Free Professional Development Resources and Opportunities for Educators

Dr. Francis Eberle, NSTA
Edward Rock, NSTA
Goals of the session

• Review Professional Development landscape
• Overview of NSTA’s e-PD Portal and the resources within it
• Explore some STEM resources

http://learningcenter.nsta.org
Teacher Content Knowledge

- A significant, **positive** correlation exists between **student achievement** and teachers’ **content knowledge** (subject matter AND pedagogical content knowledge).

- Detrimental classroom effects when teachers do not feel confident in their knowledge of science.

The US PD Landscape

What we know—Local Systemic Change K-8 Evaluation: (75,000 data points -10 yr NSF longitudinal study)

Teachers of Science with less than 16 hours of PD in last year:

- What % at K-4 level? 76%
- What % at 5-8 level? 57%
- What % at 9-12 level? 32%

Research calls for 50-80 hours/yr for high quality/impact PD.

Welcome to Your Personalized Learning Web Space!

Flavio, you've already earned 5425 Activity Points!

You've recently earned:
- Web Seminar Activator
  Attend Web Seminars

You're close to earning:
- Sapphire Commenter
  Post 11 more comment/questions

Be sure to update your profile and review your points & badges!

With these resources you can build your professional development plan, track your activities and assess your progress. You can start at "Explore Learning Opportunities" below or by creating your game plan with the PD Plan and Portfolio tool. You may also review an archived Web Seminar or a multimedia overview of the Learning Center.
Teachers interact with peers and establish lasting relationships.

Teachers have different roles and are recognized and rewarded for their contributions.

Psycho-emotional

Social

Teachers participate in discussions using compelling content as context.

Content

Building a Vibrant Learning Community

Teacher
Welcome to Your Professional Development Web Space!

Flavio, you've already earned 360 Activity Points!

You've recently earned:
- NSTA Resource Optimizer
- Add NSTA Resources

You're close to earning:
- Onyx Commenter
- Post 5 more comment/questions

Activity Progress Bar

Your Activity Matters!

It saves Polar Bears!

With these resources you can build your professional development plan, track your activities and assess your progress. You can start at "Explore Learning Opportunities" below or by creating your game plan with the PD Plan and Portfolio tool. You may also review an archived Web Seminar or a multimedia overview of the Learning Center.

- Explore Learning Opportunities
  - Advanced Search
  - See all FREE Lesson Plans
  - See all FREE Resources
Incentivize Online Community

Physical Science Indexer
Help rescue the reef by completing the Physical Science indexer. AP: 250

Aggregator (Sapphire)
Donate a pound of produce by adding 30 personal resources to your Library. AP: 300

NSTA Resource Optimizer
Donate a book with 99 others adding 10 NSTA resources to your Library. AP: 100

Advocator (Ruby)
Give a day's worth of food by writing 40 reviews. AP: 800

Commenter (Diamond)
Plant a food seed by making 100 posts onto the Discussion Forums. AP: 1,000

Disseminator (Onyx)
Preserve 10 square feet of the Osa Peninsula Rainforest by sharing a collection with 1 person. AP: 10
Online Advisors

- Moderate discussion, assist users
- 7 days/week; ~60 hours/week

Wendy Ruchti
Wendy Ruchti has been part of the Educational Foundations Department at Idaho State University’s College of Education since 2008. She received a PhD in Education from the University of Idaho in 2005 with an emphasis in curriculum and instruction in STEM education. At ISU, she has taught several educational foundations courses. Her research interests include elementary science education and creating collaborative online learning environments. Before coming to ISU, she taught middle school science and math.

Lara Smetana
Lara Smetana is an assistant professor of science education at Southern Connecticut State University. She brings classroom experience as an 8th grade physical science teacher and has worked with a variety of informal education programs across the country. Lara teaches courses in elementary science methods and educational technology and mentors student teachers. Her research interests include pre- and in-service teacher education and the use of educational technology in science teaching and learning.

Kathy Sparrow
Dr. Kathy Sparrow is currently an adjunct professor at Florida International University (FIU), teaching Elementary Science Methods. She previously worked as a middle and high school science teacher as well as the Science Supervisor for Akron Public Schools. She was a Regional Director for SECO, served on the NSTA Board of Directors and was president of the National Science Education Leadership Association (NSEA). Kathy was also awarded the Outstanding National Science Supervisor Award in 1999.
Learning Center

e-PD Resources
• Two-hour free online learning experience in a particular topic
• Based on science literacy goals in science education standards
• Eighty (80) Science Objects currently available
Elements of a Science Object: 2-hour learning experience

Hands-on activities

Common Student Preconceptions
Middle and high school students often have difficulty recognizing the dynamic nature of mitosis and its specific order of events (Kindfield, 1994). They have limited, confused, and inconsistent understandings about cell division, make little distinction between mitosis and meiosis, and do not fully understand the processes, purposes, or products of cell division (Krippel et al., 2005).

A discussion of common student preconceptions by grade band is available in the Pedagogical Implications section of the Cell Division and Differentiation SoftPack.

Preconceptions boxes

Assessment
NSTA SCIENCE SIMULATION: Make a Reef

CONTROL PANEL

- pH: 4
- Temperature: 10 - 17 °C
- Light: Clear
- Salinity: 10 - 24 ppt
- No Light: Murky
- Temperature: 17 - 23 °C
- Salinity: 25 - 40 ppt
- pH: 8
- Temperature: 23 - 29 °C
- Salinity: 41 - 55 ppt

SUBMIT
RESET
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<thead>
<tr>
<th>Physical</th>
<th>Life</th>
<th>Earth and Space</th>
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<td>• Energy:</td>
<td>• Coral Reef:</td>
<td>• Earth’s Changing Surface:</td>
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<tr>
<td>- Energy Transformations</td>
<td>- Living Reef</td>
<td>- Changing the Surface from Within</td>
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<td>- Ecosystem in Crisis</td>
<td>- Sculpting the Surface from Within</td>
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<td>- Thermal Energy, Heat and Temperature</td>
<td>- Understanding the Cell’s Importance</td>
<td>- Humans as Agents of Change</td>
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<td>- Useful and Not So Useful Energy</td>
<td>- Food Safety and You</td>
<td>- Earth’s Seasons</td>
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<td>• Atomic Structure:</td>
<td>- Microbes, Friend or Foe?</td>
<td>- General Characteristics of Earth</td>
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<td>- Investigating Atoms</td>
<td>• Science of Food Safety:</td>
<td>• Ocean’s Effect on Weather and Climate:</td>
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<td>- Energy in Atoms</td>
<td>- Growth and Reproduction of Cells</td>
<td>- Global Climate Patterns</td>
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<td>- Properties of Atoms</td>
<td>- Understanding the Cell’s Importance</td>
<td>- Global Circulation Patterns</td>
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<td>• Chemical Reactions:</td>
<td>- Food Safety and You</td>
<td>- Global Precipitation and Energy</td>
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<td>- Matter and Energy Reactions</td>
<td>- Microbes, Friend or Foe?</td>
<td>- Changing Climate</td>
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<td>- Rates of Chemical Reactions</td>
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<td>• Plate Tectonics:</td>
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<td>- Categorizing Chemical Reactions</td>
<td>- The Basis of Life</td>
<td>- Layered Earth</td>
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<td>- A World of Reactions</td>
<td>- The Molecular Machinery of Life</td>
<td>- Plates</td>
</tr>
<tr>
<td>• Force and Motion:</td>
<td>- The Most Important Molecule</td>
<td>- Plate Interactions</td>
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<td>- Newton’s First Law</td>
<td>- The Cellular Factory</td>
<td>- Consequences of Plate Interactions</td>
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<td>- Newton’s Third Law</td>
<td>• Nutrition:</td>
<td>- Lines of Evidence</td>
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<td>- Position and Motion</td>
<td>- What is Food?</td>
<td>• Solar System:</td>
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<td>- What Happens to the Food I Eat?</td>
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<td>• Cell Division &amp; Differentiation</td>
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<td>• Rocks:</td>
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<td>• Electric and Magnetic Forces:</td>
<td>• Cells and Chemical Reactions</td>
<td>- Cycling</td>
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<td>- Electromagnetism</td>
<td>- To Come</td>
<td>- Environments of Formation</td>
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<td>- Electrostatics and Current Electricity</td>
<td>• Regulation and Behavior of Organisms</td>
<td>- Categories by Process</td>
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<td>- Electric Charges</td>
<td>- To Come</td>
<td>• Earth’s Autobiography</td>
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<tr>
<td>• Elements, Atoms, and Molecules</td>
<td>• Heredity and Variation</td>
<td>• Universe:</td>
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<tr>
<td>- To Come</td>
<td>- To Come</td>
<td>- The Sun as a Star</td>
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<tr>
<td>- To Come</td>
<td>• Biological Evolution</td>
<td>- The Origin and Evolution of the Universe</td>
</tr>
<tr>
<td>- To Come</td>
<td>- To Come</td>
<td>- The Universe Beyond Our Solar System</td>
</tr>
<tr>
<td>- To Come</td>
<td>• Natural Selection</td>
<td>- Birth, Life and Death of Stars</td>
</tr>
<tr>
<td>- To Come</td>
<td>• Interdependence of Life</td>
<td>- How We Know What We Know</td>
</tr>
<tr>
<td>- To Come</td>
<td>- To Come</td>
<td>• Gravity and Orbits:</td>
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<td>- To Come</td>
<td>• Flow of Matter and Energy in Ecosystems</td>
<td>- Gravitational Force</td>
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<td>- To Come</td>
<td>- Universal Gravitation</td>
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<tr>
<td>- To Come</td>
<td>• Earth’s Changing Surface:</td>
<td>- Orbits</td>
</tr>
<tr>
<td>• Earth and Space:</td>
<td>• Earth, Sun, Moon:</td>
<td>• Resources and Human Impact:</td>
</tr>
<tr>
<td>- Changing the Surface from Within</td>
<td>- Motion of the Moon</td>
<td>- Earth as a System</td>
</tr>
<tr>
<td>- Sculpting the Landscape</td>
<td>- Our Moving Earth</td>
<td>- Using Technology to Address Resource Use Issues</td>
</tr>
<tr>
<td>- Humans as Agents of Change</td>
<td>- Earth’s Seasons</td>
<td>- Environmental Degradation</td>
</tr>
<tr>
<td>- General Characteristics of Earth</td>
<td>- Global Climate Patterns</td>
<td>- Population Growth, Technology and the Environment</td>
</tr>
</tbody>
</table>
SciPack

10-Hour, self-paced, learning experience

3-5 Science Objects

Assessment and Certification

Content Mentor
Email Support

Pedagogical Implications
The NSTA Learning Center
Jan. 2011 Collection: 6,100+ PD Resources and Opportunities Available

Do-It-Yourself Learning

SciGuides [37]
Science Objects [80]
SciPacks [21]
Archived Seminars/Podcast [350+]

Live Online Seminars & Classes

Web Seminars [120/yr]
Short Courses [50+/year]

Books & Articles

Journal Articles [3,600+]
NSTA Press Books [252+]
e-Books [136+]
e-Chapters [784+]

In Person Experiences

Symposia [6-10/year]
PD Institutes [6-10/year]

http://learningcenter.nsta.org
Everyday Engineering: What makes a better box?

By: Richard Moyer and Susan Everett

Grade Level: Middle School

Journal Article

Add to Library
Add to P D P lan
Chemistry Resources - Partners in Science Collection
A collection of e-PD resources on the topic of chemistry for high school teachers.
13 items ★★★★★ based on 3 reviews
Created by Flavio Mendez on 1/14/2011

American Chemical Society
Type: User uploaded resource

Partners in Science Program
Type: User uploaded resource

View all 13 items in this collection

Ecological Awareness Collection
64 items ★★★★★ based on 3 reviews
Created by Susanne Hokkanen on 8/30/2010

Gone, Gone from the Range
Type: Journal Article
Grade: College
Archive: Engineering: Because Dreams Need Doing, February 19, 2009

Grade Level: Elementary School, Middle School

Web Seminar Archive

Engage the imagination of your math and science students through innovative applications from the world of engineering. Help students see how engineers apply the same subject matter they are learning to create technology and benefit our lives. Set up classroom activities so your students work in teams and approach learning by thinking like engineers and doing engineering.

Grades 3-12 science and math teachers are welcome to join Dr.... [view full summary]

Price: Free via Your Subscription

Podcast: Talking to Kids about Engineering

Grade Level: Elementary School, Middle School, High School, Informal Education

Podcast

The Podcast: Talking to Kids about Engineering is a segment of the Web Seminar: WGBH: Designed to Inspire: On the Moon, June 4, 2009. The podcast is 3 minutes 13 seconds in duration.

In the source Web Seminar, Susan Buckey, Natalie Hebsie, Kristy Hill, and Thea Sahr talked about how Design Squad encourages aspiring engineers and shares engineering... [view full summary]

Price: Free via Your Subscription
Resources and Human Impact: Population Growth, Technology, and the Environment

Grade Level: Elementary School, Middle School

Science Object

Science Objects are two hour on-line interactive inquiry-based content modules that help teachers better understand the science content they teach. The Science Object is the second of four Science Objects in the Resources and Human Impact ScPack. It explores how technology can solve problems, but at the same time, can also create new strains on the environment. Improved technology used for harvesting food, coupled with the technology of improved...

Price: Free via Your Subscription

Educational Technology in the Science Classroom

By: Glen Bull and Randy L. Fell

Grade Level: Middle School, High School
Welcome to Your Professional Development Web Space!

Flavio, you've already earned 360 Activity Points!

You've recently earned: NSTA Resource Optimizer Add NSTA Resources
You're close to earning: Onyx Commenter Post 5 more comment/questions

Be sure to update your profile and review your points & badges!

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Accountability System for States, Districts, and Schools

Texas Regional Collaborative for Excellence in Science and Mathematics Teaching Directors Admin Page

Welcome to your NSTA resource administrator page.

Data below is provided to assist you in tracking activity and progress of your program participants.

Overview

<table>
<thead>
<tr>
<th>Number of Licenses Purchased</th>
<th>Number of Licenses Used</th>
<th>% Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>55</td>
<td>110%</td>
</tr>
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</table>

Total Products Added by Type

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Number Added</th>
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<tbody>
<tr>
<td>SciPack</td>
<td>155</td>
</tr>
<tr>
<td>Science Object</td>
<td>101</td>
</tr>
<tr>
<td>Journal Article</td>
<td>51</td>
</tr>
</tbody>
</table>
State and District Implementations

Over 200 unique cohorts across 68 State/District Partnerships as of January 2011

- West Virginia Department of Education
- Hawaii Department of Education
- Chicago Public Schools, IL
- Fairfax County Public Schools, Fairfax, VA
- Cincinnati Public Schools, OH
- Jefferson County Public Schools, Louisville, KY
- New York City Public Schools, NY
- Prince George's County Public Schools, MD
- LASER Alliance, Mountain to Harbor Alliance, WA
- St. Paul Public Schools, MN
- Zero-G Flight Initiative
- Montana Status University, Bozeman, MT
- Orange County, CA
- Shelby County Public Schools, TN
- Duval County Public Schools, Jacksonville, FL
- Arlington County Public Schools, Arlington, VA
- Texas A&M, Texas Centers for Excellence in Science and Mathematics (36 centers across Texas)
- PRISM Grant Program, MT
- Stamford County Public Schools, Stamford, CT
- University of Maryland Baltimore County, MD
- Atlanta Public Schools, Atlanta, GA
“I like that the Learning Center provides tailor made PD. By providing an initial assessment of content knowledge and then suggesting resources, it allows teachers to self-assess in a safe and constructive way. I think this is invaluable, especially for teachers that may be teaching a content in which they are inexperienced.” Fairfax, VA

“I am finding the NSTA discussion groups very helpful. People are really coming forward with suggestions, articles, etc. You can also get help for a very specific topic in a timely fashion.” Chicago, IL

“I absolutely love the NSTA Learning Center. I have gained so much information and I wish others would take the time to see what it is all about.” Atlanta, GA
Research and Dissemination

Three Recent Studies

• Quasi-experimental design study across 3 districts finding significant gains in teacher content knowledge. (2008)

• One 2 pretest-posttest delayed-treatment control group design with random assignment finds significant gains in teacher content knowledge, teacher self-efficacy, and students’ learning for grades 5-8 in treatment group. (2010)

• One descriptive study underway (dissertation research) finds significant gains in teacher learning for pre-posttest and pretest-final assessment for 103 teachers in grades 3-6. (2010)
Recognize our Collaborators

- NSF
- NASA
- NOAA
- FDA
- S. D. Bechtel, Jr. Foundation
- National Institutes of Health
- Department of Education
- Montana State University
- NHTSA
- NSDL
- Sally Ride Science
- GE Foundation
- Agilent Technologies Foundation
- The William and Flora Hewlett Foundation
- ExxonMobil Foundation
A Critical Piece of the Solution

• A community to share ideas, ask questions, and earn points

• Practical tools to help teachers organize, personalize & document growth over time

• Over 6,100 resources
Opportunities for you!
1. Free SciPack

2. Would you like a free SciGuide too?

3. How about another free SciPack?
Thank You

- Dr. Francis Eberle
  PH: 703-312-9255
  Email: feberle@nsta.org

- Edward Rock
  PH: 703-312-9201
  Email: erock@nsta.org
74,509 Active Users*

- 16,612 Members (22.3%)
- 57,897 Non-Members (77.7%)

Active User Growth

562,834 Resources in Libraries

- 102,396 (3/11/2008)
- 175,473 (3/11/2009)
- 400,351 (3/11/2010)
- 562,834 (3/11/2011)
Barclay! The adjacent school district’s test scores went up 25% last year apparently due to ‘e-learning.’ Whatever that is...I want two of them!
Below are group forums that you may join. Post to existing topics or start your own! All NSTA resources, personally uploaded resources, and collections may be shared and commented upon within these discussions.

26 people currently online

### Public Forums

<table>
<thead>
<tr>
<th>Forum</th>
<th>Last Post</th>
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<tbody>
<tr>
<td>Life Science</td>
<td>29 Topics by Patricia Rourke, Environmental Science</td>
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<tr>
<td></td>
<td>540 Posts yesterday, 7:34 PM</td>
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<tr>
<td>Physical Science</td>
<td>22 Topics by Steve Werner, Physical Science in the News</td>
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<tr>
<td></td>
<td>310 Posts yesterday, 11:32 PM</td>
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<tr>
<td>Earth and Space Science</td>
<td>31 Topics by Adah Stock, Earth Science Standards</td>
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<tr>
<td></td>
<td>426 Posts today, 10:04 AM</td>
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<tr>
<td>General Science and Teaching</td>
<td>85 Topics by Jan Tuomi, Topics in Science Course</td>
</tr>
<tr>
<td></td>
<td>1053 Posts today, 12:15 PM</td>
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<tr>
<td>Evaluation and Assessment</td>
<td>2 Topics by Dorian Janney, Evaluating Science Programs</td>
</tr>
<tr>
<td></td>
<td>5 Posts yesterday, 8:17 PM</td>
</tr>
</tbody>
</table>

Who is Online

Sean Andersen, Debra Bridges, Michelle Brown, Cheryl Dix, Cheryl Dix, Sharon Euler, Eddie H, Julie Heintz, Danielle Hoffman, Marcella Jimenez, Leigh Lace, Renee Lodi, Flavio Mendez, Judy Meredith, Arturo Navar, Melissa Ocker, Gina Peters, Julie Poth, heidi putman, Joel Rolon, nancy shock, Gerald Skoog, Allyson Streeter, Debbie Tomlin, Jan Tuomi, Jennifer Wyland
by Patricia McGinnis, Sat Aug 28, 2010 10:52 AM

Subject: Patty McGinnis' Collection

I will be working with gifted students this year as a gifted resource specialist so I have started my collection with items that I can use with the gifted students. I have selected 3 articles from NSTA journals and 3 archived webinars about science competitions like Exploravision. Normally teachers don't have time in the curriculum to conduct competitions. It is my hope that I can build a program that would include all sorts of challenging activities for students, including science competitions.

by Patricia Rourke, Mon Aug 30, 2010 11:43 AM

This will be interesting since I just went in and copied my current Library Profile and attached it below. I will take the time to explore NSTA Resources with new eyes looking for items that may be useful to us as on-line advisors. As I scanned the posts prior to this one, and I am sure those that will follow, I know that there will be additional areas selected by you that I will want to explore also. My current profile reflects my recent collaboration with NSTA.

Attachments

PAR_Library_Profile_Aug_30.jpg (0.07 MB)
Fiavio Mendez  
NSTA Staff

About: I am the NSTA Learning Center Senior Director. I enjoy working with educators and hope that you find the NSTA Learning Center useful and supportive to your PD goals.

Affiliation: National Science Teachers Association

Location: Arlington, VA

Badges: 

Visit the activities page to learn how you can earn points and badges. The NSTA Learning center awards badges based on activities performed within the website. Pursuing badges is a great way to explore all the resources and professional development tools the Learning Center has to offer.

Contact

Statistics

Joined: Tue Nov 07, 2006 8:39 AM
Last Visited: Today, 4:49 PM
Total Posts: 83
2010 National Education Technology Plan

Through online learning systems, teachers may enhance their learning through blending the best of onsite PD with online PD that provides immediacy, convenience, self-direction, and collaboration with other colleagues and experts via professional learning communities.

For teachers to effectively facilitate using interactive resources, learning systems, and connectedness to online communities, teachers need to experience it firsthand as part of their own learning and professional development.

<table>
<thead>
<tr>
<th>Earth &amp; Space</th>
<th>Physical</th>
<th>Life</th>
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<tr>
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<td><strong>7 Topics</strong></td>
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<td>- Earth, Sun &amp; Moon</td>
<td>- Force &amp; Motion</td>
<td>- Cell Structure &amp; Function</td>
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<td>- Gravity &amp; Orbits</td>
<td>- Energy</td>
<td>- Coral Reef Ecosystems</td>
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<td>- The Solar System</td>
<td>- Nature of Light</td>
<td>- Science of Food Safety</td>
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<td>- The Universe</td>
<td>- Chemical Reactions</td>
<td>- Resources &amp; Human Impact</td>
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<td>- Weather &amp; Climate</td>
<td>- Electric and Magnetic Forces</td>
<td>- Nutrition</td>
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<td>- Rock Cycle</td>
<td>- Atomic Structure</td>
<td>- Cell Division &amp; Differentiation</td>
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<tr>
<td>- Plate Tectonics</td>
<td>- Explaining Matter with Elements, Atoms, and Molecules</td>
<td></td>
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<tr>
<td>- Earth’s Changing Surface</td>
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</table>

| In Production                     |                  |                            |
| *(Expected release date by end of 2011)* |                  |                            |
| - Earth’s History                |                  |                            |

| Coming Soon                      |                  |                            |
| *(Expected release date by end of 2012)* |                  |                            |
| - Cells & Chemical Reactions     | - Flow of Matter & Energy in Ecosystems | - Interdependence of Life |

|                      |                  |                            |
| - Heredity & Variation     |                  |                            |
| - Biological Evolution    |                  |                            |
| - Natural Selection       |                  |                            |
| - Regulation & Behavior of Organisms |                  |                            |
WV SciPack 2007

- 67% Did NOT Complete Program
- 33% Successful Completion of Both Sci Packs

WV SciPack 2008

- 84% completed both
- 4% completed one
- 4% unsuccessful attempts
- 8% no attempts

WV SciPack 2009

- 82% passed both Sci Packs
- 7% passed 1 Sci Pack
- 8% uncessful attempts
- 3% other

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<td>74</td>
<td>68</td>
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<td>Differences in WV SciPack Programs</td>
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<td>2008</td>
<td>2009</td>
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<td>-----------------------------------</td>
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<td>Travel expenses paid in summer</td>
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<td>Stipends</td>
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<tr>
<td>Full stipend paid in summer</td>
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<tr>
<td>Initial stipend paid in summer</td>
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<td>✗</td>
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<tr>
<td>No initial stipend</td>
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<tr>
<td>Remaining stipend paid upon successful completion of program</td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Full stipend paid upon successful completion</td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Possible grad credit at MU for successful completion of program</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Tuition paid by grant program</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Tuition paid by participant &amp; reimbursed upon successful completion of program</td>
<td></td>
<td></td>
<td>✗</td>
</tr>
</tbody>
</table>
Atlanta Public Schools

Learning Center Outcomes

- 641 teachers participated in online and face-to-face components
  - 548 Elementary (grades 3-5)
  - 93 Middle (grades 6-8)

- 4122 resources were added to the teachers’ personal libraries
**APS, SciPack Data**

<table>
<thead>
<tr>
<th>Region</th>
<th>Pre-Test</th>
<th>Post-Test</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>48%</td>
<td>66%</td>
</tr>
<tr>
<td>2</td>
<td>51%</td>
<td>61%</td>
</tr>
<tr>
<td>3</td>
<td>46%</td>
<td>61%</td>
</tr>
<tr>
<td>4</td>
<td>44%</td>
<td>80%</td>
</tr>
<tr>
<td>Overall</td>
<td>47%</td>
<td>67%</td>
</tr>
</tbody>
</table>