate expanded opportunities for collaboration

NASATalk Collaborators



Image credit: mynasadata.larc.nasa.gov



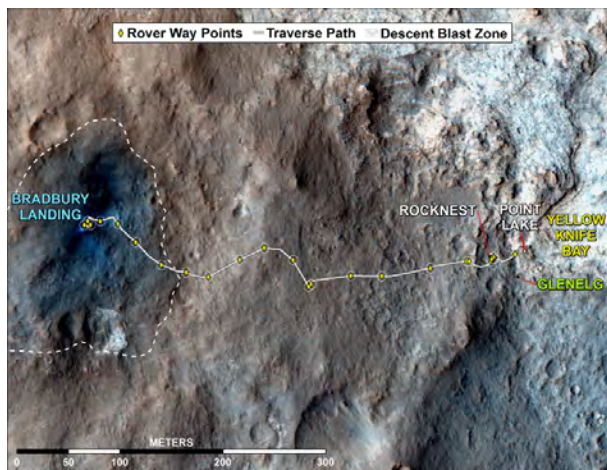
Image credit: sunjournal.com



**NASA educators.. STEM
teachers... product
developers...
curriculum designers...
educational
researchers... informal
educators.. and all
advocates for
improving learning**



Key opportunities NASA*Talk* has facilitated



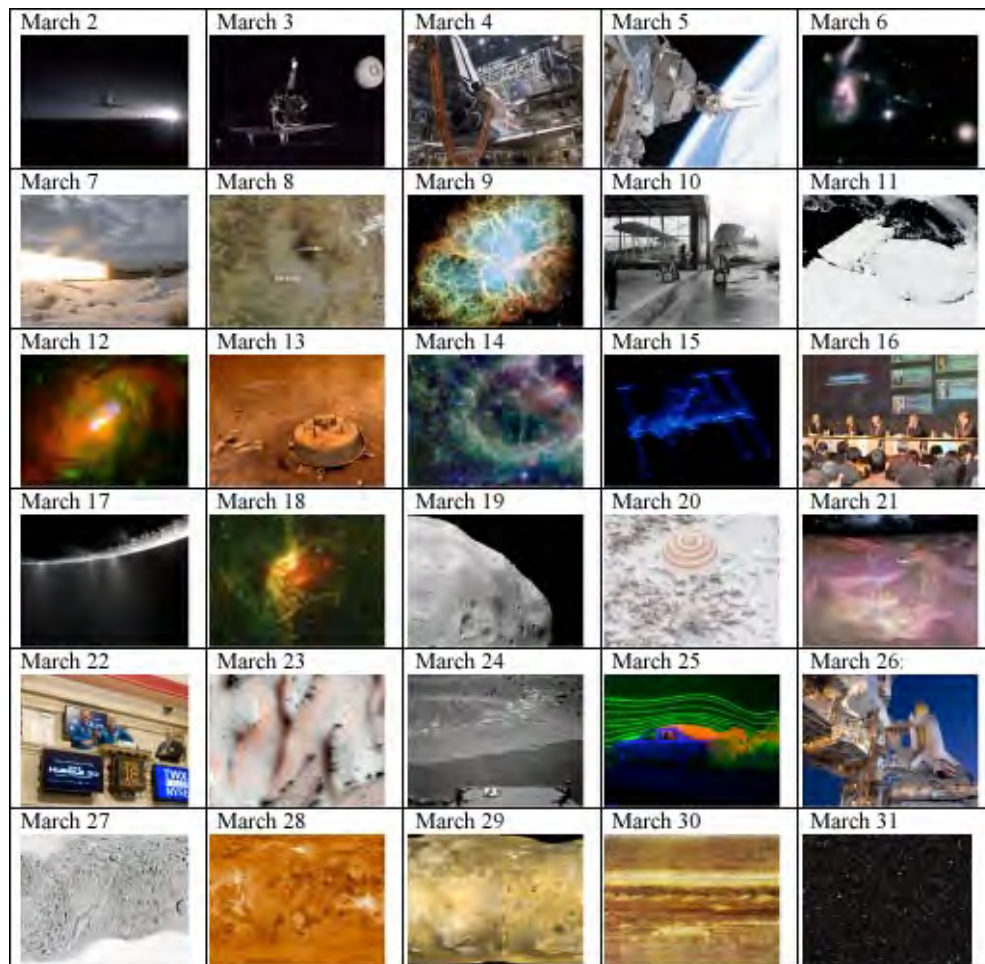
1. NASA Connections
2. Promoting NASA educator opportunities
3. STELLAR Awards
4. Online discussion of ISTE Ed Tech Standards
5. Learning with Mobile Devices
6. Educator blogs
7. Professional collaborative groups



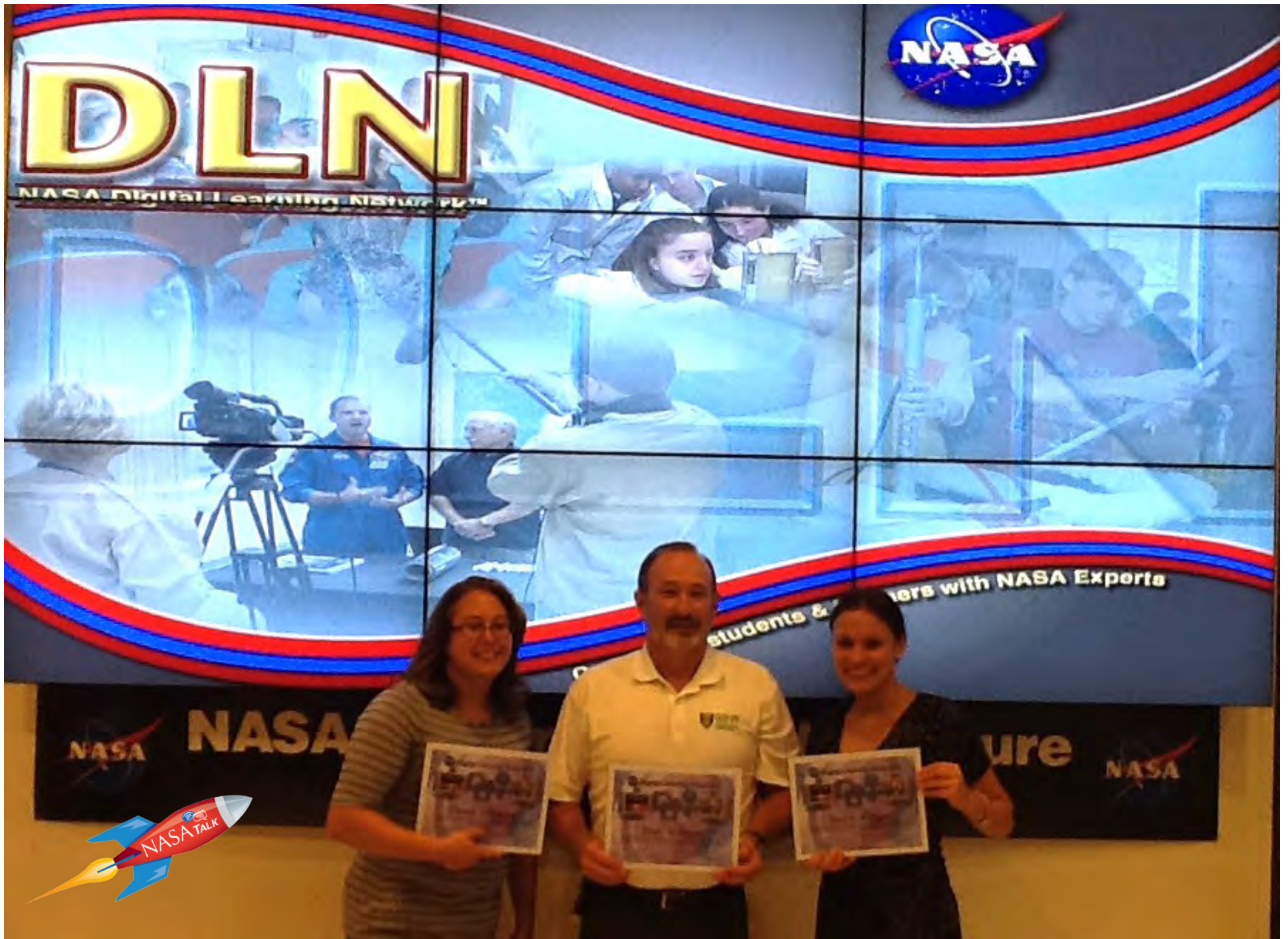
1. NASA Connections

Partnerships across NASA Education including with:

- NASA Digital Learning Network (DLN)
- NASA Aerospace Education Specialists (AES)
- Electronic Professional Development Network (ePDN)
- Aeronautics and Spaceflight
- Earth & Space Education and Public Outreach
- NASA Earth and Space Science Missions



Regarding the image at left,
Read more on NASATalk:
[Using NASA images to make digital quilts and word clouds...](#)





NASATalk features live webinar presentations and workshops to support “Just in Time” educator professional development



Rockets 2 Racecars links popular car racing with space-related technologies & math...

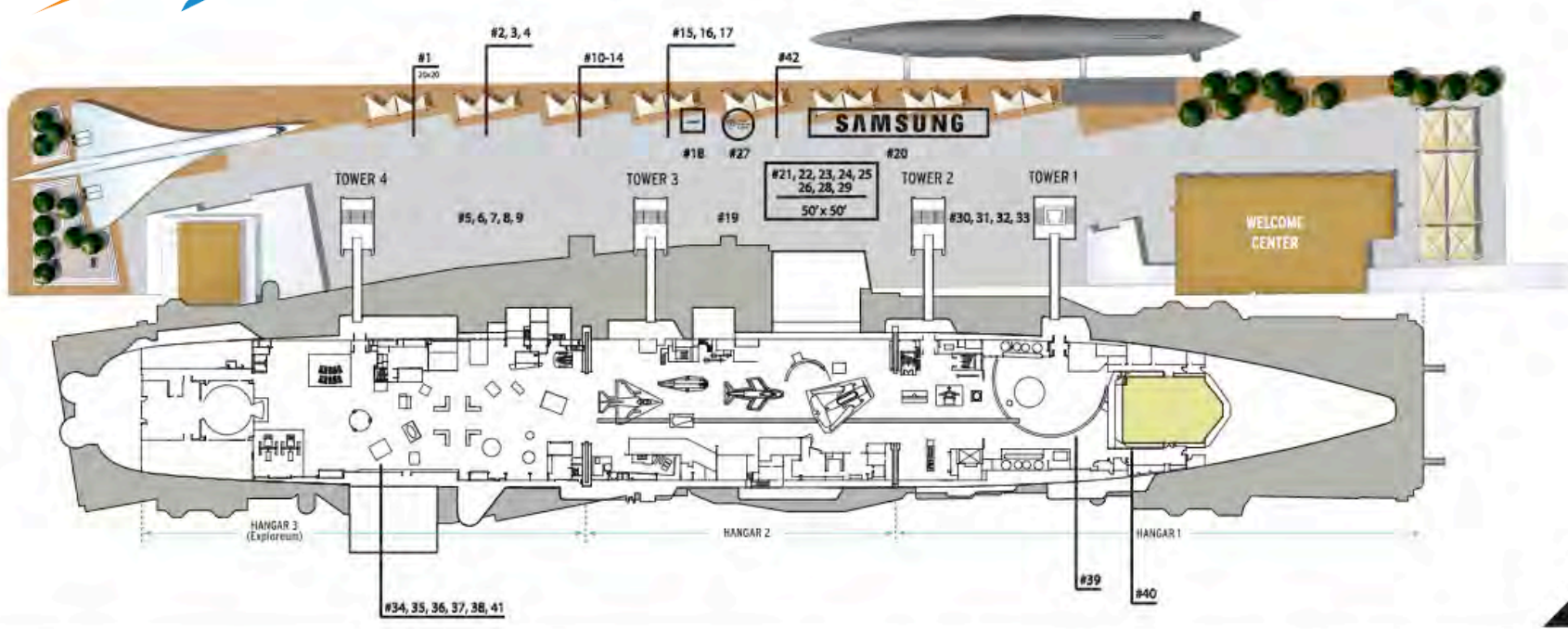


NASATalk featured a private collaborative and blog to support educator involvement in STS-131 thru STS-134 shuttle launches.





Samsung SpaceFest Exhibits & Displays



- 1. FIRST Robotics
- 2. Challenger Learning Center
- 3. Lunar Recon Orbiter (LRO)/Lunar Quest
- 4. NASA Education
- 5. Meet the ISS: 1/100 scale model of the ISS
- 6. Commercial Crew Program
- 7. Space Communication and Navigation
- 8. James Webb Space Telescope
- 9. SDO Solar Telescope
- 10. Under Pressure: Flightsuit

- 11. Peeps and Pressure Demo
- 12. Aviation by App
- 13. NASA "with you when you fly" Interactive
- 14. Flight Suit Cut Out Photo Ops
- 15. Space Launch System
- 16. Quarter Scale Orion Display
- 17. Shuttle EVA Suit Photo Op
- 18. Intrepid Sea, Air & Space Museum
- 19. HEO Dome
- 20. Samsung

- 21. NASA/Shuttle Spin-Offs
- 22. Launch Services Program
- 23. Ground Systems & Development Operations Program
- 24. mini gem - Photo Kiosk
- 25. 3rd Rock Radio
- 26. Share the Past: NASA Artifact Program
- 27. Time Warner Cable
- 28. Orbiter Locations
- 29. NASA/Intrepid Awards Center
- 30. Mars: 3D McMurdo
- 31. Mars Science Laboratory (MSL) Inflatable Rover

- 32. Roll Over Rover
- 33. Mars Mark III - Planetary Suit
- 34. CHANDRA
- 35. Hubble Space Telescope
- 36. NASA Advanced Technologies
- 37. Flight Opportunities
- 38. Dynamic Planet: Satellite Image!
- 39. NASA Art Quest
- 40. NASA Visualizations (Lutnick Theater)
- 41. Portable Planetarium
- 42. Space Camp

All SpaceFest activities and displays are subject to change





2. Promoting NASA Educator Opportunities

- Rocket-boys
October Sky Launch
- Online events such
as the Technology
Triathlon
- NASA Langley Pre-
service Teacher
poster contest
- Pre-E Workshop
- NASA STEM
Educators
Conference





National Aeronautics and Space Administration

NICE

NASA Innovations in Climate Education



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[Project Portfolio](#)

[For Educators](#)

[Partner Links](#)

[TrACE](#)

[Highlights](#)

[User Login](#)



Lin Chambers, Ph.D.,
NICE Project Scientist,
NASA LARC



Ann Martin, NICE
Program Evaluator,
NASA LARC



Bonnie Murray, NASA
Education Specialist,
NASA LARC



Laurie Ruberg, Ph.D.,
Associate Director
at CET/WJU



Don Watson, Manager
of the DLInfo Channel
at CET/WJU

Discuss
ETE on



[NGSS Website](#)



[Climate Literacy
Principles](#)



[Energy Literacy
Principles](#)



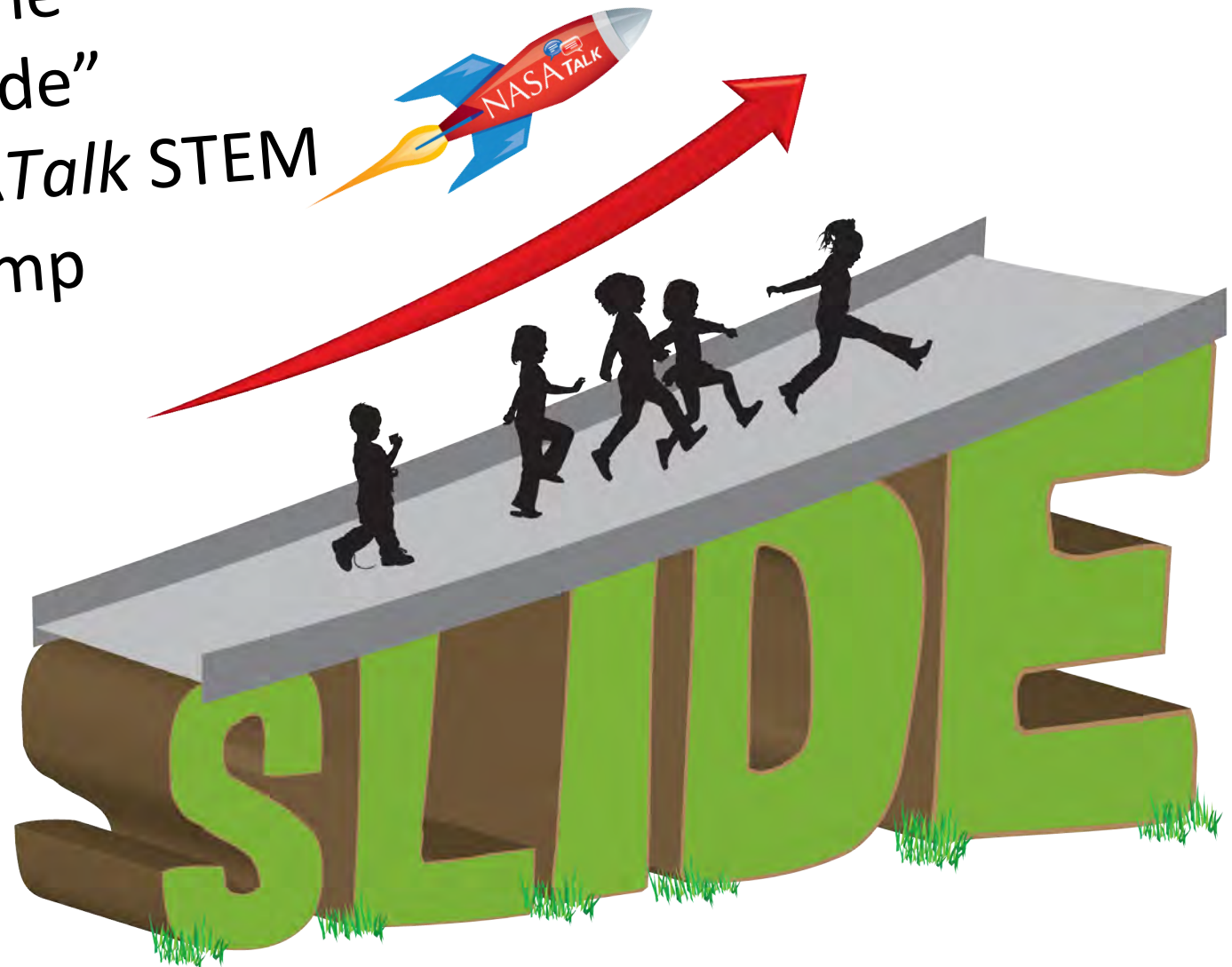
[Earth Science Literacy
Principles](#)



NASA TALK



Preventing the
"Summer Slide"
with a NASATalk STEM
Summer Camp





[Read more about this Middle School STEM Camp on NASATalk](#)



3. NASA*Talk* STELLAR Awards were established in 2009 to recognize educators demonstrating excellent uses of NASA STEM materials in classrooms or informal settings.





NASATalk STELLAR Awards were established in 2009 to recognize educators demonstrating excellent uses of NASA STEM materials in classrooms or informal settings.



The STELLAR acronym highlights educator attributes that are recognized through this award: **S**uccessful **T**eachers **E**xplaining how they imp**L**ement NASA resources to improve student **L**earning **A**nd stimulate STEM ca**R**eer interests.

STELLAR Award Winners Gallery



Eileen Poling (right) with her principal.



Garrison Hall.



Elizabeth Hoyson.



Amy Williams.



C.P. Gloria Samperio Ruiz

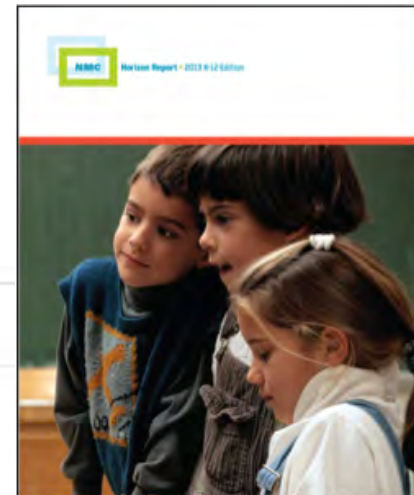


Are you the next STELLAR Awards winner?



4. ISTE Standards as NASA*Talk* Tech Topics

[Home](#) • [TechTopics](#) • [Show All TechTopics](#)



Show All TechTopics - TechTopics



With TechTopics we highlight promising educational technologies, tools, websites, resources, software, and hardware. We also provide a forum for in-depth discussion and commenting on particular educational technologies.

Topics are organized using the ISTE National Educational Technology Standards for Students. We have included additional categories for Knowledge and Comprehension Tools and other topics which do not fit neatly within one of the ISTE categories.

Feel free to add your own topics. Many of the original topics came from a research article on exemplary edtech published in October, 2008. For more information please see the article titled, "[EdTech Exemplars.](#)"



5. Learning with Mobile Devices

iPads for Learning: Learning on the Go!



Good Luck!
The crew is counting on your success.



Press MENU and then PLAY to begin the game.

BACK

NEXT

Introduction
Instructions
Play
Learn More
BLISS Wiki

You have played BLISS 4 times.

CHALLENGE RESULTS RESET

INPUTS

Lettuce Potatoes Soy Beans Wheat

Planting Area: 7168 m²

Lighting: 14 hrs

Growth Cycle: 112 days

PLANT RIN

OUTPUTS

Potable Water

Output Results	Produced	Needed
Oxygen (kg)	0	1879
Potable Water (L)	0	210037
Edible Biomass (kg)	0	850
Inedible Biomass (kg)	0	611

Growth Cycle (days)

CHALLENGE RESULTS RESET

HARVEST CYCLES

Lettuce Potatoes Soy Beans Wheat

5 0 0 0

OUTPUTS

Potable Water

Output Results	Produced	Needed
Oxygen (kg)	713	433
Potable Water (L)	115055	74589
Edible Biomass (kg)	511	306
Inedible Biomass (kg)	130	26

Growth Cycle (days)

Menu



6. Educator Blogs

The NASATalk web site includes –

9 NASA partner blogs

9 *NASATalk* team member blogs

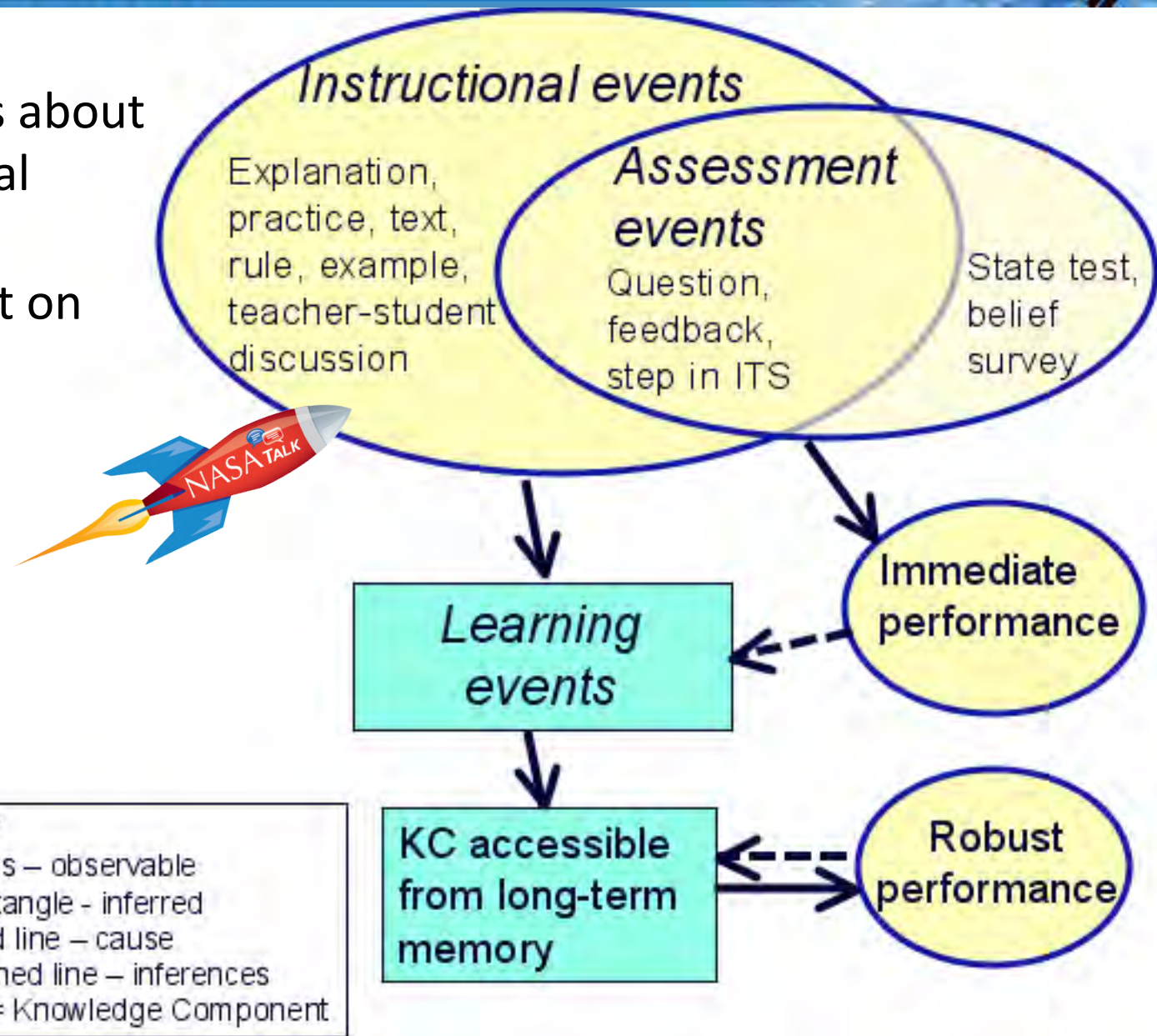
10 External partner blogs

6 Guest blogs (individuals or organizations having common interests with *NASATalk*)

Since Jan 2010 the *NASATalk* authors from the blog and collaborative groups have created 1973 articles, which are posted online.



Discussions about instructional design and Assessment on *NASATalk*





7. Professional/Content Collaborative Groups

The *NASATalk* web site includes --

5 science-related collaborative groups

4 robotics-related collaborative groups

1 Engineering education collaborative group

1 K-4 STEM education collaborative group

2 Mathematics-related collaborative groups

4 STEM education collaborative groups

3 Research and evaluation collaborative groups

1 Project planning collaborative group

6 Archived (project completed) collaborative groups

Logout ↓



Search

Enter Search Criteria...

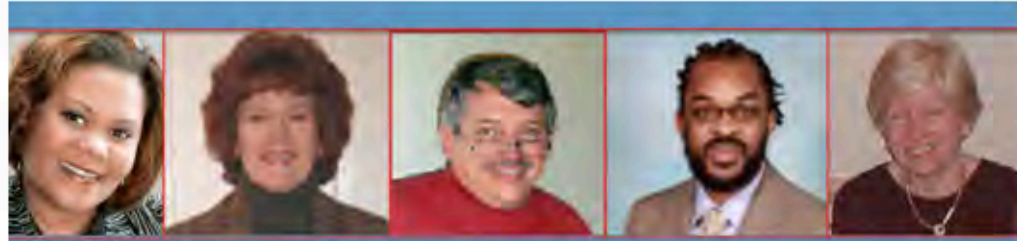
Search

Translate this page

Select Language

Google Translate

AEA GEDI Internship



Starting in October 2011, the Wheeling Jesuit University Center for Educational Technologies is participating in the American Evaluation Association (AEA)

Graduate Education in Diversity Internship (GEDI) Program. The photo collage (shown at left) features Tyra Good, our AEA GEDI intern, Debbie Piecka and Chuck Wood, who will both be contributing to Tyra's intern experience as project mentors, Rodney Hopson, who is Tyra's Duquesne University faculty mentor, and Laurie Ruberg, who is serving as the WJU/CET mentor. Each of us will be contributing to Tyra's intern experience in different, complementary ways. We have set up this member-only collaborative and blog to provide an area where we can individually and collectively share experiences, insights, and ideas about STEM evaluation practices and processes. As Tyra will be working across two different locations during her WJU/CET internship, this virtual area for communications may provide a way to tie seemingly disconnected experiences into coherent themes.

With the Tyra's internship experience as the focus of this collaborative, we'll all work together to make the internship work a means to offer a window into the variety of evaluation needs and issues within this organization. We expect this to be a mutually beneficial partnership between all involved, and we look forward to additional input from the AEA as the sponsoring professional organization during this intern year.

After receiving applications from almost 80 applicants, AEA narrowed down the pool to candidates in closest proximity to the WJU/CET, and those with



the best possible match to your organization. Interns were narrowed using the following criteria:

- Proximity
- Fit with organization
- Expressed interest in evaluation
- Exposure to evaluation
- Credentials (coursework, CV, etc.)

Let's use this online collaborative and embedded blog to document the internship process as we learn together.

[Go To AEA GEDI Journal Blog](#)

Robotics Collaborative Groups



Audience and Impact

Between Jan 1, 2010 and Sep 7, 2013

- 59,078 people visited the *NASATalk* web site
- 216,000 pages were viewed by 80,393 visitors
- Visitors came from all 50 States and 168 different countries outside the U.S.
- The average page view per visit was 2.7
- The average time per visit was 2:49 minutes



Laurie Ruberg, serves as the project manager, designer, recruiter, writer, and spokesperson for *NASATalk*.

The ideas for outreach and participation across these varied and diverse communities reflect her conscious efforts to make *NASATalk* a collaborative community that is used by many education groups.

*Alone we can do so little;
together we can do so
much – [Helen Keller](#)*

Lorena (Laurie) Ferguson Ruberg, Ph.D.

22 Maple Ave., Wheeling, WV 26003

Tel (w): 304.243.2480 Cell: 304-639-3894 Email: elearningtalk@gmail.com

PROFESSIONAL AFFILIATIONS

Wheeling Jesuit University, Wheeling, WV

Center for Educational Technologies (1995 to present)

Associate Director: Project management, project coordination, strategic and planning.

Principal Investigator: NASA Explorer Schools Evaluation project; Mid-Atlantic Region Space Science Broker (MARSSB) program; NASA Innovations in Climate Education.

Senior Instructional Designer: Lead designer for two NASA-funded curriculum development projects: BioBLAST[®], a software-based curriculum supplement for high school biology classes, and the International Space Station Challenge, a web-based curriculum.

FUNDED DESIGN, DEVELOPMENT, AND EVALUATION PROJECTS

- Manager, NASATalk.com, a Joomla!-based content management system (2008-present).
- Principal Investigator, [Exploring Global Climate Change Through Problem-Based Learning](#), a two-year curriculum development project funded by NASA (2010-2013) that includes teacher registrations from 44 states and 18 countries.
- Principal Investigator: Project Research and Evaluation, CDC/NIOSH/OSHA Contract 254-2008-23745 with Wheeling Jesuit University (Oct 2011- Sep 2013).
- Evaluator, [Mining and Industrial Safety Technology and Training Innovation \(MISTTI\)](#) project, CDC/NIOSH Cooperative Agreement (Oct 2009 – Sep 2012).
- Evaluator, NASA Earth and Space Online “Missions” for High School Learners with Accompanying Electronic Professional Development, NASA (Jun 2009 – May 2012).
- Project Manager/Instructional Designer, [BLISS-Sim](#), the first science education iTunes app developed by the NASA-sponsored Classroom of the Future, based on the COTF multimedia BioBLAST[™] simulation data.
- Mid-Atlantic Region Space Science Broker/Facilitator, funded by NASA Science Mission Directorate (2001-2007) to support building strategic partnerships among scientists and educators in nine states and the District of Columbia.
- Principal investigator, [NASA Explorer Schools program evaluation \(2005-2007\)](#), a national program designed to increase student interest and achievement in STEM-related content and careers by providing sustained professional development for teachers and administrators at ethnically diverse middle schools.
- Sr. Instructional Designer, International Space Station Challenge, web-based curriculum activities (1999 – 2001).
- Sr. Instructional Designer, Project Manager, [BioBLAST[™]](#), a multimedia curriculum for high school biology students based on NASA advanced life support research (1995-1999).

Virginia Polytechnic Institute and State University, Blacksburg (1988-1995):

College of Education, Instructional Systems Development

Research Associate: Research funded by NSF Undergraduate Course and Curriculum Development, “Development and Assessment of a Multimedia Plant Science

Laboratory” NSF Curriculum Development Grant #92-2170-06. Dissertation research.

Self-Instruction Curriculum Lab Manager: Computer lab technical support staffing.

Virginia Cooperative Extension Service Interactive Design and Development Group
Research Associate/Assistant Project Director: Served as team leader for development of Virginia Public Information Stations, a project funded by the U.S. Department of Agriculture and the Kellogg Foundation.

Human Services on Cable Inc., New Orleans (1985-1987)

Project Director: Served as program manager; provided leadership for the design and planning of a distributed human service information system. Implemented activities with support from a volunteer board of directors, community stakeholders, and local cable sponsor. Secured grant support and corporate funding to support program.

EDUCATION

Virginia Polytechnic Institute and State University, College of Education, Blacksburg
Ph.D. degree earned (1994) in Curriculum and Instruction
Dissertation title: Student Participation, Interaction, and Regulation in a Computer-Mediated Communication Environment. Dissertation funded by NSF Curriculum Development Grant #92-2170-06.

University of Iowa, College of Arts and Sciences, Iowa City
M.A. degree earned (1979) in English Literature.

Drexel University, College of Humanities and Social Sciences, Philadelphia
B.S. degree earned (1974) in Psychology and Education.

AWARDS AND RECOGNITIONS

Second place, AERA Division H School Evaluation and Program Development Outstanding Publications Competition on Program Evaluation Studies, 2008.

Senior Instructional Designer/Project Lead for *BioBLAST™* multimedia CD-ROM (1995-1999) that received the following awards:

- Copper AXIEM (Absolute Excellence in Electronic Media) Award, 1999.
- Distinguished Achievement Award for Excellence in Educational Publishing—Educational Technology Curricular Software, The Association of Educational Publishers, 1999, one of four finalists.
- CODIE AWARD for School Based Education Product—Best Product 1999, one of five finalists.

Tuition scholarship, Virginia Tech, 1991-1994.

Psi Chi psychology honorary fraternity, Drexel University chapter (1973).

PROFESSIONAL AFFILIATIONS

- American Educational Research Association—1991 to present
- American Evaluation Association—2007 to present
- National Science Teachers Association—1996 to present
- Professional Education Department, Wheeling Jesuit University – Adjunct Faculty 1997-1999 & 2007 to 2010
- Principal and Founder of PLANTS, LLC - a business formed (2013) to provide professional scientific and technical services related to plant growth and food production processes.

Professional services include educational workshops, hands-on training, professional development, and information assistance to promote sustainable agriculture practices.

COMMUNITY AND PROFESSIONAL VOLUNTEER ACTIVITIES

Member, Wheeling Hopeful City Community Renaissance Task Force – 2001 to 2004
Commonwealth Graduate Engineering Program, Advisory Board Member – 2005 to 2008
Area coordinator for Future City National Engineering Competition – 2003 to 2013

Reviewer for:

- Software Information Industry Association CODIE™ Judge
- American Educational Research Association
- American Evaluation Association
- NASA Education and NASA Science Mission Directorate E/PO Program
- National Science Foundation

PEER-REVIEWED PRESENTATIONS AND PUBLICATIONS

- Ruberg, L. F., Morris, K., & Wood, C. A. (2013). Mobile Devices for STEM Learning to Go: Guidelines for Selecting Mobile Devices and Applications to Enhance STEM Learning. In Norma Teresinha Oliveira Reis (Ed.) *Pedagogical Analyzes of Space Sciences Education Practices at NASA and the Brazilian Space Agency*. NOVA Science Publishers
- Kibonge, L. B., Ruberg, L. F., & Wood, C. A. (April 16, 2013). Health, Safety, and Coal Mining Jobs. *Student Research and Scholarship Symposium*, Wheeling Jesuit University, Wheeling, WV.
- Ruberg, L. F. (2013). NASA Responds to Climate Changes and Human Health Issues with Hydroponic Solutions. Invited presentations at the 8th ASOCIACIÓN HIDROPÓNICA MEXICANA A.C., 14-16 Mar 2013, Toluca, Mexico.
- Ruberg, L. F. (2013). NASA Studies of Hydroponics for Extreme Environments and to Optimize Plant Production Invited presentations at the 8th ASOCIACIÓN HIDROPÓNICA MEXICANA A.C., 14-16 Mar 2013, Toluca, Mexico.
- Ruberg, L. F., Cummings, M., Piecka, D. C. B., Ruckman, C., & Seward, R. (2011). A logical approach to supporting professional learning communities. *Knowledge Management & E-Learning: An International Journal*, 3 (4), 599-620.
- Ruberg, L., & Piecka, D. (2011). Evaluating Mining Safety and Health Training, Technology Transfer, and Communications. American Evaluation Association annual meeting, November 2-5, Anaheim, CA.
- Ruberg, L. F., Piecka, D. B., Calinger, M. (2011, March). Adding Value to Instruction with Strategic Use of Online Collaboratives. National Science Teachers Association Research Dissemination Conference on Emerging Technologies. San Francisco, CA
- Piecka, D. C. B., Ruberg, L., & Ruckman, C. (2011) Self-discovery learning opportunities in NASATalk. In A. Hai-Jew (Ed.), *Constructing self-discovery learning spaces online: Scaffolding and decision making technologies*. Hershey, PA: IGI Global.

- Ruberg, L., Shia, J., Lightfritz, C., & Morgan, A. (2010). *Process evaluation of an immersion-learning experience for grades K-4 youth*. American Evaluation Association annual meeting, Nov. 8-13, San Antonio, TX.
- Ruberg, L., Calinger, M., & Howard, B. (2009). Evaluating educational technologies: Historical milestones. In L.A. Tomei (Ed.). *Designing instruction for the traditional, adult, and distance learner: A new engine for technology-based teaching*. Hershey, PA: IGI Global.
- Reese, D. D., Wood, C.A., Ruberg, L.F (2010). *MoonWorld*, 41st Lunar & Planetary Science Conference in Houston; <http://www.lpi.usra.edu/meetings/lpsc2010/pdf/1439.pdf>
- Ruberg, L., Wood, C. A., Reese, D. D., Lightfritz, C., & Harrison, A. (2009). *MoonWorld: Virtual Fieldwork in Second Life*. Paper presented at the meeting of the 40th Lunar and Planetary Science Conference, The Woodlands, TX. Abstract retrieved from <http://www.lpi.usra.edu/meetings/lpsc2009/pdf/2229.pdf>
- Ruberg, L., & Calinger, M. (2009). *Evaluation of educational simulations of extreme weather events*. American Evaluation Association annual meeting, Nov. 10-14, Orlando, FL.
- Ruberg, L. (2009, April). *Blending globalization and curriculum analysis to study technology-focused teacher training*. Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Ruberg, L., Smith, D., Shipp, S., Shupla, C., & Grier, J. (2008). Efforts of space science EPO professionals to meet the needs of pre-service students and faculty: Analysis of results. In C. D. Garmany, M.G. Gibbs; & J.W. Moody (Eds.), *EPO and a changing world: Creating linkages and expanding partnerships, Vol. 389*. Astronomy Society of the Pacific: http://www.aspbbooks.org/a/users/add_volume.
- Chen, C-H., Ruberg, L., & Martin, J. (2008). Modeling scientific inquiry through technology-mediated tools. In R. Kobayashi (Ed.), *New educational technology*. NOVA Publishers.
- Ruberg, L.F., Chen, C-H, & Martin, J. (2008, March). *Applying blended research methods to school-based intervention evaluation*. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Chen, C-H., Ruberg, L., Hull, J., & Martin, J. (2008, March). *Promoting STEM teaching practices and student learning: A longitudinal impact of professional development*. Paper presented at the annual meeting of American Educational Research Association, New York.
- Ruberg, L., Chen, C-H., & Martin, J. (2007). *NASA Explorer Schools project evaluation: Summer 2003 to spring 2006*. Center for Educational Technologies, <http://www.cet.edu/?cat=publications&page=35>
- Ruberg, L., Martin, J., & Chen, H-C. (2007). *Value-added assessment: Teacher training designed to improve student achievement*. Evaluation in Education Multipaper Session 344. Evaluation 2007: Evaluation and Learning. American Evaluation Association annual conference, Nov. 7-10, Baltimore.
- Chen, K., Ruberg, L., & Martin, J. (2007). *Promoting science, technology, engineering, mathematics, and geography (STEM-G) through professional development: Learning from evaluation*. Poster presentation 131. Evaluation 2007: Evaluation and Learning. American Evaluation Association annual conference, Nov. 7-10, Baltimore.

- Ruberg, L., Smith, D., Shipp, S., Shupla, C., & Grier, J. (2007). *Efforts of space science EPO professionals to meet the needs of pre-service students and faculty: Analysis of results*. Astronomy Society of the Pacific 119th annual conference, Sept. 5-8, Chicago.
- Ruberg, L.F., Steel, S., & Wood, C. (2006, September). *Transforming scientific discoveries into exciting inquiry activities*. Astronomy Society of the Pacific, Baltimore.
- Ruberg, L.F. (2006, June). Aligning student learning with astronomy research: The Virtual Design Center. American Astronomical Society annual conference, Calgary.
- Ruberg, L.F., Grier, J. (2006, February). *Sensing energy: Light sources and detectors*. Pre-Service Teacher Conference, Alexandria, VA.
- Ruberg, L.F., Shipp S., & Smith, D.A. (2005, January). *Exploring ways to help pre-service teachers meet science education challenges* (Abstract 132.07). Poster session presented at the American Astronomical Society 205th annual meeting, San Diego.
- Ruberg, L.F. (2005, February). *Testing ideas about light with hands-on learning centers*. National AfterSchool Association annual conference, San Antonio, TX.
- Ruberg, L.F. (2004, November). *What kinds of support can the broker/facilitator program provide to support scientists involvement in E/PO?* Abstract of poster presentation at 36th annual American Astronomical Society Division of Planetary Sciences meeting, Louisville, KY.
- Ruberg, L.F., & Jones, S.P. (2004, July). Examining the potential for using space science as a context for teaching among minority-serving pre-service faculty. Poster presented at the *Proceedings of the Introduction to Cosmos in the Classroom Conference*. Medford, MA: Astronomy Society of the Pacific.
- Ruberg, L.F., Reese, D., Kirby, J., & Hernandez, V. (2004, June). *Bridging the gap between urban and rural schools with technology*. Paper presented at National Education Computing Conference annual meeting, New Orleans: International Society for Technology Education. <http://center.uoregon.edu/ISTE/NECC2004/program/>
- Ruberg, L. F. (2003, April). *Applying the design process to curriculum development in technology education*. Poster session presented at the American Educational Research Association, Chicago.
- Ruberg, L.F., & Baro, J.A. (2002). Designing graphical, interactive simulations to model scientific problem solving. In S. Naidu (Ed.), *E-Learning: Technology and the development of teaching and learning*. London: Kogan Page.
- Ruberg, L.F. (2002, September). *Know your content and how to deliver it*. NSF-/NASA-sponsored pre-service teacher conference, Effective Science, Technology, Engineering, and Mathematics Partnerships: Strategies for Success, Orlando, FL.
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