

Blended Professional Learning for Pre-Service and In-Service Science Educators:

The **NSTA** Learning Center



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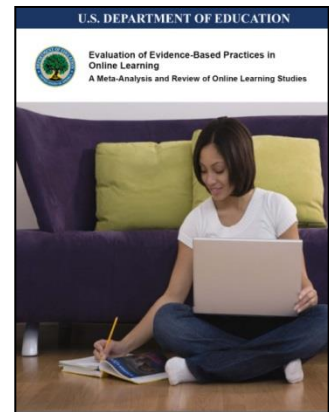
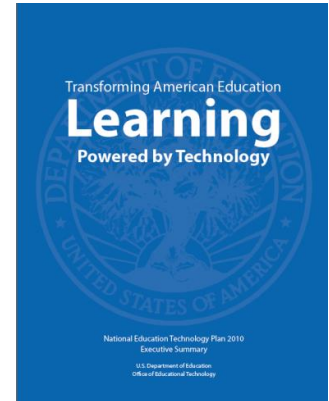
If time is the most precious non-renewable resource teachers have, and face-to-face professional learning experiences alone don't reach scale, and are too expensive if the sole method of engagement/delivery...then...

US Department National Education Technology Plan

Through online learning systems, teachers may extend and 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.**

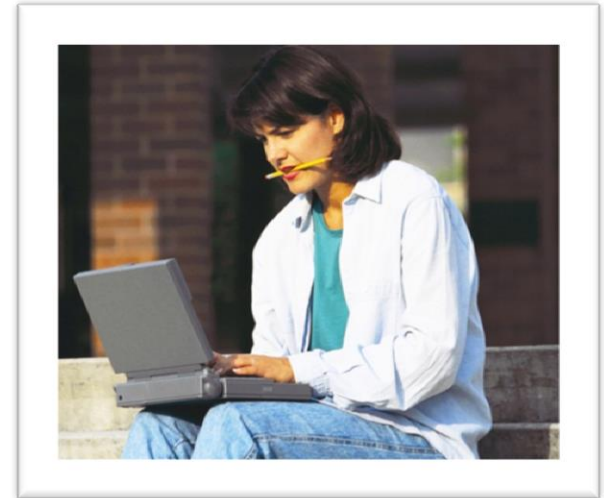
US Department of Education (2010). *Transforming American education: Powered by Technology*. Washington, DC: Office of Educational Technology.



Blended PD: Models for Delivery

Examples from IBM, Shell, Cisco, and others:

- *Anchor Blend*: Begins with f2f and continues online
- *Bookend Blend*: Meet online for pre-work before initial f2f, follow-up online for continued discussion
- *Field Blend*: Most self-directed, where learners control the pace and time for learning, gaining access to resources and support online when and where they need them.



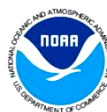
(Kim, Bonk & Oh, 2008)

A Critical Piece of the Teacher Learning Solution

- Self-Directed Access
- 4,200+ free resources
- Free tools to help teachers diagnose, personalize, and document their learning
- Free access to online advisors and colleagues through chat and discussion
- Badge recognition system



The screenshot shows the NSTA Learning Center website. At the top, there's a navigation bar with links like NSTA Home, Learning Center Home, My PD Tools, Subjects, Learning Resources & Opportunities, Community Forums, Ed. Administrator Professor, and Help. Below this is a 'My Learning Center' section with a welcome message to 'Flavio' and links to View Cart, Admin, and Log Out. The main content area is titled 'Teacher Learning Journeys: Learn Today...Your Way' and includes a search bar and a description of the personalized learning journey. Below this is a section for 'Explore Learning Resources and Opportunities' with filters for Advanced Search, See all FREE Lesson Plans, and See all FREE Resources. It also has tabs for By Subject (Earth & Space Science, Life Science, Physical Science), By Grade Level (Elementary, Middle School, High School, College), and By State Standards (with a dropdown to 'Choose a state'). Other sections include 'Do-It-Yourself Learning', 'Live Online Seminars & Classes', 'Books, Articles & Websites', and 'In Person Experiences'. On the right side, there's a 'Next Generation Science Standards' banner for a virtual conference, a 'Most Popular Resources' list, and a 'Tegan Collier' badge for 'Last Week's Top Appraiser'.



S.D. Bechtel, Jr.
Foundation



GE Foundation



EXXONMOBIL
FOUNDATION

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Technologies
Foundation

:: NSTA Learning Center Admin

Stats as of 11/15/2014



Show the Previous:

5



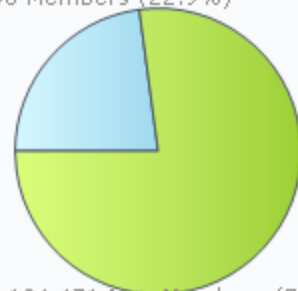
Years



Update

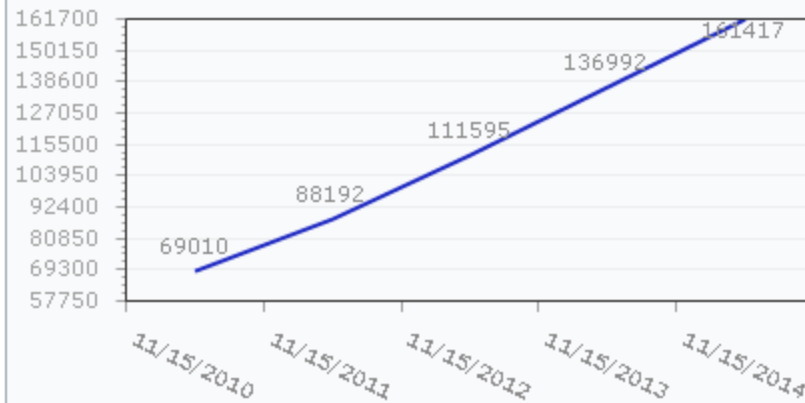
161,417 Active Users*

36,946 Members (22.9%)

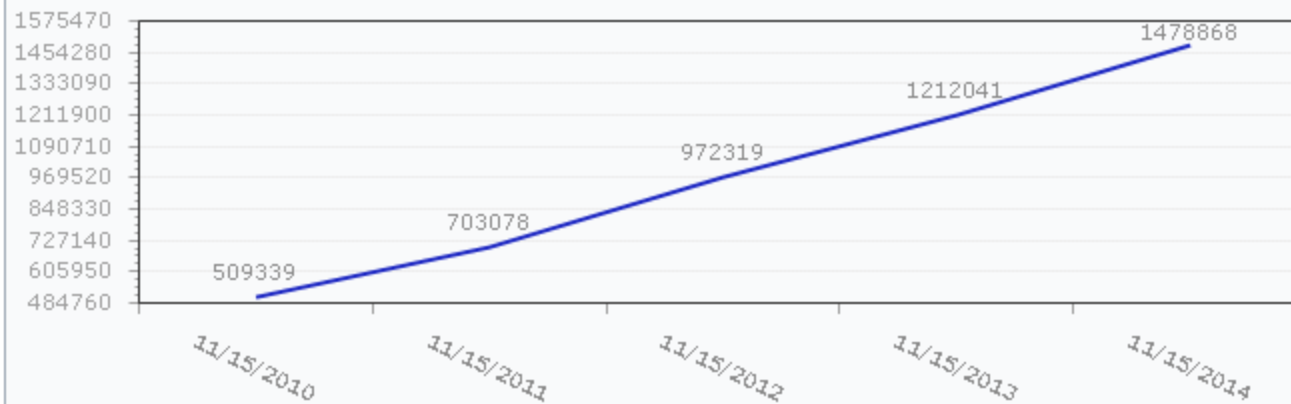


124,471 Non-Members (77.1%)

User Growth



1,478,868 Resources in Libraries



The **NSTA** Learning Center **Resources, Tools, and Community**

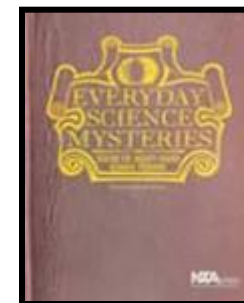
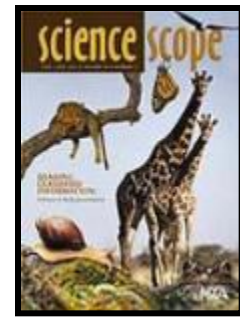
<http://learningcenter.nsta.org>

What's free in the NLC?

NLC account *(No NSTA Membership)*

Over 4,200 digital resources

- Science Objects *(94)*
- Web Seminars & Archives *(Over 2,100)*
- Journal Articles/Lesson Plans *(Over 1,340)*
- e-Book chapters *(Over 289)*
- NASA, NDEP STEM career videos (external)
- All PD tools
- All public end-user collections *(Over 7,129)*
- All public community forums *(14)*
- All conference presenter materials *(Over 7,000)*



Interactive Web Modules Review Disciplinary Core Ideas in Science

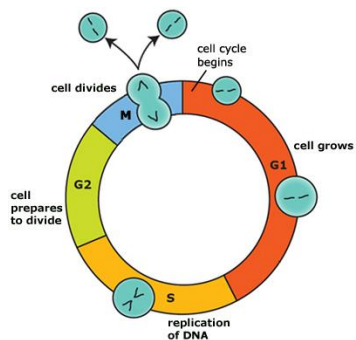


- Two-hour **free** online learning experience in a particular topic
- Ninety-four **(94)** Science Objects currently available





Videos and Illustrations



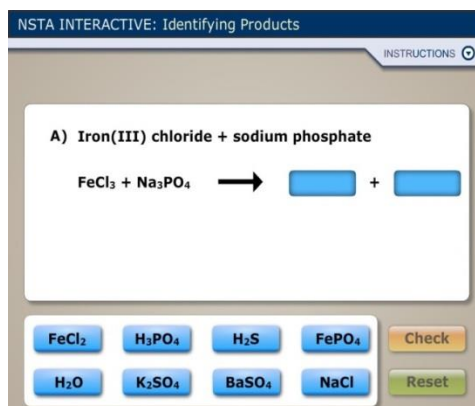
Animations



The petri dish after overnight incubation shows colonies of bacterial growth.

Slide shows

Interactive Elements



Simulations



Hands-On Activity

[Click here](#) for a hands-on activity that allows you to track cells in a growing root to see where the largest region(s) of growth occur.

Teacher 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 (Knippels 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 SciPack](#).

Student Preconceptions



Which of the following best describes the concept of inertia?

- ☐ Inertia is just a name that describes the fact that an object obeys Newton's first law.
- ☐ Inertia is sort of an "internal force" that actively resists changes in motion. For example, when you try to push something, its inertia pushes back on you.
- ☒ Inertia is something that pushes an object along once you have thrown and released it.
- ☐ Inertia is something moving, an object loses


Answer Feedback

Please try again.

Inertia is the reason the object keeps moving even after you release it, but it is not something that pushes the object along. Once you release the object, there might be forces of air friction and gravity acting on it, but the object itself doesn't do any pushing.

[Close](#)

Formative Assessments



National
Science
Teachers
Association

SciPacks and
Science Objects

Home
Ask the Mentor
Help
Glossary
Return to the Learning Center

TABLE OF CONTENTS

- Orientation
 - Getting Started
 - Getting Help
 - Getting Certified
- Force and Motion SciPack
 - Position and Motion
 - Newton's First Law
 - Newton's Second Law
 - Newton's Third Law
 - Introduction
 - Let's Get Started
 - Activity
 - The Basic Idea
 - A Full Statement
 - Tying it All Together
 - Evaluation
 - Glossary
 - Learning Outcomes
 - Pedagogical Implications
 - Final Assessment
 - Credits

Force and Motion SciPack

Introduction > Activity

Previous Section
Next Section

00:00 00:33

Activity

As an introduction to this material, imagine that you are in the middle of a frozen pond. This pond is so slick that it's essentially frictionless. In other words, there is no friction between you and the pond. Your job is to get off the pond to safety. You can do a few things. One is to stand up and walk. Another is to crawl. You also have plenty of snow around you, and you can throw a snowball either up, down, or to the side. Gee, you don't suppose those snowballs have something to do with getting off the pond, do you?




Figure 1.2. Action and Reaction Simulation.



attracts anything on the Earth to bring it closer, but the Earth is able to hold onto everything except water. This attraction stretches the Earth's oceans into an ellipse (Earth in the center). The effect takes the form of two bulges relative to the Earth, one nearest the Moon and one farthest from it.

- Each day there are two high tides and two low tides.
- There are about 12 hours and 25 minutes of separation between two high tides.

Liberty Science Center

Neap Tides:

During the Moon's First and Third quarter phases the Sun and Moon are at right angles to each other, causing the water bulges to cancel each other. The result are low and high tides known as Neap Tides.

- Neap Tides are especially weak tides and only occur once a month.

The Proxigean Tide:

This is a rare and unusual tide that occurs when the Moon is at its closest point to Earth and in its full or new phase.

- The Proxigean Tide occurs only once a year.



NSTA SCIENCE SIMULATION: Horizontal Balloons

INSTRUCTIONS 



CONTROL PANEL

☐ **START**

☐ **RESET**

PAYLOAD

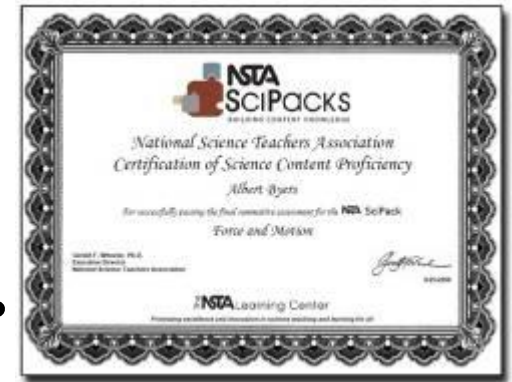
BALLOONS  3 

WASHERS  2 



3-5 Science Objects

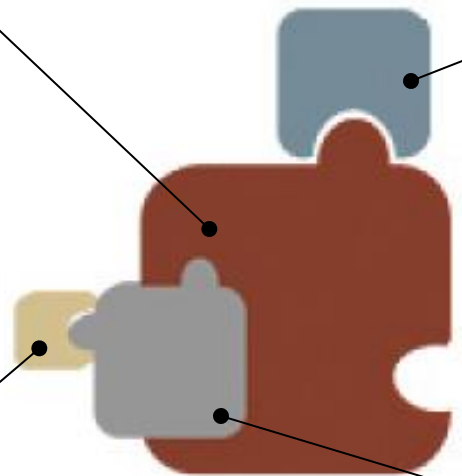
10-Hour, self-directed, online module



Final Assessment with Certificate and Badge



**Unlimited Email Support
Content Mentor**



SciPack



**Pedagogical Implications
Science Object**

Assessments

District /University Pre-Post assessment Results

Graphs

Raw Numbers

5/7/2013



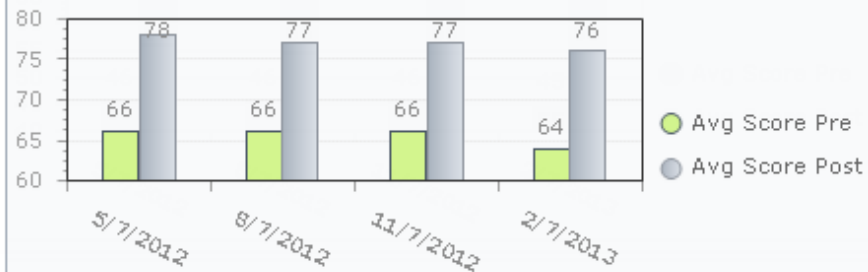
Previous: 4 Quarters Update

Energy Assessment

1183 Pre-tests taken with a 64% avg score

463 Post-tests taken with a 73% avg score

totals as of 5/7/2013

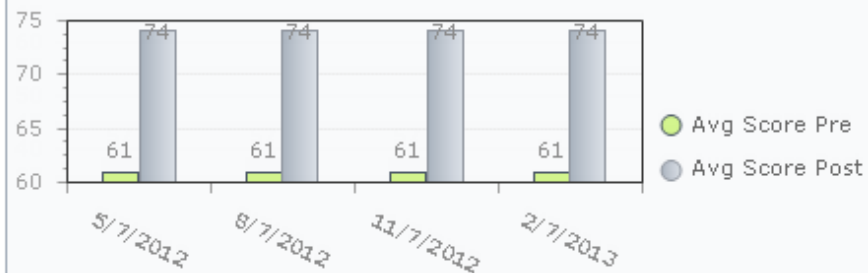


Earth's Changing Surface Assessment

341 Pre-tests taken with a 61% avg score

95 Post-tests taken with a 74% avg score

totals as of 5/7/2013

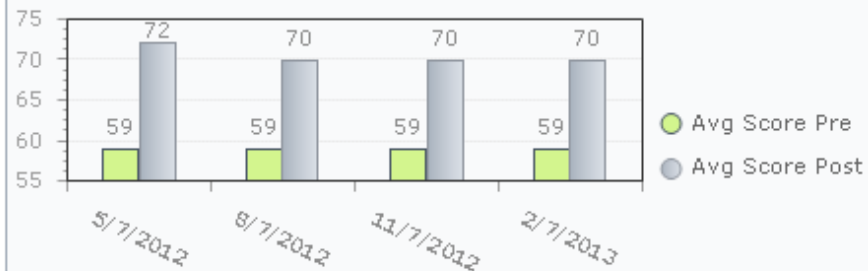


Cell Structure and Function Assessment

415 Pre-tests taken with a 59% avg score

116 Post-tests taken with a 70% avg score

totals as of 5/7/2013



Teacher Learning and Self-Efficacy (SciPacks)

- **Quasi-experimental Design Study:** Across 3 districts finding *significant gains in teacher content knowledge using single SciPack*. (2008). n=45, teachers in grades 5-8
- **Experimental Design Study:** Pretest-posttest delayed-treatment/control group design with random assignment finds *significant gains in teacher content knowledge, teacher self-efficacy, and students' gain scores for grades 5-8 in treatment group across two SciPacks*. (2009-2010), n = 56
- **Descriptive Study:** Dissertation research finds *significant gains in teacher learning* for pre-posttest and pretest-final assessment. (2010). n = 85, teachers grades 3-6 from 11 different states.
- **NASA Blended PD Evaluation Study.** Incorporated SciPacks, Online Communities, Badges, Leader Boards, and Online Courses across 13 districts. *Significant gains in teacher learning and self-efficacy* (2010-2012) n = 300.


See: <http://learningcenter.nsta.org/research/>

PD Indexer and The PD Plan and Portfolio

- Diagnose Science Content Knowledge Understanding
- View Resources and Opportunities for Consideration
- Add to your Plan

PROFESSIONAL DEVELOPMENT INDEXER

The Professional Development Indexer helps you diagnose your needs in specific science content areas and provide suggestions of NSTA e-PD resources and opportunities you may want to consider as you plan your professional development (PD). The Indexer does not assign a grade or present a score to the questions you answer, but saves a list of recommended resources for later review.



You have two options for indexing your PD needs. First, you may review all of the content areas across any of the three science disciplines provided: physical, life, or earth and space science by clicking the "Diagnose All Subjects" button with a specific discipline. This will present you with five questions randomly selected from each content area for that discipline. Or, you may select one or more content areas within a discipline by checking the appropriate boxes and then selecting the "Diagnose Selected Subjects" button. This will present 10 questions from each science content area selected.

Earth and Space Science Indexer

Content Areas Covered:

- ☐ Rock Cycle
- ☐ Earth, Sun, and Moon
- ☐ Gravity and Orbits
- ☐ Solar System
- ☐ Plate Tectonics
- ☐ Universe
- ☒ Oceans Effect on Weather and Climate
- ☐ Earth's Changing Surface

Diagnose Selected Subjects

Diagnose All Subjects

Completed Indexes Indexes in Progress

Completed Indexer Results

| | | |
|----------------------|--------------------|--------|
| Rock Cycle, Earth... | Results 3/23/2007 | Delete |
| Solar System, Pla... | Results 11/5/2008 | Delete |
| Gravity and Orbit... | Results 11/17/2009 | Delete |
| Solar System | Results 10/5/2009 | Delete |
| Oceans Effect on ... | Results 11/21/2009 | Delete |

Hide Results

Life Science Indexer

Content Areas Covered:

- ☐ Cell Structure and Function
- ☐ Coral Reef Ecosystems
- ☐ Science of Food Safety

Completed Indexes Indexes in Progress

Completed Indexer Results

| | | |
|----------------------|-------------------|--------|
| Cell Structure an... | Results 9/11/2009 | Delete |
|----------------------|-------------------|--------|

PROFESSIONAL DEVELOPMENT INDEXER

Category: Life Science Indexer

Date: 4/1/2011

↓ **About Your Feedback**

↓ **Collapse All Recommended Resources**

Cell Division and Differentiation

Your score: **5** out of **10** correct

Close Resources

All Resources for this Subject

Cell Division and Differentiation



Cell Division and Differentiation: Continuity of Life

Science Object



Add to PD Plan

Science Objects are two hour on-line interactive inquiry-based content modules that help teachers better understand the science content they teach. This Science Object is the first of three Science Objects in the Cell Division and Differentiation SciPack.

Member Price: **Nonmember Price:** Free

Free

Grade Level: Elementary School, Middle School, High School



Cell Division and Differentiation: Variation and Specialization of Cells

Science Object



Add to PD Plan

Cronbach Alpha Internal Consistency

| Pre and Postassessment | No. of Items | No. of Cases | Internal Consistency* |
|---------------------------------|--------------|--------------|-----------------------|
| Earth History | 20 | 111 | .704 |
| Magnetic and Electric Forces | 22 | 114 | .821 |
| Nature of Light | 20 | 105 | .737 |
| Atomic Structure | 16 | 102 | .882 |
| Cell Structure and Function | 23 | 261 | .636 |
| Chemical Reactions | 23 | 101 | .877 |
| Elements, Atoms, & Molecules | 28 | 103 | .812 |
| Cell Division & Differentiation | 22 | 97 | .752 |
| Cells & Chemical Reactions | 24 | 94 | .821 |
| Force and Motion | 25 | 220 | .816 |
| Energy | 20 | 227 | .759 |
| Solar System | 20 | 238 | .695 |
| Plate Tectonics | 20 | 216 | .790 |

Byers, A., Koba, S., Sherman, G., Scheppke, J., & Bolus, R. (2011). Developing a web-based mechanism for assessing teacher science content knowledge.

Journal of Science Teacher Education.

The **NSTA** Learning Center as e-Textbook

<http://learningcenter.nsta.org/etextbook>

IHEs using the NSTA Learning Center as their e-textbook:

- Appalachian State University, *fa14*
- Brenau University, *fa14*
- Central Connecticut State University, *sp14*
- College of Charleston, *f13*
- College of St. Benedict/St. John's Univ., *sp14*
- Columbus State University, *fa14*
- Dominican University, *su13*
- Eastern Connecticut State University, *fa14*
- Elizabethtown College, *f13*
- Florida Gulf Coast University, *fa14*
- Florida International University, *sp12*
- Fort Hays State University, *f13*
- Idaho State University, *sp12*
- Indiana Univ.-Purdue Univ. Columbus, *f12*
- Indiana University South Bend, *f13*
- Kent State University, *fa14*
- McLennan Community College, *su14*
- Mercer University, *sp12*
- Merrimack College, *fa14*
- Midwestern State University, *sp14*
- Minnesota State University Moorhead, *sp14*
- Montana State University Billings, *sp13*
- New Jersey City University, *fa14*
- New Mexico State University, *sp14*
- Northern Arizona University, *sp14*
- Northeastern Illinois University, *sp14*
- Northwestern College, *fa14*
- Oregon State University Cascades, *su14*
- Plymouth State University, *f12*
- Saint Mary's College at Notre Dame, *f13*
- San Diego State University, *sp14*
- Shippensburg University, *sp14*
- Southern Adventist University, *su14*
- Southern Illinois University Carbondale, *f11*
- SUNY Cortland, *fa14*
- University of Alberta, *fa14*
- University of Central Missouri, *f13*
- University of Connecticut, *su14*
- University of Delaware, *f13*
- University of Hawaii at West Oahu, *fa14*
- University of Houston, *fa14*
- Univ. of Maryland Baltimore County, *f12*
- University of Montana, *sp14*
- University of Nebraska Omaha, *su14*
- University of New Mexico, *fa14*
- University of Portland, *fa14*
- University of Regina, *sp14*
- University of South Carolina, *su14*
- University of South Carolina Aiken, *sp14*
- University of Texas at Tyler, *f11*
- University of Wisconsin Oshkosh, *f13*
- Virginia Commonwealth University, *f13*
- Virginia Tech, *sp14*
- Wayne State College, *fa14*
- Western New Mexico University Gallup, *sp13*
- Wilson College, *fa14*
- Wright State University, *sp14*

Student e-mail to professor

Just wanted to say a HUGE thank you for using the NSTA subscription as a text for our course this semester....I could not agree with a better way to use my textbook money than to subscribe to a great resource like this...also I think this will be one of the most resourceful tools I will use in my future teaching career. Just wanted to acknowledge the awesomeness of this helpful tool.

S. Middleton,
Indiana University South Bend



The **NSTA** Learning Center

Back-End Instructor/Administrator Dashboard

Individual Users

Accountability system for professors; collect data on usage by individual, manage the content on your class landing page, analyze pre/post test scores and other activity data.

| User | Date Registered | # of Resources via Subscription | Last Active | Activity Points |
|--------------|---------------------|------------------------------------|---------------------|-----------------|
| Teacher name | 02/03/2013 1:42 PM | 33 | 03/25/2013 5:43 PM | 1345 |
| Teacher name | 09/24/2011 9:58 PM | 56 | 04/02/2013 7:55 PM | 1165 |
| Teacher name | 02/06/2013 1:50 PM | 24 | 04/01/2013 9:00 PM | 1270 |
| | 01/31/2013 9:13 PM | 0 | 02/04/2013 1:14 PM | 0 |
| | 02/11/2013 10:09 PM | 24 | 03/14/2013 7:53 PM | 1210 |
| | 03/05/2013 9:10 AM | 163 | 04/02/2013 4:08 PM | 2610 |
| | 02/01/2013 1:04 PM | 106 | 04/01/2013 9:03 PM | 2265 |
| | 01/31/2013 2:02 PM | 237 | 04/01/2013 11:56 AM | 3490 |
| | 01/31/2013 7:57 PM | 67 | 04/02/2013 7:36 PM | 1780 |
| | 02/06/2013 3:53 PM | 41 | 03/27/2013 11:23 AM | 1115 |

SciPack Access History

4/2/2013

Teacher name

| Page | Access Date |
|---|---------------------------|
| Solar System Final Assessment | Thu Mar 14, 2013 10:34 AM |
| Jovian Anomalies | Wed Mar 13, 2013 12:53 PM |
| Terrestrial Anomalies | Wed Mar 13, 2013 12:53 PM |
| Differentiation | Wed Mar 13, 2013 12:51 PM |
| The Gaseous Beginning | Wed Mar 13, 2013 12:51 PM |
| Quiz | Wed Mar 13, 2013 11:51 AM |
| Summary | Wed Mar 13, 2013 11:51 AM |
| Looking Through New Eyes | Wed Mar 13, 2013 11:51 AM |
| Probing the Solar System | Wed Mar 13, 2013 11:50 AM |
| Seeing into the Sky | Wed Mar 13, 2013 11:50 AM |
| Telescopes: The Power of Technology | Wed Mar 13, 2013 11:49 AM |
| Subsequent Theories | Wed Mar 13, 2013 11:49 AM |
| Retrograde Motion as Evidence | Wed Mar 13, 2013 11:48 AM |
| Size and Distance | Wed Mar 13, 2013 11:47 AM |
| Measuring Positions of Earth, the Moon, and the Sun | Wed Mar 13, 2013 11:47 AM |
| View from Earth | Wed Mar 13, 2013 11:47 AM |
| Earth Among the Planets | Wed Mar 13, 2013 11:47 AM |
| A Closer Look at Asteroids | Wed Mar 13, 2013 10:25 AM |
| Quiz | Wed Mar 13, 2013 10:21 AM |
| Summary | Wed Mar 13, 2013 10:21 AM |
| Looking Through New Eyes | Wed Mar 13, 2013 10:21 AM |
| Search for New Bodies | Wed Mar 13, 2013 10:21 AM |

SciPack Progress Report

4/2/2013

Teacher name

| SciPack | Complete |
|--|----------|
| Flow of Matter and Energy in Ecosystems | 0% |
| Does Matter Matter? | 0% |
| Carbon, Carbon Everywhere | 0% |
| Nothing Matters Without Energy | 0% |
| Learning Outcomes | 0% |
| Pedagogical Implications | 0% |
| Flow of Matter and Energy in Ecosystems Final Assessment Attempts: 0 | |
| Solar System | 100% |
| Earth in Space | 100% |
| A Look at the Planets | 100% |
| Asteroids, Comets, and Meteorites | 100% |
| Formation of our | 100% |
| Learning Outcomes | 100% |
| Pedagogical Implications | 100% |
| Solar System Final Assessment Attempts: 3 | |
| Failed Tue Mar 12, 2013 3:12 PM Score: 61.54% | |
| Failed Wed Mar 13, 2013 10:00 AM Score: 61.54% | |
| Passed Thu Mar 14, 2013 10:49 AM Score: 88.46% | |

Pre/Post Test Results

| Test | Date Completed | Results | Score |
|---------------------------------|--------------------|---------|-------|
| Solar System Pre-Assessment | 2/27/2013 6:01 PM | 12/20 | 60% |
| Solar System Post-Assessment | 3/12/2013 10:42 AM | 17/20 | 85% |
| Earth and Space Science Indexer | 3/3/2013 9:02 AM | 26/40 | 65% |
| Life Science Indexer | 3/3/2013 10:01 AM | 33/50 | 66% |
| Physical Science Indexer | 3/3/2013 10:34 AM | 22/30 | 73% |

:: Activity

Overall Group Activity

9/1/2012 to 12/31/2012

75255 Total Points

1134 Add NSTA Resource
 88 Create Collection
 42 Complete Indexer
 0 Add Event
 1 Add Personal Resource
 33 Attend Web Seminar
 42 Complete SciPack
 43 Write Review
 10 Recommend Resource
 62 Post comment/question
 66 Share Collection
 33 Publicize Collection
 20 Create Portfolio
 390 Create Portfolio Goal
 298 Upload Evidence
 163 Complete Reflection
 39 Generate Report

:: Activity

Activity for Teacher name

9/1/2012 to 12/31/2012

3955 Total Points

69 Add NSTA Resource
 1 Create Collection
 1 Complete Indexer
 0 Add Event
 0 Add Personal Resource
 4 Attend Web Seminar
 3 Complete SciPack
 1 Write Review
 0 Recommend Resource
 3 Post comment/question
 2 Share Collection
 2 Publicize Collection
 1 Create Portfolio
 16 Create Portfolio Goal
 18 Upload Evidence
 9 Complete Reflection
 1 Generate Report

My Community Forums

14 Forums (including):

- Physical Science
- Life Science
- Earth/Space Science
- NGSS
- Evaluation/Assessment
- Research in Science Ed
- Elementary Science
- New Teachers

The screenshot shows a web page titled "Community Forums". At the top, there is a navigation bar with "Home > General Science and Teaching > The Flipped Classroom". Below this is a search bar and a "SEARCH COMMUNITY/PEOPLE" button. A status bar indicates "20 people currently online" and provides buttons for "POST REPLY", "WATCH THIS TOPIC", and "MOVE THIS TOPIC". The main content area displays a post by Kayla Anselmi, dated Sun Dec 04, 2011 3:34 PM, with 79 Replies and 1405 Views. The post discusses resources for students without internet access and includes two attachments: "Flipped Classroom Parent Letter.pdf" and "Flipped Mastery Rubric Unit 7.doc". To the right of the post is a user profile for Kayla Anselmi, showing 20 Posts, 3380 Activity Points, and a "Private Message Kayla" button. Below the first post is a reply by Sandy Gady, dated Thu Dec 15, 2011 10:40 PM, with 771 Posts and 27015 Activity Points. To the right of this reply is a user profile for Sandy Gady, showing 771 Posts and 27015 Activity Points. Below the second post is a reply by Pamela Auburn, dated Sat Nov 03, 2012 1:00 PM, with 1679 Posts and 54280 Activity Points. To the right of this reply is a user profile for Pamela Auburn, showing 1679 Posts and 54280 Activity Points. At the bottom of the page, there is a section titled "Flipping Your Classroom Collection" with 10 items, including "The Flipped Classroom Infographic", "Flipped Learning", and "Flip Teaching".

Community Forums

Home > General Science and Teaching > The Flipped Classroom

Find Topics and Users SEARCH COMMUNITY/PEOPLE

20 people currently online

POST REPLY WATCH THIS TOPIC MOVE THIS TOPIC

Sun Dec 04, 2011 3:34 PM 79 Replies 1405 Views by Maureen Stover Tue Feb 26, 2013 2:10 PM

by Kayla Anselmi, Thu Dec 08, 2011 1:15 PM

Sandy,

These are two great resources, thank you. The way I plan to deal with students who do not have access to the internet is either by allowing them to download the video files to a flash drive to play on thier computer (without internet) or by giving them a DVD with the videos burned to it so they can play them on their TV. I am also fortunate enough to be at a school that has an open computer lab that students are able to use in the mornings.

Here are two documents that I prepared to provide to parents and students as I begin this flipped model.

Attachments

Flipped Classroom Parent Letter.pdf (0.06 MB)

Flipped Mastery Rubric Unit 7.doc (0.05 MB)

EDIT REPORT REMOVE

by Sandy Gady, Thu Dec 15, 2011 10:40 PM

I too like your letter home to parents/guardians. You provide in a very clear and positive way the expectations you have that students will watch the videos at home.

A couple of curiosities. One, how long are the videos the students watch? Did you create them yourself, or are they already on YouTube or some other source? From your rubric, it appears you have a list of expectations for the amount of work your students need to complete. I'm not sure how long the unit you have listed is to last, it appears to be about three weeks. I would love to know more how this works in a real classroom over a period of time and the changes and modifications you would make.

EDIT REPORT REMOVE

by Pamela Auburn, Sat Nov 03, 2012 1:00 PM

I began flipping some of the lessons in my chemistry class when I re-wrote the learning outcomes to emphasize what students should be able to "do" rather than what they should know. This rewrite called to my attention that if the LOs were performance based I would need to structure my lessons around those performance objectives. Yes I know students are supposed to practice with homework at home. Well just as some students do not watch the videos even fewer do homework. So here I chose to fight the battle in what I thought the most effective manner. Practice is critical and guided practice is better than unguided (individual at home practice - more on this later) practice.

Here is a collection of resources on flipped classrooms

Flipping Your Classroom Collection (10 items) Open in New Window

The Flipped Classroom Infographic -User Uploaded Resource

Flipped Learning -User Uploaded Resource

Flip Teaching -User Uploaded Resource

Kayla Anselmi 20 Posts 3380 Activity Points Private Message Kayla

Sandy Gady 771 Posts 27015 Activity Points

Pamela Auburn 1679 Posts 54280 Activity Points

NSTA New Science Teacher Academy Explorations Accelerator

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**Kathy
Renfrew**

21175 Activity Points

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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.

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Affiliation: VT Agency of Education

Location: West Barnet, VT

Badges Earned:



Recognizing Teacher Learning and Leadership

- Provide opportunities to build reputation and contribute to the community and as part of your own personal growth*
- Facilitate administrator affirmation of teachers' growth*



Administrator: *One of our teachers sent the following information after receiving a note from NSTA that stated: Congratulations! You have been selected as the NSTA Learning Center Top Advocator for the week of May 28.*

She was delighted and wrote, "Look at what I got in my email! ...NSTA picked me!! It's all because of you that I started this science journey in the first place! Thank you!!"

...I simply put an announcement on Blackboard praising the top folks to date over the weekend. The only man in class had the overall top points. Several young women announced, "We can let Terry get away with that!" And so it began....

NSTA Learning Center Leader Boards

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Top Commenters

Building a worthwhile learning community provides opportunities for you to recognize those leaders that share their ideas, lessons and resources. The top commentators are those that contribute their voice in the Community Forums. [Join the dialog!](#)

Learning Headlines and Opportunities

Upcoming live web seminars:

October 6, 2014 - [Bringing Nature into the Classroom](#)

October, 2014 - [Celebrate Connected Educator Month](#)

Points This Month

| Pos | Name | Commenter Points Earned |
|-----|---|-------------------------|
| 1 |  <u>Dorian Janney</u> | 3500 |
| 2 |  <u>Cris Dewolf</u> | 3250 |
| 3 |  <u>Therese Houghton</u> | 3230 |
| 4 |  <u>Angie Fairweather</u> | 2670 |
| 5 |  <u>Chris Leverington</u> | 2610 |
| 6 |  <u>LeRoy Attles</u> | 2430 |

How to develop successful online social [learning] communities





Connected
Educators

The Connected Community

Exploratory Research on Designing Online Communities

of Practice for Educators to Create Value

U.S. Department of Education, Office of Educational Technology



Connected
Educator
Month

District Toolkit

Expanding the Circle,
Closing the Loop

September 2013

U.S. Department of Education
Office of Educational Technology

Questions