The NSTA Learning Center:
Free Professional Learning Resources and Opportunities for Educators

Presented by: Al Byers, Ph.D. and Flavio Mendez

April 23, 2013
6:30 p.m. – 8:00 p.m. Eastern time
Introducing today’s presenters…

Al Byers, Ph.D.
Assistant Executive Director, e-Learning and Government Partnerships
National Science Teachers Association

Flavio Mendez
Senior Director, NSTA Learning Center
National Science Teachers Association
Agenda

• Blended professional learning
• e-Resources that you can use
• Tools to manage/document your learning
• Learning in community

http://learningcenter.nsta.org
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.

Selected Excerpts of Analysis

• Literature review from 1996 to 2008, more than 1,000 studies, 50 met rigor for meta-analysis

• On average, students in online learning performed modestly better than those receiving f2f instruction (few studies, mostly corporate/IHE’s)

• From 50 independent effects identified for meta-analysis comparisons, 11 significantly positive effects favoring online and blended learning, 3 favoring f2f.

• Instruction combining online and f2f elements had a larger advantage relative to purely f2f instruction or purely online instruction
  o Blended vs. Face-to-Face
    Mean effect size +0.35, p < .001
  o Online vs. Face-to-Face
    Mean effect size +0.05, p = .46
What types of onsite learning are you doing?

<table>
<thead>
<tr>
<th>Pursuing a science degree at local university and/or community college</th>
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<tbody>
<tr>
<td>6-to-8 week university/community college short course</td>
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<tr>
<td>2-week intensive course at local university, government program, or district office</td>
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<tr>
<td>Professional conferences/out-of-state programs</td>
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<td>Local weekend workshops at university or other research facility</td>
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<tr>
<td>After school sponsored by school/district</td>
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<td>Other</td>
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How can you enhance and extend your onsite professional learning?
A Critical Piece of the Teacher Learning Solution

- Self-Directed Access
- 3,700+ free resources
- Free tools to help teachers diagnose, organize, personalize, and document their learning
- Immediate free access to online advisors and colleagues through chat and discussion
- Badge recognition system
121,421 Active Users*

- 22,468 Members (18.5%)
- 98,953 Non-Members (81.5%)

Active User Growth

1,078,594 Resources in Libraries
What’s free in the NLC?

- NLC account *(you DO NOT need to be a member of NSTA to create one!)*
- Over 3,700 resources
  - Science Objects (94)
  - Web Seminars (live, archives, and podcasts) (~1,800)
  - Journal Articles (~1,200)
  - e-Book chapters (~200)
  - Symposia Archives
  - External Resources: NASA, NDEP
- All PD tools
- All public collections (~4,300)
- All public community forums (12)
- All conference materials
Free, self-directed, interactive learning experiences

Based on science education standards

Ninety-four (94) currently available
Elements of a Science Object

Videos
Slide shows
Images
Preconceptions boxes

Hands-on activities

Simulations
Assessment
Science Simulations and Animations (over 260!)
Visit the web address below to experience an NSTA Science Object sample interactive:
### Earth and Space
- Earth, Sun, and Moon
- Gravity and Orbits
- The Solar System
- The Universe
- Weather and Climate
- Rocks
- Plate Tectonics
- Earth’s Changing Surface

### Physical
- Force and Motion
- Energy
- Nature of Light
- Chemical Reactions
- Electric and Magnetic Forces
- Atomic Structure
- Explaining Matter with Elements, Atoms, and Molecules

### Life
- Cell Structure and Function
- Coral Reef Ecosystems
- Science of Food Safety
- Resources and Human Impact
- Nutrition
- Cell Division and Differentiation
- Cells and Chemical Reactions
- Flow of Matter and Energy in Ecosystems
- Interdependence of Life
- Heredity and Variation

Science Objects are available in these 25 topics
Add free Science Objects to your “My Library”
Welcome to Your Personalized Learning Center!

Flavio, you've already earned 7705 Activity Points!

You've recently earned:
- Pearl Disseminator
- Diamond Committee
- Share LC Collections

You're close to earning:
- Diamond Committe
- Share LC Collections

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.
See All Science Objects

or

Display Science Objects by Subject Area

Ready When You Are — for Free!
You're teaching a subject for the first time, or for the first time in a long time. You need a content refresher now. Where can you find help that's engaging, high-quality, easy to access — and affordable, too?

From NSTA's latest ready resource: Science Objects! Science Objects are two hour on-line interactive inquiry-based content modules that help you better understand the science content you teach.

With support from sponsors, Science Objects provide all teachers of science open access to these valuable new resources—at no cost!

The system check will detect your current browser settings and plug-ins you have on your computer as are required to access the rich media content in the Science Objects, such as the Flash and QuickTime media players.

[Learn More]
Add a Science Object to Library
e-Journal Articles:

- Science and Children (*elem.*)
- Science Scope (*middle*)
- The Science Teacher (*high*)
- Journal of College Science Teaching

Which journal are you interested in exploring?

<table>
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<tr>
<th>S&amp;C</th>
<th>SS</th>
<th>TST</th>
<th>JCST</th>
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• Interact with leading scientists, engineers, education specialists and colleagues from around the world \textit{(Mon-Thu, evenings)}

• Learn on-demand via 450+ web seminar archives, 1,300+ podcasts
Add free e-Journal Articles, Web Seminar Archives, or Podcasts to your “My Library”
Welcome to Your Personalized Learning Center

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Welcome to Your Personalized Learning Web Space!

Flavio, you've already earned 12715 Activity Points!

You've recently earned: Diamond Commenter
You're close to earning: Platinum Commenter

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.
Ask an Online Advisor or use the Advanced Search to find resources.
NLC Activity Points: NSTA Resources

10 Activity Points for each NSTA resource that you add to your Library.

You will earn your first badge after adding 5 resources.
Learning Center’s PD tools
Welcome to your collection of professional development resources. Select from the links and tabs below to access your NSTA resources, your uploaded items, organize them into collections, and then share your collections with others.
My PD Plan and Portfolio

My Content Knowledge
- Review/Improve Physical Science Understanding
  - Force and Motion
  - Symposia - Force and Motion

Category: My Content Knowledge
Goal: Review/Improve Physical Science Understanding
My Tasks: Define Evidence

PD Resource to Address Goal
- Perspectives: Action Research - Inquiring Into Science Teaching and Learning
- NSTA Learning Center Resource

Expected Date of Goal Completion
6/30/2008

Goal Statement
I plan to improve my understanding and comprehension of major physical science concepts by participating in online courses and experiences relating to force and motion.

Why I chose this goal, and where I am now
- Empty - Add information

Standards
Standards for Professional Development for Teachers of Science: Knowledge and Understanding of Science Under the fundamental facts and concepts in major science
Learning Center
Community
Join the conversation with like-minded individuals
Welcome to Your Personalized Learning Web Space!

Flavio, you've already earned **6970 Activity Points**!

You've recently earned:
- **Emerald Aggregator**
  - Add Personal Resources
- **Diamond Commenter**
  - Post 21 more comment/questions

You're close to earning:
- **Shawna Paynter**
  - Last Week's Top Advocator

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.
Discussions forums

- 12 Forums
- 1,695 Topics
- 18,720 Posts
- Physical Science
- Life Science
- Earth/Space Science
- NGSS
- Evaluation/Assessment
- Research in Science Ed
- Elementary Science
- New Teachers
NLC Activity Points: Commenter

10 Activity Points for each posted message.
About Me: As a teacher, I bring experience to my work at the Vermont Agency of Education. I am co-lead in Vermont’s role in NGSS development. As the Elementary Science & Mathematics Specialist I assist with the implementation of the CCSS in both Mathematics and English Language Arts. Recently our team developed a Short Focused Research Project based on science content for K-2 students that is being shared regionally throughout the state. I am a member of a collaborative team of specialists from New Hampshire, Rhode Island and Measured Progress who develop, and construct the NECAP science assessment.

In 2000, I was honored as Vermont’s elementary Presidential Awardee for Excellence in Science Teaching. I am an active NSTA member who is currently on the committee that chooses the Outstanding Science Trade Books.

Affiliation: VT Agency of Education

Location: West Barnet, VT
Welcome to Your Personalized Learning Web Space!

Flavio, you've already earned 12715 Activity Points!

You've recently earned:  
- Diamond Commenter
  - Post comment/questions

You're close to earning:  
- Platinum Commenter
  - Post 2 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

Welcome. Flavio  ▸ Admin  ▸ Log Out
Public recognition for hours of online work!

<table>
<thead>
<tr>
<th>Pos</th>
<th>Name</th>
<th>Total Activity Points Earned</th>
<th>Recent Donations/Badges</th>
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<tbody>
<tr>
<td>1</td>
<td>James Johnson</td>
<td>14,780</td>
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<tr>
<td>2</td>
<td>Rebecca Falin</td>
<td>13,530</td>
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<tr>
<td>3</td>
<td>Olukayode Banmeke</td>
<td>5,950</td>
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<tr>
<td>4</td>
<td>Sandra Desieno</td>
<td>5,340</td>
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<tr>
<td>5</td>
<td>Melinda Holmes</td>
<td>4,565</td>
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<tr>
<td>6</td>
<td>Karen Weir-Brown</td>
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<td>7</td>
<td>Danielle Courson</td>
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<tr>
<td>8</td>
<td>Shannon Cole</td>
<td>1,480</td>
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- Badge recognition system
Don’t forget the web seminar evaluation

and to choose your FREE SciPack
10-Hour, self-directed, learning experience

3-5 Science Objects

SciPack

Content Mentor
Email Support

Assessment and Certification

Pedagogical Implications

FREE FREE FREE FREE

National Science Teachers Association
Certification of Science Content Proficiency
Thank you to today’s presenters…

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Senior Director, NSTA Learning Center
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