



**NSTA Learning Center
Free Professional Learning
Resources for Teachers**

Presented by: Flavio Mendez

July 27, 2011

The **NSTA** Learning Center

Free Professional Learning Resources for Teachers

July 27, 2011

<http://learningcenter.nsta.org>

Flavio Mendez
Senior Director

Goal of this seminar

- Overview of NSTA's e-PD Portal and the resources and opportunities within it



<http://learningcenter.nsta.org>

Why professional learning?



Teacher Content Knowledge

- A significant, *positive* correlation exists between *student achievement* and *teachers' content knowledge* (subject matter & pedagogical content knowledge)
- Detrimental effects occur when teachers do not feel confident in science



Aaronson, Barrow and Sander, 2003; Bransford, Brown,; Clermont & Borko, 1994; Cochran-Smith and Zeichner, 2005; Cocking, Donovan, & Pellegrino, 2000; Darling-Hammond, 2006; Darling-Hammond and Bransford, 2005; Economic Policy Institute, 2003; Gess-Newsome and Lederman, 1999; Goldhaber, 2002; Goldhaber and Brewer, 1998; Goldhaber and Brewer, 2000; Jepsen, 2004; Kane, Rockoff and Staiger, 2006; Ma, 1999; Monk, 1994; Rivkin, Hanushek, and Kain, 2005; Rockoff 2004; Sanders and Rivers, 1996; Shulman, 1986, 1987; Wenglinsky, 2002; Wilson, Floden and Ferrini-Mundy, 2001. Council of Chief State School Officers: Blank, R.K., Alas, N., & Smith, C. 2008.; Mestre & Cocking, 2002; Weinburgh, Smith, & Clark, 2008; Whitehurst, 2002; Wilson, Floden, & Ferrini-Mundy, 2002.

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 to effect a
change in practice.**

Banilower, E.R., Heck, D. J., & Weiss, I.R. (2007); Garet, M. Porter, A., Desimone, L., Birman, B., & Yoon, K. (2001); Yoon, K.S. Duncan, T., Lee, S.W., & Shapley, K. (2008); Supovitz, J.A. & Turner, H.M., 2000

A Critical Piece of the Solution

- A **community** to share ideas, ask questions, while earning points
- Practical **tools** to help teachers organize, personalize & document growth over time
- Over 6,400 **resources** (close to 2,000 free)



The screenshot shows the NSTA Learning Center website. At the top, there's a navigation bar with links: Back to NSTA.org, Contact Us, Help, and Feedback. Below this is the main header with 'The NSTA Learning Center' and a search bar. A secondary navigation bar includes links for Home, My PD Tools, Subjects, Learning Resources & Opportunities, Discussion Forums, and Education Administrator.

The main content area features a 'Welcome to Your Professional Development' section. It describes the Learning Center as NSTA's e-professional development (PD) portal, offering access to over 5,400 resources, with over 1,600 being free. It mentions tools like My Library, My PD Record, and My PD Plan and Portfolio. There are links to 'Create your free account!' and 'watch the overview.' Below this, there are two highlighted features: 'NEW: Earn as you learn!' and 'NEW: Live Support!'. To the right of the welcome message is a small image of a smiling woman.

On the right side of the page, there is a 'Login' section with fields for E-mail and Password, and a 'LOGIN' button. Below the login section are links for 'I'm an NSTA member but I don't have a password', 'Register Now for Free', and 'Lost password?'. There are also links for 'RSS' and 'SHARE'.

Below the login section is a 'NSTA Featured Resources' section with a 'NSTA SciPacks' logo and the text 'You Deserve the Credit!'. Below this is a 'Most Popular Resources' section with a list of resources: 1. Cell Structure and Function: Cells – The Basis of Life, 2. Plate Tectonics: Layered Earth, 3. Universe: The Sun as a Star, 4. Energy: Thermal Energy, Heat, and Temperature.

At the bottom, there is an 'Explore Learning Opportunities' section. It has links for 'See all FREE Lesson Plans' and 'See all FREE Resources'. Below this are three columns: 'By Subject' (Earth & Space Science, Life Science, Physical Science), 'By Grade Level' (Elementary, Middle School, High School, College), and 'By State Standards' (Select your state to begin: Choose a state).

What's free in the LC?

- LC account and Profile
- Close to 2,000 resources
 - Science Objects (84)
 - E-Book chapters (~200)
 - Journal Articles (~825)
 - Web Seminars (live, archives, podcasts)
- All public collections
- All PD tools (*Library, PD Plan, PD Indexer, Notepad, etc.*)
- All public discussion forums



[Home](#)[My PD Tools](#)[Subjects](#)[Learning Resources
& Opportunities](#)[Discussion
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My Learning Center

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PD Indexer](#)[My PD Plan
and Portfolio](#)[My PD Record
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Notepad](#)[New: Discussion
Forums](#)[Help
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Welcome to Your Personalized Learning Web Space!

Flavio, you've already earned 6810 Activity Points!

You've recently earned:



Emerald Commenter
[Post comment/questions](#)

You're close to earning:



Diamond Commenter
[Post 22 more comment/questions](#)

[UPDATE YOUR PROFILE](#)[CHECK THE LEADER BOARDS](#)

Activity Progress Bar

Your Activity Matters!

It
donates
Water!



Amy Banks
Last Week's [Top Commenter](#)

This Week's
Most Shared Collection

[Life Science HiDOE
SP11](#)
Shared by:
[Renee Carlyle](#)

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Explore Learning Opportunities

[Advanced Search](#)[See all FREE Lesson Plans](#)[See all FREE Resources](#)

**LIVE SUPPORT
ONLINE**

[Click here](#) →

:: Learning Center Profile

[Edit My Community Profile](#)



Michael

[0 LC Activity Points](#)

Complete this space and upload your thumbnail image:

Your profile is a professional reflection for others to learn about you as they view your contributions to this learning community. As you create, rate and share resources and collections of resources you will earn points and badges that will travel with you and reflect your contributions to the community. You are not an island unto yourself, but connected to a larger group of like-minded colleagues at various levels of experience. Get connected and engaged by contributing your ideas to the [discussion forums](#), uploading your best resources into a [public collection for others to try](#), and if you have a question, be sure to tap the [live online advisors](#).

[So let's get started!](#) Upload an image of yourself, let us know who you are, and become part of this dynamic community and the resources we can share amongst each other!

Your activity makes contributions like these



[Give a Bowl of Rice](#)



[Plant a Seed](#)



[Plant a Giving Tree](#)



YOU'RE CLOSE TO EARNING



Onyx Commenter

[Post 5 more comment/questions](#)



NSTA Resource Activator

[Add 5 more NSTA Resources](#)

[View all badges & activities](#)

Badges Yet to be Earned

[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.



Community Profile

Any information shared in this Community Profile section is publicly available to all registered users of the Learning Center.



[Change Profile Pic](#)

School / Work Affiliation

About Me

Location

IM Screen Name

Twitter

Facebook

Skype Name

☒ Allow other Learning Center users to send me Private Messages. My email address will not be shared.

Edit your Learning Center Community Profile now



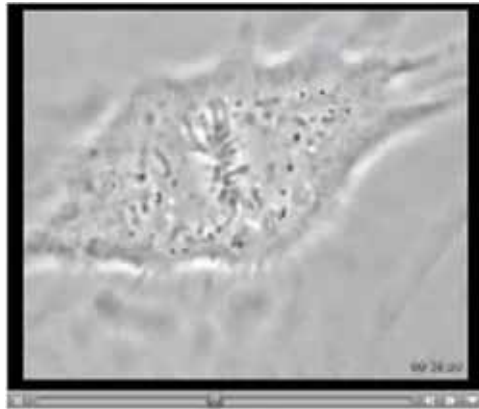
The **NSTA** Learning Center

e-PD Resources and Opportunities



- Two-hour **free** online learning experience in a particular topic
- Based on **science literacy** goals in science education standards
- Eighty-four **(84)** Science Objects currently available






Videos



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


Slide shows



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.

Hands-on activities

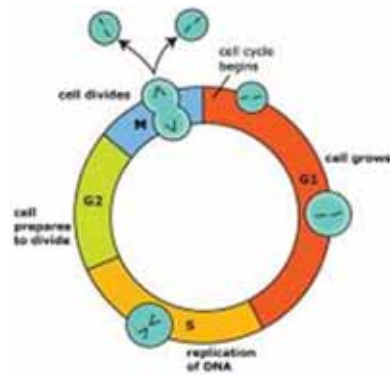


Common Student Preconceptions

Middle and high school students often have difficulty recognizing the dynamic nature of mitosis and its specific order of events (Orndorff, 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 (Knappels 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](#).

Preconceptions boxes



Images

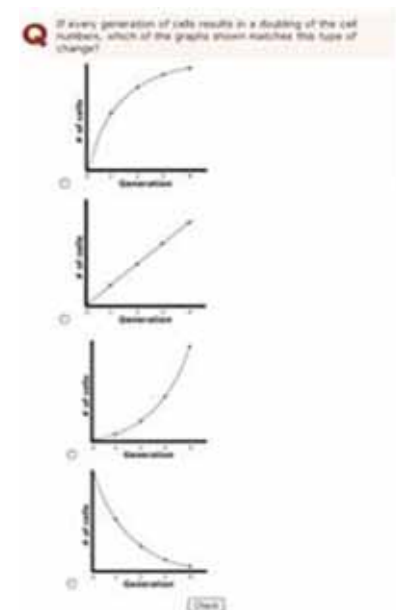
Elements of a Science Object: 2-hour learning experience



Explore a sim



Simulations



Assessment

Example Simulations and Animations

NSTA SCIENCE SIMULATION: Make a Reef

INSTRUCTIONS ⓘ

CONTROL PANEL

Submit
Reset

pH: 15 (slider) 8 (input)
Temperature: 23 - 28 °C (range) 17 - 23 °C (range) 18 - 17 °C (range)
Light: No Light (checkbox) Murky (checkbox) Clear (checkbox)
Salinity: 41 - 55 ppt (range) 25 - 40 ppt (range) 10 - 24 ppt (range)

NSTA SCIENCE SIMULATION: Seismic Waves

INSTRUCTIONS ⓘ

RIGIDITY: HIGH
RIGIDITY: LOW

VELOCITY

CONTROL PANEL

START
STOP
RESET

TEST FOR:
X Rigidity
Density

Top Layer:
X High
Low

Bottom Layer:
High
X Low

NSTA SCIENCE SIMULATION: Air Track

INSTRUCTIONS ⓘ

CONTROL PANEL

START
CONTINUE
RESET

Pusher Force:
X 1 N
2 N

Cart A Mass:
1 kg
X 2 kg

Cart B Mass:
X 1 kg
2 kg

MITOSIS MATCH-UP

INSTRUCTIONS ⓘ

Your Challenge:

Drag each cell, from the bottom, into the area that indicates its order in cell division. Position "1" marks the beginning of cell division while position "7" will be the completion of cell division.

Reset
Submit

NSTA SCIENCE SIMULATION: Horizontal Balloons

INSTRUCTIONS ⓘ

CONTROL PANEL

START
RESET

PAYLOAD

BALLOONS
WASHERS

NSTA INTERACTIVE: Identifying Products

INSTRUCTIONS ⓘ

A) Iron(III) chloride + sodium phosphate

$\text{FeCl}_3 + \text{Na}_3\text{PO}_4 \rightarrow \text{ } + \text{ }$

FeCl₂ H₃PO₄ H₂S FePO₄
H₂O K₂SO₄ BaSO₄ NaCl

Check
Reset

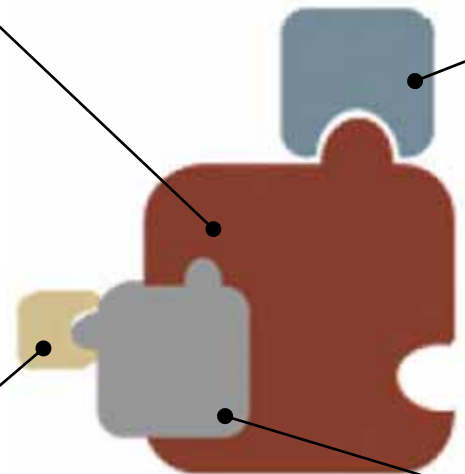


3-5 Science Objects

10-Hour, self-paced, learning experience



Assessment and Certification



SciPack



Content Mentor
Email Support

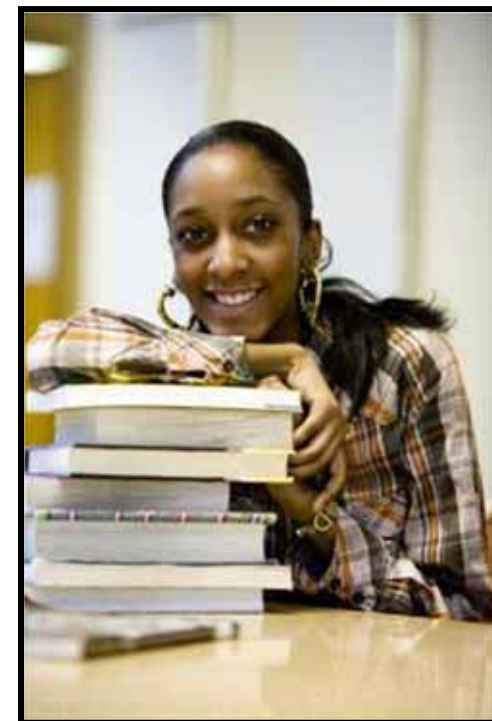


Pedagogical
Implications

Which SciPack title will you choose at the end of the program?

Earth, Sun, and Moon	Gravity and Orbits	The Solar System	The Universe	Oceans Effect on Weather and Climate	Rock Cycle
Plate Tectonics	Earth's Changing Surface	Force and Motion	Energy	Nature of Light	Chemical Reactions
Electric and Magnetic Forces	Cells Structure and Function	Coral Reef Ecosystems	Science of Food Safety	Resources and Human Impact FREE Today!	Nutrition
Cell Division and Differentiation	Explaining Matter with Elements, Atoms, and Molecules	Atomic Structure	Cells and Chemical Reactions		

- SciGuides
- Web Seminars (live)*
- Web Seminar Archives*
- Podcasts*
- Journal Articles *(some *)*
- eBook Chapters *(some *)*
- eBooks
- Online Courses
- External Resources*



* = free

How to add resources to your “Library?”



THE NSTA Learning Center

Search the Learning Center



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Forums](#)

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Welcome to Your Personalized Learning Web Space!

SEARCH COMMUNITY

Flavio, you've already earned **6810 Activity Points!**

You've recently earned:



Emerald Commenter
[Post comment/questions](#)

You're close to earning:



Diamond Commenter
[Post 22 more comment/questions](#)

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Explore Learning Opportunities

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Search all NSTA resources and offerings below:

Keyword:

Author:

Type of Learning Resource:

Grade Level:

- ☒ All Grade Levels
- ☐ Elementary School
- ☐ Middle School
- ☐ High School
- ☐ College
- ☐ Informal Education

Science Discipline:

Price:



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Narrow your search by subject, grade level, or price

FILTER BY SUBJECT

- ☐ Life Science
- ☐ Earth & Space Science
- ☐ Physical Science

FILTER BY GRADE LEVEL

- ☐ Elementary School
- ☐ Middle School
- ☐ High School
- ☐ College
- ☐ Informal Education

FILTER BY PRICE

- ☐ Free
- ☐ <\$1
- ☐ \$1-\$3
- ☐ \$3-\$5
- ☐ \$5-\$10
- ☐ \$10-\$20

Subject: ▸ [All Subjects](#)

Opportunities: ▸ [All Opportunities](#)

Individual Resources

Collections Created by Users

Collections Created by NSTA

99 results in Do-it-Yourself Learning
184 results in Books & Articles

7 results in Live Online Seminars & Classes
1 result in In Person Experiences

Sort by:

Results: 1 - 10 of 311

1 2 3 4 5 6 7 8 9 ... 32 Next



Useful and Not So Useful Energy

Science Object

Energy: Useful and Not So Useful Energy



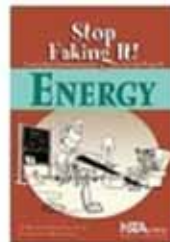
Grade Level: Elementary School, Middle School, High School

Add to Library

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 fourth of four Science Objects in the **Energy** SciPack. It provides a conceptual and real-world understanding of why **energy** in some forms can easily be used but in other forms is difficult to use. **Energy** transformations usually produce some heat, which is transferred to cooler... [\[view full summary\]](#)

Member Price: **Free** Nonmember Price: **Free**



Book Chapter

Recognizing Energy



By: [William C. Robertson, Ph.D.](#)

Grade Level: Elementary School, Middle School

Add to Library

Add to PD Plan

Energy is such a common notion. We talk about it all the time. Should you buy energy-efficient windows? The country needs an **energy** policy. That little kid at the store who screaming at the top of his lungs sure has a lot of energy. This chapter deals with recognizing and defining energy. This free selection includes the Table of Contents and Preface.


Member Price: **Free** Nonmember Price: **Free**

Save time by accessing a public collection

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RESOURCE FILTERS

Narrow your search by subject, grade level, or price

FILTER BY SUBJECT

☒ Life Science

☒ Earth & Space Science

☒ Physical Science

FILTER BY GRADE LEVEL

☒ Elementary School

☒ Middle School


Subject: ▸ [All Subjects](#)

Opportunities: ▸ [All Opportunities](#)


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Collections Created by NSTA

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 1 result in In Person Experiences



Sort by:

Results: 1 - 10 of 311 1 2 3 4 5 6 7 8 9 ... 32 Next



Energy: Useful and Not So Useful Energy ★★★★★

Grade Level: Elementary School, Middle School, High School

 Add to Library  Add to PD Plan

Useful and Not So Useful Energy

Science Object

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Member Price: **Free** Nonmember Price: Free

[Energy: Elementary Collection](#)

A collection of resources for elementary school teachers on the topic of energy

12 Items Not yet reviewed

Created by [Learning Center Online Advisors](#) on 9/30/2010



What's Hot? What's Not?

Type: Journal Article

Grade: Elementary School, Middle School



The Early Years: The Sun's Energy

Type: Journal Article

Grade: Elementary School, Informal Education

[View all 12 items in this collection](#)

[Energy: High Collection](#)

A collection of resources for high school teachers on the topic of energy

13 Items Not yet reviewed

Created by [Learning Center Online Advisors](#) on 9/30/2010



Science Sampler: To heat or not to heat

Type: Journal Article

Grade: Middle School



Career of the Month: Roller Coaster Designer

Type: Journal Article

Grade: High School

[View all 13 items in this collection](#)


Energy: Elementary

A collection of resources for elementary school teachers on the topic of energy

- [Back to All Collections](#)
- [Remove this Collection](#)

Intended for: Elementary school

- Shared by Learning Center Online Advisors
- [Re-Share this Collection](#)
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Don't Forget!: Use the buttons next to each item to add these resources to your own library so that you don't lose access to them if the collection owner changes or removes this collection. 

Currently displaying items: 1 - 12 of 12



Archive: Living and Working in Space: Energy, Dec 14, 2006

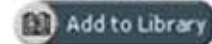
Type: Web Seminar Archive

Grade: Elementary School, Middle School

Summary: The Solar Cycle and Space Weather!

The first of two Web Seminars on the topic of Living and Working in Space: Energy was held on Thursday, December 14, 2006, from 6:30 p.m. to 8:00 p.m. Eastern time. The presenter was Dr. Terry Kucera, Solar Physicist,...

FREE Resource



Energy

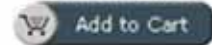
Energy

Type: SciPack

Grade: Elementary School, Middle School, High School

Summary: SciPacks are self-directed online learning experiences for teachers to enhance their understanding of a particular scientific concept and its related pedagogical implications for student learning. Unlimited expert content help via email and a final assessment...

Price: \$39.99



Energy

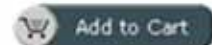
Energy

Type: SciGuide

Grade: Elementary School, Middle School

Summary: SciGuides are a collection of thematically aligned lesson plans, simulations, and web-based resources for teachers to use with their students centered on standards-aligned science concepts.

Price: \$5.95



This SciGuide addresses forms of energy and the transformations...



Different Kinds of Energy

Energy: Different Kinds of Energy

Type: Science Object

Grade: Elementary School, Middle School, High School

Summary: 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 four Science Objects in the Energy SciPack. It provides a conceptual...

FREE Resource



Add resources to your “Library” now



**Let's pause for
questions about the
Learning Center's e-PD
resources**



The **NSTA** Learning Center

e-PD Tools

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My Profile	My Library	My PD Indexer	My PD Plan & Portfolio
My PD Record and Certificates	My Calendar	My Notepad	Discussion Forums

My Library

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[Learning Center Home](#) > [My Library](#) RSS SHARE f t e

My Library: NSTA Resources

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[My NSTA Resources](#) | [My Uploaded Resources](#) | [My Resource Collections](#)

Do-it-Yourself Learning

Books & Articles

SciGuides
(37 items)

SciPacks
(20 items)

Science Objects
(57 items)

Podcasts
(38 items)

Web Seminar Archives
(22 items)

Symposia Archives
(2 items)

Book Chapters
(26 items)

Journal Articles
(46 items)

Live Online Seminars & Classes

In Person Experiences

Web Seminars
(1 item)

No Items
[Search for resources to add!](#)

Upload your own resources to *My Library*

- Word docs
- Excel files
- PPT pres.
- URLs
- Images

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My NSTA Resources **My Uploaded Resources** My Resource Collections

Resource Upload

New to the Learning Center! Enjoy the convenience of having all your electronic resources in one location. Upload up to 1.5 GB of your resources to your Learning Center library, add them to your collections, create notes about them, and e-mail them to your friends. File formats include PowerPoint presentations, Word documents, Excel spreadsheets, PDF files, image files, and more. Each file must be 10 MB in size or smaller. Please read the [Terms and Conditions](#).

Upload a Resource You are currently using 0.2% of your 2 GB
You have 2.00 GB of available space

My Uploaded Resources

	NSTA Learning Center This is the URL for the NSTA Learning Center.	<ul style="list-style-type: none">Email to a FriendModify CollectionsCreate NoteDelete this Resource
	NSTA Learning Center Marketing Brochure.pdf PDF file of the NSTA LC Marketing Brochure.	<ul style="list-style-type: none">Email to a FriendModify CollectionsCreate NoteDelete this Resource
	Sample Agenda for APS implementations.doc Sample agenda created for APS administrators to run implementation workshops.	<ul style="list-style-type: none">Email to a FriendModify CollectionsCreate NoteDelete this Resource
	Sample PPT for APS implementations.ppt Sample PPT created for APS administrators to use at their implementations.	<ul style="list-style-type: none">Email to a FriendModify CollectionsCreate NoteDelete this Resource

My Library: Resource Collections

Welcome, The Learning  [Log Out](#)

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 NSTA Resources](#)

[My Uploaded Resources](#)

[My Resource Collections](#)

Collections enable you to group together and organize your NSTA resources. You may also share collections with friends and colleagues.

To create a new collection:

- Click "Start a New Collection" below; fill in the brief form and click "Submit"
- Choose items from your library, our resource search page, or upload your own files to add to the collection
- NOTE: NSTA resources must first be added to your library before they can be added to a collection**
- For more help view the [My Library Help Guide](#) (1.24 MB PDF) to see screen shots and step-by-step instructions



My Collections



Collections Shared With Me

[Start a New Collection](#)

Title	Created
 Climate Change 8 items	9/3/2010
 Climate Change Here and Now: 7 items	9/10/2010
 Earth Day PD Resources for Teachers of Science 9 items	4/12/2010
 FDA/CFSAN: Food Irradiation 7 items	9/10/2010
 NSTA REPORTS Freebies Column: Nov. 2010 3 items	9/20/2010

Title	Shared by	Shared
 Climate Change Here and Now: 7 items	The Learning Center	9/10/2010
 FDA/CFSAN: Food Irradiation 7 items	The Learning Center	9/10/2010
 SCIENCE CLASS Elementary Edition: Oct. 2010, Process Skills 8 items	The Learning Center	9/13/2010
 Summer PD Resources 5 items	Flavio Mendez	5/4/2010

Building a Vibrant Learning Community

- ***Psycho-emotional Opportunities***
- ***Compelling Content***
- ***Social Engagement***



Learning Center Profile

[Edit My Community Profile](#)



Flavio Mendez
NSTA Staff

[6070 LC Activity Points](#)



About Me: 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

Recent Donations Earned



[Give a Bowl of Rice](#)

3 donations made



[Donate a Book](#)

2 donations made



[Plant a Seed](#)

3 donations made



YOU'RE CLOSE TO EARNING



Sapphire Commenter

[Post 4 more comment/questions](#)



Platinum Indexer

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[View all badges & activities](#)

PD Activity Badges Earned:



NSTA Learning Center Leader Boards

Follow your top colleagues' online activity and contributions



Top Aggregators

Building a worthwhile learning community provides opportunities for you to recognize those leaders that share their ideas, lessons and resources. The top aggregators are those who have added personal resources to their Learning Center libraries. [Upload resources to your free space!](#)

Learning Headlines and Opportunities

Upcoming live web seminars:



May 17, 2011 - [Earth Climate Course](#)



May 23, 2011 - [NASA's Eyes on the Earth - What's up, Satellites?](#)

Overall	Commenters	Aggregators	Disseminators	Advocators	SciPack Power Users
Pos	Name		Aggregator Points Earned	Recent Donations/Badges	
1		Sharon Ruggieri	1,520		
2		Katherine Zimmerman	1,510		
3		LeRoy Attles	1,500		
4		Jessica Fagan	1,500		
5		Sherene McDonald	1,500		
6		Eric Sandberg	1,350		
7		Ronaldo Relador	1,330		

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 (NSELA). Kathy was also awarded the Outstanding National Science Supervisor Award in 1999.



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Search the Learning Center

Resources Discussion Forums Education Administrator

Welcome, Flavio :: [Admin](#) | [Log Out](#)

My Calendar My Notepad New: Discussion Forums Help Desk

Web Space!

Activity Progress Bar

Your Activity Matters ! It reduces your carbon footprint!

NEW LIVE SUPPORT

Online Advisors now available!

Featured PD Resource

Science OBJECTS **FREE**

Force and Motion: Position and Motion









plan, track your activities opportunities" below or by may also review an [archived](#)

all FREE Lesson Plans all FREE Resources

LIVE SUPPORT ONLINE

Click here →

Discussion Forums (*asynchronous*)

Public Forums			
Forum			Last Post
	Elementary Science	15 Topics 293 Posts	by Todd Redman Today, 12:43 PM Hard to Teach Science Chapter 2
	Life Science	43 Topics 813 Posts	by Maureen Stover Today, 1:49 PM A New Approach to Biology
	Physical Science	39 Topics 502 Posts	by Patricia Rourke Yesterday, 8:15 PM Angry Birds
	Earth and Space Science	54 Topics 721 Posts	by Dehrben Flores Yesterday, 10:50 AM The Solar System
	General Science and Teaching	121 Topics 1632 Posts	by Steve Werner Today, 10:37 AM Science Songs
	Professional Development	16 Topics 223 Posts	by Patricia Rourke Yesterday, 6:46 PM Our Shared Characteristics As a PLC
	Evaluation and Assessment A public forum discussing formative, sumative, and dynamic assessments and evaluations.	8 Topics 87 Posts	by Carolyn Mohr Fri Jul 08, 2011 12:50 PM Engineer Activities for STEM and NonStem Students
	Research in Science Education Science educators discuss the classroom implications of the latest science education research.	6 Topics 66 Posts	by Kathy Sparrow Yesterday, 1:40 PM Current Research: 2011 Summer Reading Suggestions

Discussion Forums

[Home](#) > [General Science and Teaching](#) > Science Inquiry and Scientific Method? Which do Scientists Really Use?

14 people currently online



[Hours of Operation](#)

POST REPLY

STOP WATCHING TOPIC

by [Adah Stock](#), Tue Nov 16, 2010 10:32 AM

While looking for something else I came across a great Podcast (7 minutes long) which provided insight on being a scientists and using the scientific method. It is a must for a teacher and students to hear. I suggest your listen to this scientist describe his involvement with the scientific method and then share your thoughts on this as well.

Attachments

[Podcast: Scientific Method](#) (Podcast)



Adah Stock

473 Posts

[Learning Center Activity Points](#)

[Private Message Adah](#)

EDIT **REPORT** **REMOVE**

by [Kathy Renfrew](#), Wed Nov 17, 2010 10:40 AM

What an awesome discussion. I have spent time reading, researching and reflecting on this thread. There is part of the discussion that I think I disagee with:

"the scientific method is great for young children who have not developed a strong cognitive ability to think. It the same as you have to learn to walk before you can run. The scientific method is a way for them to gain an understanding of the process. However, as they grow older and have more experiences and make more decisions they should be weaned off this and introduced to scientific inquiry."

I believe all children , even very young children can think scientifically and therefore engage in the inquiry process. I am attaching an article which talks about young children doing science inquiry and a graphic from one of my favorite authors, Karen Worth.

So what do others think?



Kathy Renfrew

222 Posts

[Learning Center Activity Points](#)

[Private Message Kathy](#)

Recognize our Collaborators



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.**

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



A Critical Piece of the Solution

- A **community** to share ideas, ask questions, while earning points
- Practical **tools** to help teachers organize, personalize & document growth over time
- Over 6,400 **resources** (close to 2,000 free)



The screenshot shows the NSTA Learning Center website. At the top, there's a navigation bar with links: Back to NSTA.org, Contact Us, Help, and Feedback. Below this is the main header with 'The NSTA Learning Center' and a search bar. A secondary navigation bar includes Home, My PD Tools, Subjects, Learning Resources & Opportunities, Discussion Forums, and Education Administrator.

The main content area features a 'Welcome to Your Professional Development' section. It describes the Learning Center as NSTA's e-professional development (PD) portal, offering access to over 5,400 resources, with over 1,600 being free. It mentions tools like My Library, My PD Record, and My PD Plan and Portfolio. There are links to 'Create your free account!' and 'watch the overview.' Below this, there are two highlighted features: 'NEW: Earn as you learn!' and 'NEW: Live Support!'.

On the right side, there's a 'Login' section with fields for E-mail and Password, and a 'LOGIN' button. Below the login section, there are links for 'I'm an NSTA member but I don't have a password', 'Register Now for Free', and 'Lost password?'. There are also links for 'RSS' and 'SHARE'.

Below the login section, there's a 'NSTA Featured Resources' section with a 'NSTA SciPacks' banner. At the bottom, there's a 'Most Popular Resources' section with a list of resources: 1. Cell Structure and Function: Cells – The Basis of Life, 2. Plate Tectonics: Layered Earth, 3. Universe: The Sun as a Star, and 4. Energy: Thermal Energy, Heat, and Temperature.

At the bottom of the main content area, there's an 'Explore Learning Opportunities' section. It has links for 'See all FREE Lesson Plans' and 'See all FREE Resources'. Below this, there are three columns: 'By Subject' (Earth & Space Science, Life Science, Physical Science), 'By Grade Level' (Elementary, Middle School, High School, College), and 'By State Standards' (Select your state to begin: Choose a state).

Don't forget the web seminar evaluation and to choose your **FREE SciPack**

	Earth & Space <i>8 Topics</i>	Physical <i>7 Topics</i>	Life <i>7 Topics</i>
Completed	<ul style="list-style-type: none"> ▪ Earth, Sun & Moon ▪ Gravity & Orbits ▪ The Solar System ▪ The Universe ▪ Weather & Climate ▪ Rock Cycle ▪ Plate Tectonics ▪ Earth's Changing Surface 	<ul style="list-style-type: none"> ▪ Force & Motion ▪ Energy ▪ Nature of Light ▪ Chemical Reactions ▪ Electric and Magnetic Forces ▪ Atomic Structure ▪ Explaining Matter with Elements, Atoms, and Molecules 	<ul style="list-style-type: none"> ▪ Cell Structure & Function ▪ Coral Reef Ecosystems ▪ Science of Food Safety ▪ Resources & Human Impact ▪ Nutrition ▪ Cell Division and Differentiation ▪ Cells and Chemical Reactions

Thank You

- Flavio Mendez
PH: 703-312-9250
Email: fmendez@nsta.org

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My Learning Center

Welcome, Paul  [View Cart](#) | [Admin](#) | [Log Out](#)

[Welcome](#) | [My Profile](#) | [My Library](#) | [My PD Indexer](#) | [My PD Plan and Portfolio](#) | [My PD Record and Certificates](#) | [My Calendar](#) | [My Notepad](#) | [New: Discussion Forums](#) | [Help Desk](#)

Welcome to Your Personalized Learning Web Space! [SEARCH COMMUNITY](#)

Paul, you've already earned **775 Activity Points!**

You've recently earned:
 **Ruby Aggregator**
[Add Personal Resources](#)

You're close to earning:
 **Ruby Commenter**
[Post 10 more comment/questions](#)

[UPDATE YOUR PROFILE](#) | [CHECK THE LEADER BOARDS](#)

Activity Progress Bar
 Your Activity Matters!
 It Donates Produce! 


Amy Banks
 Last Week's Top Commenter

This Week's Highest Rated Collections

[Uncovering Student Misconceptions](#)
 Shared by: [Nicole Shimshock](#)

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](#)

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<http://learningcenter.nsta.org>



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NSTA Web Seminars

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