



NSTA Web Seminar:

**The NSTA Learning Center — PD
Resources and Tools for Teachers**

Tuesday, October 6, 2009

Goal of this seminar



Topics to Discuss

- Review Professional Development landscape
- Overview of NSTA's e-PD Portal and the resources within it

The Professional Development Landscape



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.

I would like to ask you a question



How many hours of science PD did you receive last year?



Looking at the Professional Development Landscape

How many hours of science PD did you receive last year?

- A. 1-20 hours
- B. 21-50 hours
- C. 51-80 hours
- D. 80+ hours



The Professional Development 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 per year

Exploring Your Needs in Professional Development



How many have completed an online professional development course?

Please mark on the space below with a stamp to indicate that you have.

Exploring Your Needs in Professional Development

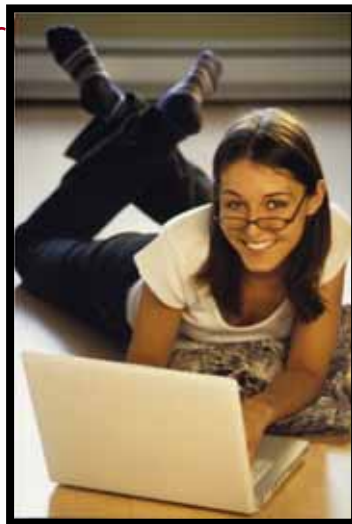


- How many have completed an online professional development course?

You are not alone: In 2008 over 3.9 million learners in the US took a course online...

The 2009 Horizon Report: The New Media
EDUCAUSE Learning Initiative

Consortium



A Critical Piece of the Solution

The NSTA Learning Center

- On-Demand Access
- 4,000+ resources
- Tools to help you organize, personalize, and document your growth over time.

The screenshot displays 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 a header with the NSTA Learning Center logo and a photo of three people. A secondary navigation bar includes links for Home, My Account, Subjects, Learning Resources & Opportunities, Professional Development Tools, and Education Administrator.

The main content area is divided into several sections:

- Welcome to Your Professional Development:** A text block explaining the Learning Center's purpose, mentioning over 3,300 resources and tools like My Library, My Transcript, and My Professional Development Plan. It includes a "How to Guide" PDF link.
- Explore Learning Opportunities:** A section with a search bar and filters 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 menu).
- Do-It-Yourself Learning:** Promotes 1-2 or 8-10 hour interactive activities.
- Live Online Seminars & Classes:** Promotes 1-2 hour seminars, week and month long courses.
- Books & Articles:** Lists Books, Book Chapters, eBooks, and Journals.
- In Person Experiences:** Promotes attending NSTA workshops.

On the right side, there's a sidebar with:

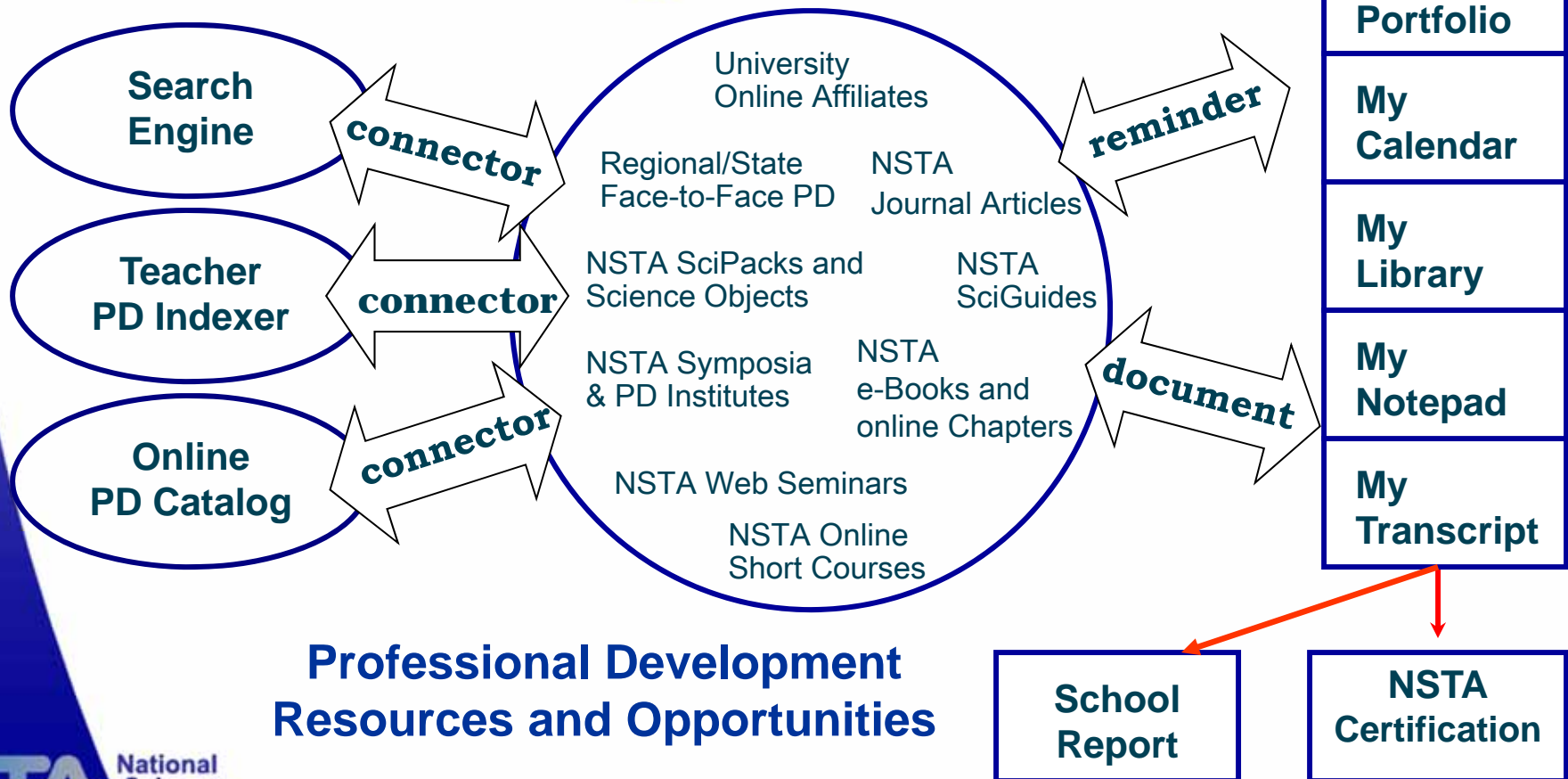
- Login:** A link to log in.
- Most Popular Science Objects:** A list of objects like "Energy: Different Kinds of Energy", "Plate Tectonics: Layered Earth", etc.
- Multimedia Overview:** A section with a "View Overview of the NSTA Learning Center" button.
- Free Learning Resources:** A section with "Science Objects" and "Coral Reef Ecosystems in Crisis".
- Testimonials & Awards:** A section with a testimonial about the Science Objects and SciPacks.

At the bottom, there's a "Our Content Collaborators" section featuring logos for NSF, NASA, NOAA, FDA, National Institutes of Health, Earth & Space Science, NSTA Press, Montana State University, Agilent Technologies Foundation, NHTSA, and NSDL.

Scalable, Sustainable, and Customized Professional Development



The NSTA Learning Center







**Professional Development
Resources and Opportunities**

The NSTA Learning Center



Aug. 2009 Collection: **4,000+** PD Resources and Opportunities Available

 Do-It-Yourself Learning	 Live Online Seminars & Classes
SciGuides [31] Science Objects [64] SciPacks [16] Archived Seminars/Podcast [350+]	Web Seminars [16-20/yr] Short Courses [20+/year]
 Books & Articles	 In Person Experiences
Journal Articles [2500+] NSTA Press Books [235+] e-Books [110+] e-Chapters [625+]	Symposia [6-10/year] PD Institutes [6-10/year]

Have you accessed any of these resources?
Use an emoticon to respond.

The **NSTA** Learning Center



Collaborators



S.D. Bechtel, Jr.
Foundation



Agilent
Technologies
Foundation

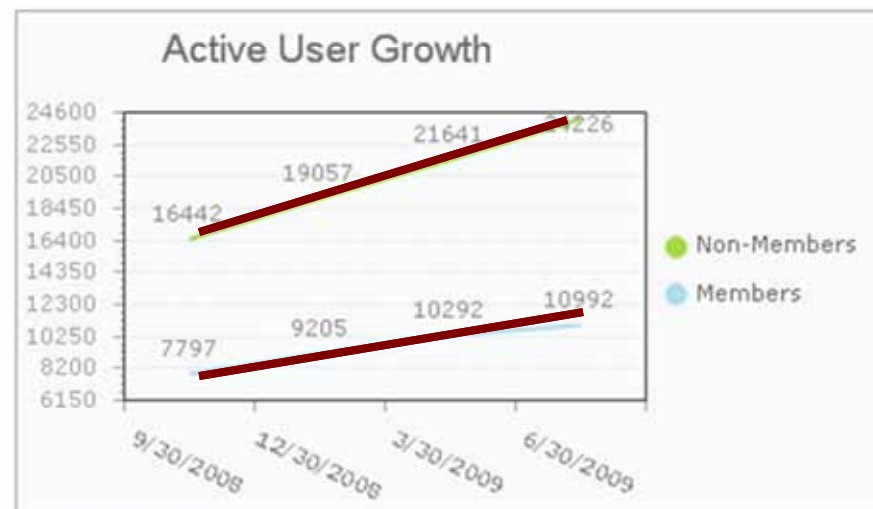
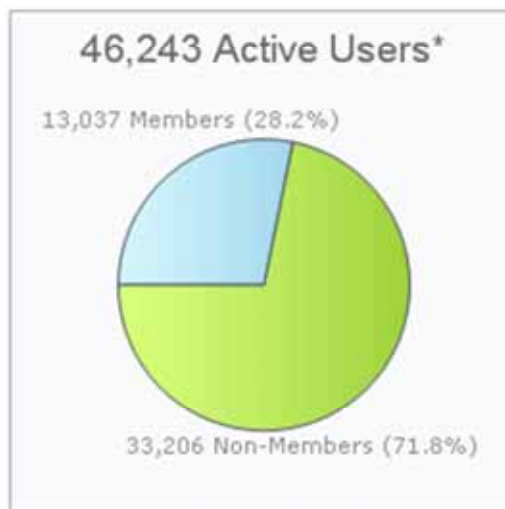


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FOUNDATION

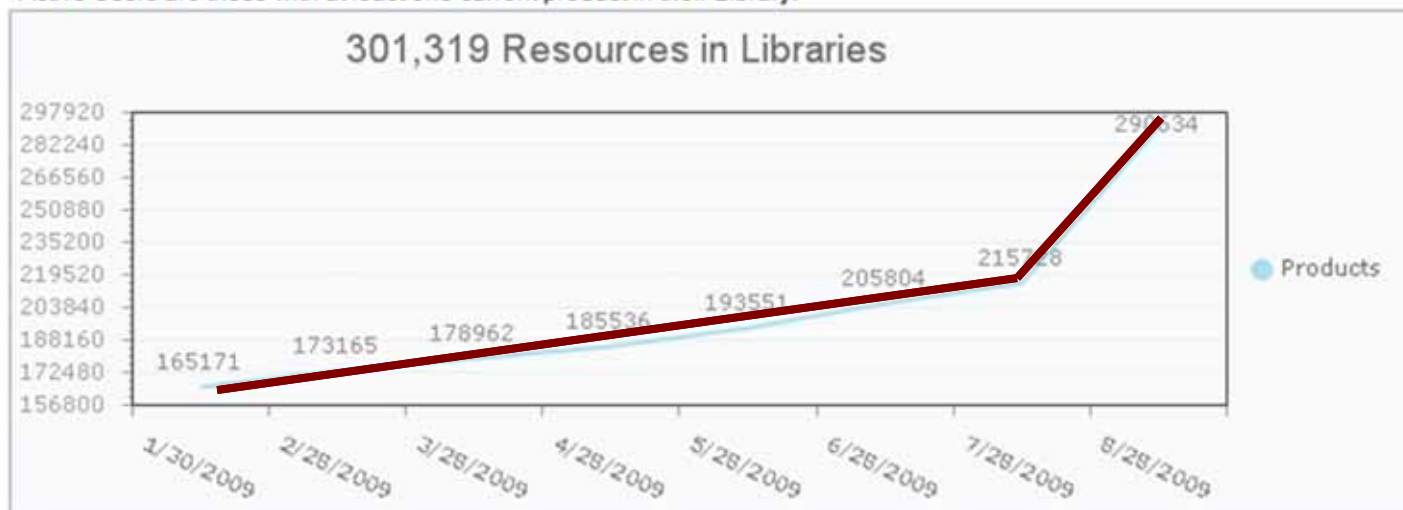
The NSTA Learning Center



**Over 46,000
Individual
accounts with
over 300,000
resources
across
teachers'
libraries**



*Active Users are those with at least one current product in their Library.



The NSTA Learning Center



**Over 175
unique
deployments
across 45
State/District
Partnerships
as of
September
2009**

- West Virginia Department of Education
- New Hampshire Department of Education
- Hawaii Department of Education
- Vermont Department of Education
- Nebraska Department of Education
- Cincinnati Public Schools, OH
- Louisville County Public Schools, Louisville, KY
- Gwinnett and Forsyth County Public Schools, Atlanta, GA
- Lincoln County Public Schools, NE
- LASER Alliance, Mountain to Harbor Alliance, WA
- Oregon Science Teachers Association
- Florida Science Teachers Association
- Zero-G Flight Initiative
- Twin Harbors Science Consortium
- Petaluma City Schools, Petaluma, CA
- Duval County Public Schools, Jacksonville, FL
- Texas Education Service Center, University of Texas, Texas A&M, Texas Centers for Excellence in Science and Mathematics (36 centers across Texas)
- PRISM Grant Program, MT
- MSP Elementary Science Coaching, CT
- University of Maryland Baltimore County, MD
- Atlanta Public Schools System, Atlanta, GA

Navigating through...



The **NSTA** Learning Center

...is simple to do.



NSTA
National
Science
Teachers
Association

NSTA **WEB**
SEMINARS

Find resources by:

- Subject
- Learning Resources & Opportunities
- All Free Resources
- Advanced Search
- Grade Level
- State Standards
- Learning Preference



*Now you
try it!*

The screenshot displays the NSTA Learning Center homepage. At the top, there's a navigation bar with links: Home, My Account, Subjects, Learning Resources & Opportunities, Professional Development Tools, and Education Administrator. Below this, a 'Welcome to Your Professional Development' section provides an overview of the portal's resources. A 'Most Popular Science Objects' list is featured on the right, including topics like Energy, Plate Tectonics, and the Sun. The central area offers 'Explore Learning Opportunities' with filters for Subject (Earth & Space Science, Life Science, Physical Science), Grade Level (Elementary, Middle School, High School, College), and State Standards. It also highlights various learning formats: Do-it-Yourself Learning, Live Online Seminars & Classes, Books & Articles, and In Person Experiences. The bottom of the page features a grid of logos for content collaborators, including NSTA, NASA, NOAA, FDA, National Institutes of Health, and others. A sidebar on the right provides additional links for login, RSS, and more resources.

Advanced Search



ADVANCED SEARCH

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:

- All Earth and Space Science Topics
- All Earth and Space Science Topics
- Climate
- Cycles
- Earth in the solar system
- Earth materials
- Earth processes
- Earth system structure
- Earth's water
- Energy
- Evolution
- Solar system
- Solar system changes
- Space exploration
- Weather



Let's Pause for Two Questions

<http://learningcenter.nsta.org>



Learning Center Overview



NSTA Science OBJECTS

Science Objects development supported by...



THE WILLIAM AND FLORA
HEWLETT
FOUNDATION



U.S. Department of Transportation
National Highway Traffic Safety
Administration



S.D. Bechtel, Jr.
Foundation

Featured e-PD resources within the Learning Center



- Two hour **free** online learning experience in a particular topic
- Interactive **simulations** of phenomena in an engaging way
- Questions to promote **interaction and learning** via inquiry strategy
- Based on **science literacy** goals in science education standards
- Sixty-four **(64)** Science Objects are currently available



http://scipacks.nsta.org - Position and Motion - Microsoft Internet Explorer

NSTA SciPacks Force and Motion
Position and Motion 1 OF 8

Home Ask the Wizard Reset Page Previous Next

Position and Motion

- Introduction
 - Let's Get Started
- Position
- Motion
- Changes in Motion
- Tying it All Together
- Evaluation
- Glossary
- Credits

Let's Get Started

Much of science involves explaining why things happen. Why do things fall to the Earth? Why does a thrown ball follow a particular path? Why does a battery create an electric current? Before we can explain why things are happening, though, it's a good idea to get a thorough *description* of what's going on. In fact, about half of what scientists do is describe things carefully so they can analyze them further.

The focus of the *Position and Motion* Science Object is on description. You're going to learn:

- how scientists specify the position of objects,
- how scientists describe the motion of objects, and
- how scientists describe the change in motion of objects.

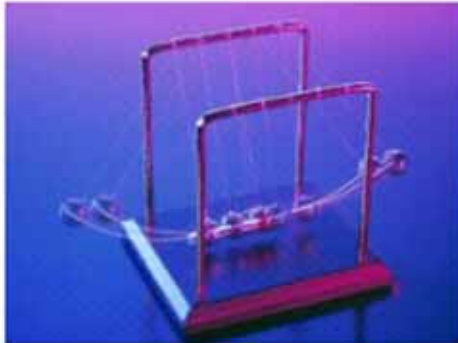
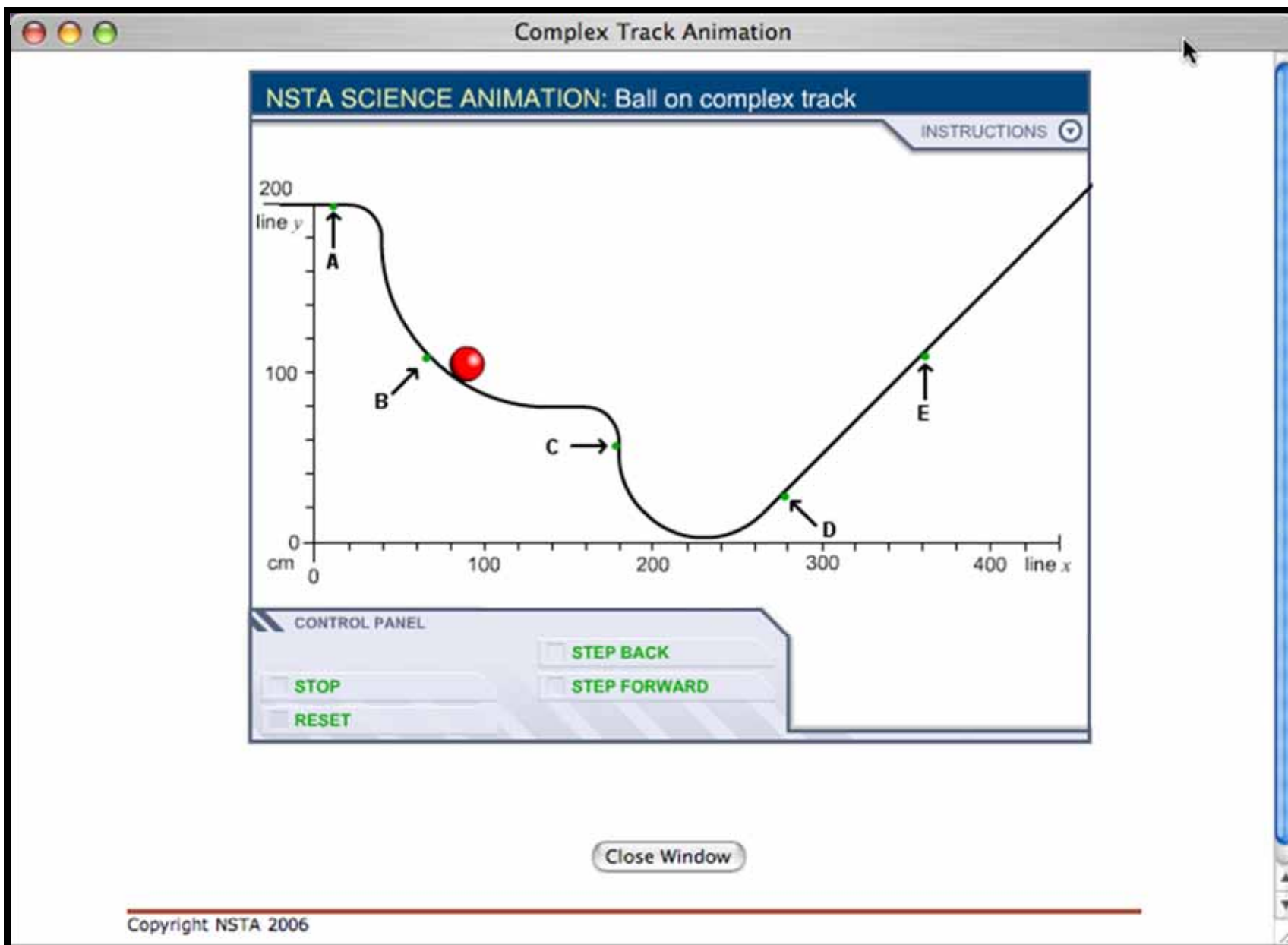



Figure 1.1

That might sound a bit boring, but it really isn't. After all, we do get to start with rabbits and turtles.

Done Internet



http://scipacks.nsta.org - Position and Motion - Microsoft Internet Explorer

NSTA
Science
OBJECTS

Force and Motion
Position and Motion

5 OF 8

Home


Reset Page

Previous

Next

Position and Motion

- Introduction
- Position
- Motion
- Changes in Motion
- Tying it All Together
 - Tying it All Together
 - Animation Analysis

The ball has zero acceleration at ...

☐ Point E, because the ball is at rest at that point.

☐ Point B, because the direction is constant there.

☐ Point D, because it's slowing down at that point. It is decelerating but not accelerating.

☒ Point A, because neither its speed nor its direction are changing there.

Check

http://scipacks.nsta.org - Answer Feedback - M...

Answer Feedback

Incorrect!

If the ball is at rest, that means the instantaneous velocity is zero. Acceleration, however, is measured by changes in velocity. An object at rest does not necessarily have zero change in velocity.

For more information:

- [For help revisit the One More Definition section.](#)
- [To see how this information relates to each position in the](#)

points is the instantaneous speed of the ball the

D. The ball is moving fastest at those Points. and depends only on the magnitude of the velocity, and

it is changing its speed the fastest at that point.

the speed has to be largest at the beginning in order for re path.

the ball is slowing down at Point D, it can't have a ere.

Check



Objects in Motion Hands-On Activity

Hands-On Activity

Grab a ruler or meterstick, a marble or a ball bearing, and about a meter-long section of Hot Wheels® track. If you don't have access to kids' toys, just use anything you can find that's flexible and will allow a marble to roll along it. What works well is a section of clear plastic tubing (try the hardware or plumbing supply store) and a ball bearing that's small enough to roll freely inside the tubing.

Find a friend or family member to help you with this next part. Hold the track in a U shape so the lowest part just touches a table top or a floor, as seen in Figure 3.10.


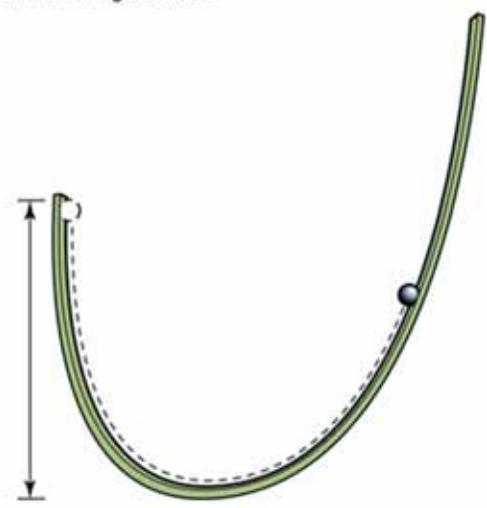


Figure 3.10

Now measure the vertical distance from the floor or table to one end of the track. For the directionally challenged, that vertical distance is shown in Figure 3.11.

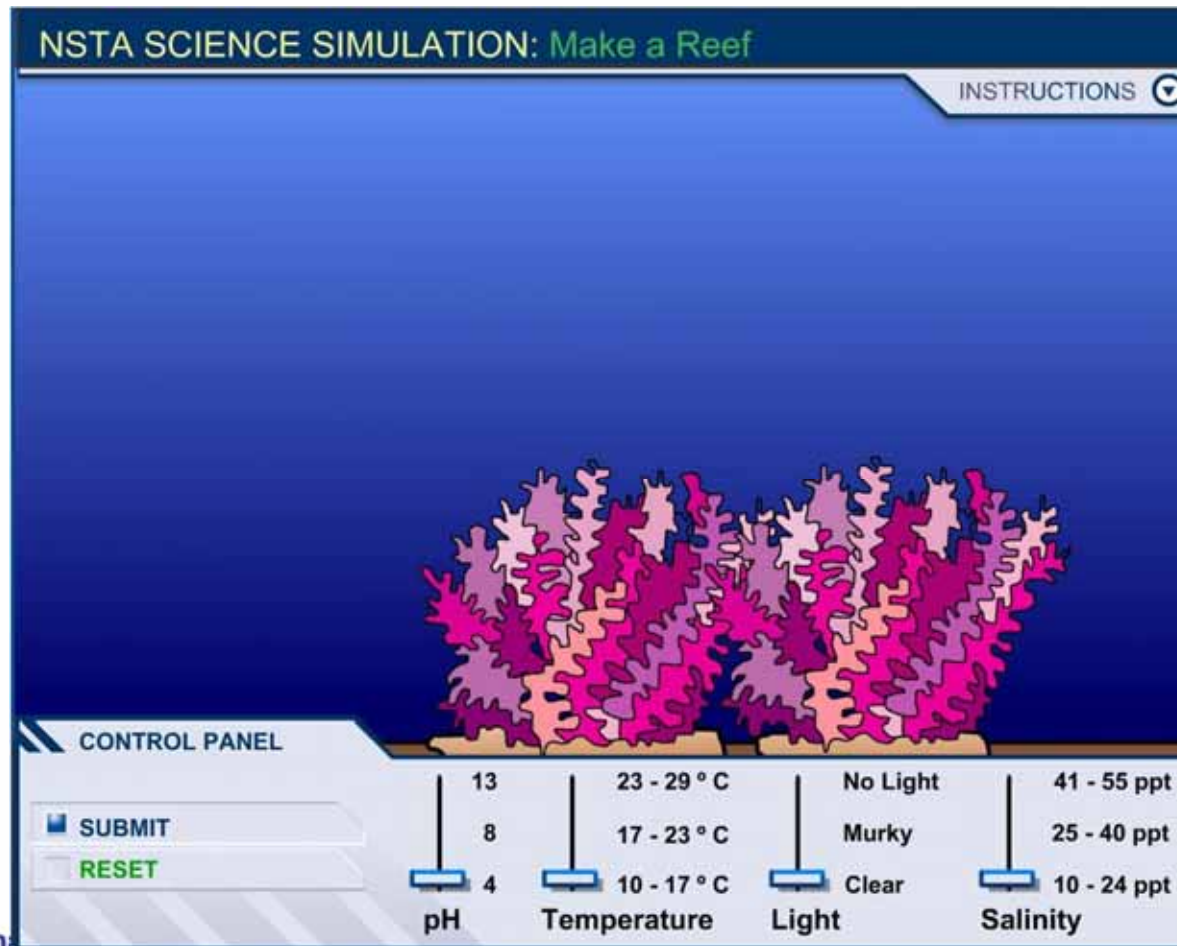


If your memory isn't great, write this distance down. You'll need to keep this one side of the track at that same vertical distance as you do the next few things. With your accomplice helping you, hold the track in a U shape with the bottom of the U touching the table or floor; holding your end at the vertical distance you've measured, drop the marble at the top of that end of the track.

Let's sample an Interactive Simulation



Coral Ecosystems



Featured e-PD resources within the Learning Center



A total of 64 two hour Science Objects are **freely available** now at The NSTA Learning Center

Topic Areas:

- Force and Motion
- The Universe
- The Solar System
- Gravity and Orbits
- Energy
- Coral Ecosystems
- Earth's Changing Surface
- Chemical Reactions
- Earth, Sun & Moon
- Coral Reef Ecosystems
- Plate Tectonics
- Rock Cycle
- Ocean's Effect on Weather and Climate
- Food Science Safety
- Nature of Light
- Cells Structure and Function



What subject area Science Objects are you most interested in reviewing after this web seminar?

- A. Life Science
- B. Physical Science
- C. Earth/Space Science
- D. Not sure
- E. All



Let's Pause for Two Questions

<http://learningcenter.nsta.org>



NSTA SciPacks

BUILDING CONTENT KNOWLEDGE

SciPack development supported by...



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THE WILLIAM AND FLORA
HEWLETT
FOUNDATION



U.S. Department of Transportation
National Highway Traffic Safety
Administration



GE Foundation

S.D. Bechtel, Jr.
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National
Science
Teachers
Association

NSTA **WEB
SEMINARS** 

Featured e-PD resources within the Learning Center



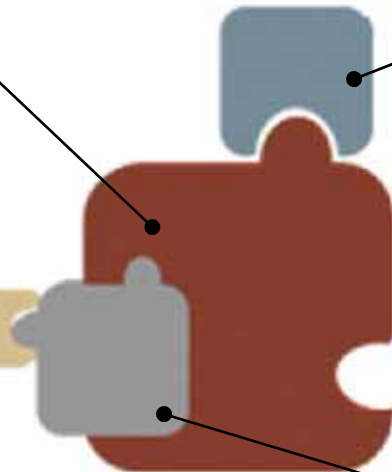
- 10 Hour Online and On-Demand Learning Experience
- 3-5 Free Science Objects, **plus**
 - Individualized email support
 - Pedagogical Implications component
 - Opportunity for Certification by passing a Final Assessment



3-5 Science Objects



Assessment
and Certification



SciPack



Content Wizard
Email Support



Pedagogical
Implications

Personal Information



Welcome,
susan_y@nsta.org

Last Visit:

- Date: Not Available
- Time: Not Available

Science Object Status:

- Available: 105
- Visited: 1

Links

- [Help Desk](#)
- [NSTA Learning Center](#)

Welcome

To access your SciPack, refer to the **Table of Contents** below.

1. Select your SciPack from the **Select** drop-down list
2. Click **Find**
3. To expand the SciPack Table of Contents, click on the SciPack title or click the + next to the SciPack title
4. Click the name of the section you would like to view

When you have only one SciPack, start with Step 3 above.

Table of Contents

Select:

SciPack	Completion	Last Accessed
Orientation	<div></div>	Not Accessed
Force and Motion	<div></div>	07/10/07 8:44 AM
Position and Motion	<div></div>	07/10/07 8:44 AM
Newton's First Law	<div></div>	Not Accessed
Newton's Second Law	<div></div>	Not Accessed
Newton's Third Law	<div></div>	Not Accessed
Force and Motion Final Assessment	<div></div>	Not Accessed
Glossary	<div></div>	Not Accessed
Pedagogical Implications	<div></div>	Not Accessed

You've Got a Wizard (e-Mentor) in Your Corner...

NSTA SCIPACKS Force and Motion
Newton's Second Law 2 OF 6

Home Ask the Wizard Discussion Reset Page Previous Next

Newton's Second Law

- Introduction
- An Equation that Explains it All
 - F , m , and a
- Applying the 2nd Law
- Teeter-totters and Equations
- It's the Net Force
- Net Forces can Cause Change in Direction, Too
- Revisiting an Explanation
- Check Your Understanding
- Applying the Law
- Evaluation
- Glossary
- Credits

Figure 2.2

Large Force Leads to Large Acceleration

Now, you were able to change the mass of each individual space ship by adding passengers. Adding passengers adds mass to each ship. The force acting on any one ship is constant throughout the simulation. What happens when you add mass to a given space ship? Well, it doesn't accelerate as much. You might want to return to the simulation to check that out. The following drawing illustrates this idea.


Small Mass leads to Large Acceleration

Large Mass leads to Small Acceleration

- Send your questions directly to a content expert via e-mail
- Receive response within 2 school days

Pedagogical Implications



**Force and Motion**
Science Pedagogical Implications4 OF 6

HomeAsk the WizardDiscussionReset PagePreviousNext

Science Pedagogical Implications

- Introduction
- Grades K-2
 - K-2 Strand Map
 - Describing Motion
 - Forces
 - Changes in Motion
- Grades 3-5
- Grades 6-8
 - 6-8 Strand Map
 - Describing Motion
 - Forces**
 - Changes in Motion
- Grades 9-12
- Further Reading

Forces

In the earlier grades, the ideas in this strand focused on simple observations and ideas about specific forces. The major idea to be grasped at this level is the notion of multiple forces reinforcing or balancing one another. The *National Science Education Standards* recommend that by the end of the eighth grade, students should know the following:

- If more than one force acts on an object along a straight line, then the forces will reinforce or cancel one another, depending on direction and magnitude.

Students of all ages believe that if there is no motion then there is no force acting, so the idea of forces canceling each other out may be difficult. Experience identifying the forces that are acting on an object will be important. For example, you could present a large object such as a beach ball to the class, then have students push on either side of it. Then they can then observe that even though each side is exerting a large force, the ball may not move.

Students' understanding of these situations will directly contribute to their growing understanding of Newton's second law, described in the next section. Indeed, at this point, instruction around the idea in this strand and the *Changes in Motion* strand should be tightly coordinated.

SciPack Final Assessment



- Pass / Fail
- Three Tries
- Timed: 180 Minutes
- Certificate from NSTA

SciPack Topics and Production Status

	Earth & Space <i>9 Topics</i>	Physical <i>7 Topics</i>	Life <i>13 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 	<ul style="list-style-type: none"> ▪ Cell Structure & Function ▪ Coral Reef Ecosystems ▪ Science of Food Safety ▪ Resources & Human Impact
In Production	<ul style="list-style-type: none"> ▪ Earth's History 	<ul style="list-style-type: none"> ▪ Magnetic & Electric Forces ▪ Elements, Atoms & Molecules ▪ Atomic Structure 	<ul style="list-style-type: none"> ▪ Cell Division & Differentiation ▪ Cells & Chemical Reactions ▪ Regulation & Behavior of Organisms ▪ Flow of Matter & Energy in Ecosystems ▪ Nutrition
Coming Soon			<ul style="list-style-type: none"> ▪ Heredity & Variation ▪ Biological Evolution ▪ Natural Selection ▪ Interdependence of Life



The feature I believe is most useful about SciPacks is:

E-Mentor (Expert that answers questions)	Pedagogical Implications (Ed. Research regarding students misconceptions)	Final Assessment (Get a certificate from NSTA for a passing grade)

All

Evaluation of Online, On-Demand, Science Professional Development Material Involving Two Different Implementation Models



Participant Feedback: Confidence in teaching subject matter:

- 7%: Very Confident *Before* completing F&M SciPack
- 60%: Very Confident *After* completing F&M SciPack
- 98%: Found SciPack content relevant
- 96%: Would recommend SciPack
- 98%: Found interactive simulations worthwhile

Pre/Post Assessment and Final Assessment Results

- Horizon Research Instrument:
Positive *significant gains in learning* between pre/post test
- Final Assessment: 92% passed the final assessment

JSOT, Vol. 17, N. 1, Feb 2008



Let's Pause for Two Questions

<http://learningcenter.nsta.org>



SciGuides

Sites, Solutions, Success

SciGuides development supported by...



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HEWLETT
FOUNDATION



U.S. Department of Transportation
National Highway Traffic Safety
Administration



GE Foundation

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Foundation

Featured e-PD resources within the Learning Center



Do you spend time searching for
appropriate web resources to use
in the classroom?

YES	NO



Featured e-PD resources within the Learning Center



Valuable classroom resources for science teachers interested in integrating the web into their teaching

Each SciGuide consists of:

- Approximately 100 standards-aligned web-accessible resources
- Customized lesson plans using selected web resources
- Teacher media vignettes describing and showcasing the lessons
- Samples of student work
- Interactive simulations utilized in SciPack on same topic





Position and Motion

Think about driving a car. We know when the car is still, when it is traveling at a constant speed and when the speed is increasing or decreasing. We know when we are getting closer to the car in front that we have to reduce our speed. When that car in front is getting close very fast, we have to reduce our speed by a great amount very quickly. Can we explain this more accurately?



We rarely think about the motion of objects beyond noticing that they are still or in motion. But we have an intuitive sense of a wide range of motion and changes in motion. This SciGuide will develop a deeper understanding of motion and changes in motion and introduce descriptive language and equations for changes in motion.

Motion involves a change in position. It is important to be able to describe position accurately in relation to a reference point. When the object changes position, it is important to describe how it changes position and in what direction. This SciGuide will provide support in understanding different ways to describe position and different units used in science. How an object changes its position can be described by using speed or velocity. When the speed or velocity changes, those changes can be describe by the object's acceleration. Definitions for position, speed, velocity and acceleration developed by physicists can be extremely helpful in understanding motion. Definitions, scientific units, equations, graphs of change in position and change in velocity, and simulations are all provided in these on-line resources to facilitate and understanding of

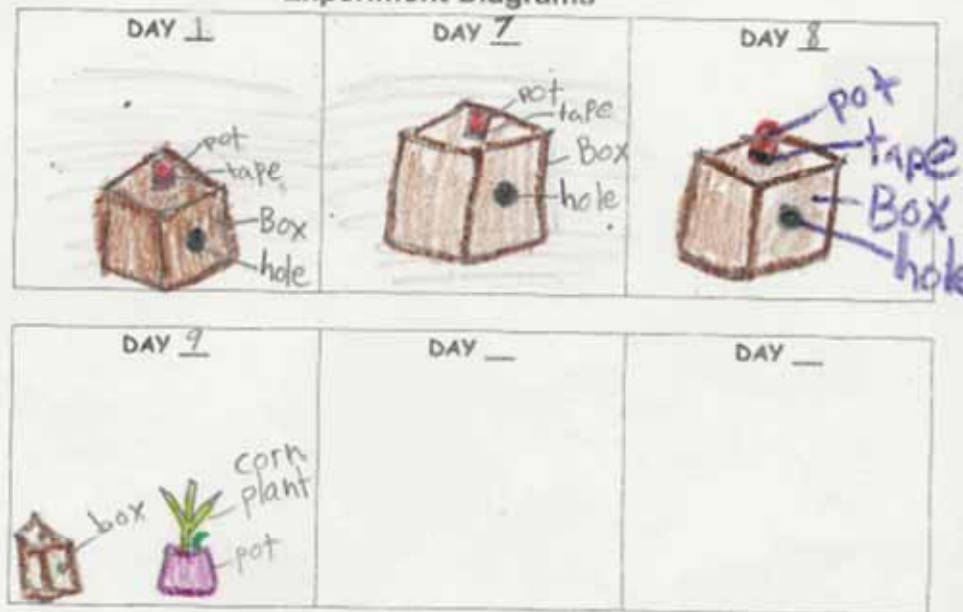
Lesson Resources:

- ✦ **Rollercoasters!**
 - [Lesson Plan](#)
 - [Vignette \(Case Study\)](#)
 - [Audio Clip](#)
 - [Sample of Student Work](#)

Additional Resources:

- ✦ **Media**
 - [Angels and Distance \(flash sim\)](#)
 - [Three Speeds \(flash sim\)](#)
 - [Moving Objects \(flash sim\)](#)
 - [Motion Related to Speed \(flash sim\)](#)
 - [Ball Rolling Across Different Surfaces \(flash sim\)](#)
 - [Velocity and Speed \(flash sim\)](#)
 - [Applying Force to a Moving Object \(flash sim\)](#)
 - [Ball on a Complex Track \(flash sim\)](#)

Experiment Diagrams



CONCLUSION:

(Explain what happened throughout your experiment)

My table planted a plant upside down. We used a box, pot, corn, plants, soil, and tape, and plastic wrap. We wanted to know if the plants in a box would grow to the sunlight. The plants grew, but not to the sunlight. At first the plants were 4.8 mm and 1.75. Now they're a little taller. The colors changed to. It's starting to turn white instead of green. I think that they didn't grow very much taller because they were upside down. How we did this was by getting a box. Then cutting 2 holes in it. Second we put the plant upside down in one of the holes and taped it down. Now when we measured it this





The feature I believe is most useful about SciGuides is:

URLs	Lesson Plans	Samples of Student Work	Teacher Media Vignettes	Interactive Simulations from SciPack



Learning Center

Other resources



- Blended Professional Development Opportunity
- Initially face-to-face with follow-up online



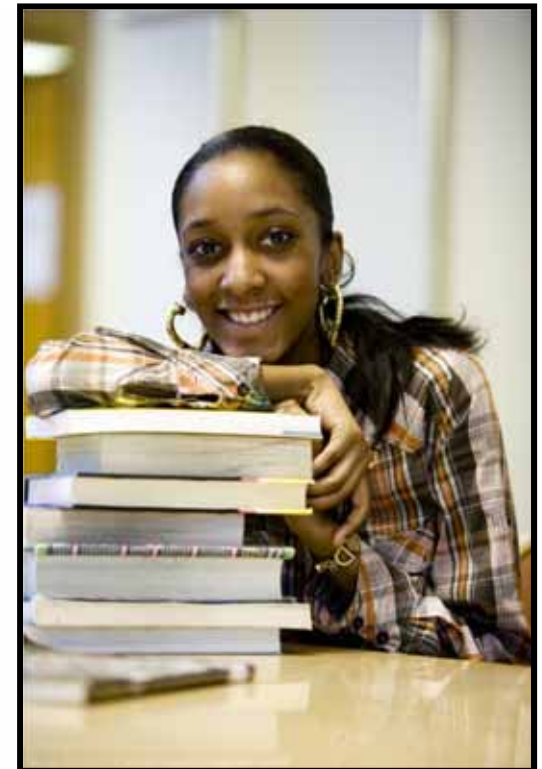
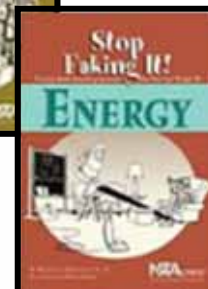
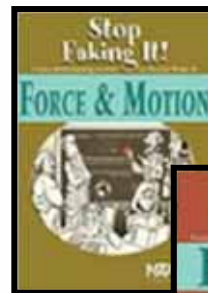


- Interact with leading scientists, engineers, education specialists and colleagues from around the world
- Since 2003 we have done over 125 web seminars to over 8,000 participants
- 125 web seminar archives, 200+ podcasts

More resources.....



- Journal Articles
- eBook Chapters
- eBooks
- Online Short Courses





Let's Pause for Two Questions

<http://learningcenter.nsta.org>

NSTA Learning Center Tools



▸ Back to NSTA.org ▸ Contact Us ▸ Help

The NSTA Learning Center

Home My Account Subjects Learning Resources & Opportunities Professional Development Tools Education Administrator

My Learning Center

Welcome, Science Teacher :: [My Account](#) [Logout](#)

Welcome My Library My PD Indexer My PD Plan & Portfolio My Transcript My Calendar My Note Pad

Welcome to Your Professional Development Web Space!

Through the resources on this site you can begin to build your professional development plan, track your activities and assess your progress. You can start at the "Explore Learning Opportunities" section or by writing your game plan with the PD Plan and Portfolio tool. Whatever you decide, that's the beauty of this space. So, let's get started!

Featured PD Resource



**Science
OBJECTS** 

Oceans Effect on Weather and Climate: Global Climate Patterns



My Library

- Store and create collections of resources
- Create notes for individual resources
- Share your collections with colleagues
- **Upload your own resources**

New!

Back to NSTA.org | Contact Us | Help | Feedback

The NSTA Learning Center

NSTA Guest Home | My Account | Subjects | Learning Resources & Opportunities | Professional Development Tools | Education Administrator

Learning Center Home > My Learning Center > My Library

Welcome, Sample Teacher | My Account | Logout

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. Please use the ["My Library" Help Guide](#) (1.24 MB PDF) if you need assistance adding resources or creating collections in your library.

NSTA Resources | **New! Uploaded Resources (Beta)** | Resource Collections | Collections Shared With Me

Do-it-Yourself Learning	Books & Articles
SciGuides (1 item) SciPacks (1 item)	No Items
Live Online Seminars & Classes	In Person Experiences
No Items	No Items

Add resources to *My Library*



Back to NSTA.org Contact Us Help

THE NSTA Learning Center

Home My Account Subjects Learning Resources & Opportunities Professional Development Tools Education Administrator

Welcome, Sample Teacher :: My Account Logout

My Learning Center

Welcome My Library My PD Indexer My PD Plan My Calendar My Note Pad

Welcome Texas Regional Collaborative Science and Mathematics Teachers

This website is provided to give you an opportunity to use the NSTA Learning Center. These standards-aligned resources are designed to help science educators increase their content knowledge, organize and document their personalized professional development plans and increase their effectiveness in the classroom.

SciPack Pre-and Post-Tests

In order to measure the effectiveness of your professional development programs, pre- and post-tests can be administered online via your custom NSTA Learning Center website.

Click below to access the pre-tests and post-tests.

Learning Resources & Opportunities

- Science Objects
- SciPacks
- SciGuides
- Symposia
- Web Seminars
- Online Short Courses
- NSTA Journal Articles
- NSTA Press Books

Learning Center Resources

Featured PD Resource

 **NSTA SciPacks**

Force and Motion

Upload your own resources to *My Library*

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



My Library

Welcome, Albert Byers :: [My Account](#) [Admin](#) [Logout](#)

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. Please use the ["My Library" Help Guide](#) (1.24 MB PDF) if you need assistance adding resources or creating collections in your library.

NSTA Resources

New! Uploaded Resources [Beta]

Resource Collections

Collections Shared With Me

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 **1.5 GB**

You have **1.50 GB** of available space

My Uploaded Resources



[Preliminary Exam Question 1 Online PD.doc](#)

This document provides an update on PD and online PD as well as current trends in same (e.g., social networking, m-learning, etc.)

- [Email to a Friend](#)
- [Move out of Online PD Ar... Collection](#)
- [View/Edit Notes](#)
- [Delete this Resource](#)



[Tapped-In Challenge to Sustain Communities.pdf](#)

Discussion how PD may be primarily local and necessitate school-based communities versus national ones

- [Email to a Friend](#)
- [Add to Collection](#)
- [Create Note](#)
- [Delete this Resource](#)



[NSTA Learning Center](#)

Online e-PD portal

- [Email to a Friend](#)
- [Move out of Online PD Ar... Collection](#)
- [Create Note](#)
- [Delete this Resource](#)



[SciPack Production Cost.xls](#)

Overview of all related expenses for creating a SciPack

- [Email to a Friend](#)
- [Add to Collection](#)
- [Create Note](#)
- [Delete this Resource](#)



[Ice Climbing.jpg](#)

Image from NASA education professional development experience at Lake Placid, NY. Climbing ice wall

- [Email to a Friend](#)
- [Add to Collection](#)
- [Create Note](#)
- [Delete this Resource](#)

Create Collections in *My Library*



Back to NSTA.org | Contact Us | Help | Feedback

The NSTA Learning Center

NSTA Guest Home | My Account | Subjects | Learning Resources & Opportunities | Professional Development Tools | Education Administrator

Learning Center Home > My Learning Center > My Library


RSS | SHARE

My Library


Welcome, Sample Teacher :: My Account | Logout


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. Please use the ["My Library" Help Guide](#) (1.24 MB PDF) if you need assistance adding resources or creating collections in your library.


NSTA Resources | **New! Uploaded Resources (Beta)** | **Resource Collections** | Collections Shared With Me


 Do-it-Yourself Learning

 Books & Articles


 SciGuides (1 item)


 No Items

 SciPacks (1 item)

 Live Online Seminars & Classes

 In Person Experiences

 No Items

 No Items



Flavio Mendez has 22 items in his “*My Library*” space. How many do you have?



0	1	2-4
At least 5	More than 5	This is a worthwhile tool that I need to try



My PD Indexer

- Diagnose gaps in content understanding
- Recommend targeted PD resources for individual users

The screenshot shows the NSTA Learning Center website. The header includes the NSTA logo and navigation links: Home, My Account, Subjects, Learning Resources & Opportunities, Professional Development Tools, and Education Administration. The main content area is titled "PROFESSIONAL DEVELOPMENT INDEXER". It includes a login section for Albert Byers, a search bar, and a table of indexers.

Indexer:	Subjects Covered:	Action:
Earth and Space Science Indexer	Rock Cycle Earth, Sun and Moon Universe Solar System Gravity and Orbits Plate Tectonics Earth's Changing Surface Weather and Climate	Take New Assessment Show My Results Show Tests in Progress
Life Science Indexer	Cell Structure and Function Coral Reef Ecosystems	Take New Assessment Show My Results Show Tests in Progress
Physical Science Indexer	Force and Motion	Take New Assessment Show My Results Show Tests in Progress

My PD Plan & Portfolio



- Create multiyear plan outlining goals, evidences, and justifications for growth
- Upload files to demonstrate completion of goals with reflections
- Generate automatic PDF report with embedded URL links and images

The screenshot shows the 'The NSTA Learning Center' website with the title 'My Professional Development Plan and Portfolio'. At the top right are links for 'BACK TO LEARNING CENTER' and 'MY ACCOUNT'. Below the title is a navigation bar with buttons: 'Welcome', 'Select Goal Categories', 'Define/Measure Goals', 'View Status', and 'Generate Report'. The main content area is titled 'Support Evidence'. On the left is a 'Portfolio Manager' tree with folders for 'My Content Knowledge', 'My Content Pedagogy', 'My Assessment/Evaluation Skills', 'My Technology Skills', 'My Leadership Skills', 'My Management Skills', and 'Impact on Student Learning'. Under 'My Content Knowledge', there is a sub-folder '(goal) - Earth Science Review' which contains an '[evidence] - Earth's Changing Surface' file and a 'Reflection' link. On the right, the selected evidence is displayed with 'Category: My Content Knowledge', 'Goal: Earth Science Review', and 'Evidence: Earth's Changing Surface SciPack'. Below this is a 'My Tasks' section with four icons: 'Upload File', 'Add Note', 'Edit Evidence', and 'Delete Evidence'. Further down is an 'Instructions' section with text explaining the purpose of the evidence and links for 'About Upload File' and 'About Add Note'.

[Welcome](#)[Select Goal Categories](#)[Define/Measure Goals](#)[View Status](#)[Generate Report](#)

:: Welcome to My PD Plan & Portfolio Tool!

Welcome to *My Professional Development Plan and Portfolio Tool*! This flexible and easy-to-use tool collection represents web-based resources designed to help you reflect upon, plan, manage, organize, and report those experiences defining your own professional development journey across a specified time period. The tools help you complete the following steps in the creation of your own personal PD plan and portfolio:



- **Step One:** Identify your professional development (PD) goal categories
- **Step Two:** Describe your specific PD goals
- **Step Three:** Define action items and portfolio artifacts (evidence)
- **Step Four:** Upload evidence files
- **Step Five:** Review goal status and reflect on your accomplishments
- **Step Six:** Automatically generate your PD reports

Select the button below to begin (or continue) your PD plan and portfolio journey:

My Portfolio



[Get started \(or continue\) using this tool!](#)

Tool Overview



[View a short animation describing the various features of this tool](#), or download the ["Portfolio Help" PDF \(0.5 MB\)](#) for assistance on how to get started.

Sample Reports



[View a sample PD portfolio report \(PDF file\)](#)

[Welcome](#)[Select Goal Categories](#)[Define/Measure Goals](#)[View Status](#)[Generate Report](#)

Support Evidence

Portfolio Manager

- My Content Knowledge
 - (goal) - Review/Improve Physical Science Understanding
 - (evidence) - Force and Motion SciPack
 - (evidence) - Symposia-Force and Motion
 - Reflection
- My Content Pedagogy
- My Assessment/Evaluation Skills
- My Technology Skills
- My Leadership Skills
- My Management Skills
- Impact on Student Learning
- Other

You define the evidence that will demonstrate you have completed your goal

Category: My Content Knowledge**Goal:** Review/Improve Physical Science Understanding**Evidence:** Force and Motion SciPack

My Tasks



Instructions

In this step, you can edit the information associated with the evidence you plan to use in your portfolio to communicate about your successful professional development experiences for the selected goal. You can upload files, create your own files (i.e. a note describing specific journals or books you have read), and edit the information about how a specific evidence file does, in fact, communicate your successful accomplishments.

About Upload File

About Add Note/Link

You are currently using **26%** of your **25MB**





My Transcript

- Receive and print PDF certificates
- Generate PDF transcript report
- Share report with administrators

MY TRANSCRIPT

The Transcript tool allows you to generate a PDF report listing your completed NSTA professional development (PD) experiences. You receive certificates as you complete experiences at NSTA Conferences, Web Seminars, Online Short Courses, Symposia, and NSTA Academies. Select the tab below to see a list of your completed experiences, contact hours, and certificates for each area, or select the "Download My Transcript" link and select specific experiences for your PDF transcript report.

You may also use our free [PD Plan & Portfolio tool](#) to plan and track your PD. Within this tool you may generate and store reflections about your PD experiences, upload images and student work samples, point to URLs, and upload certificates to document your growth over time. You may then generate a PDF report that includes these uploaded files and reflections. The PDF Plan report enhances your NSTA transcript and is not limited to NSTA PD events.



 [Download My Transcript](#)

SciPacks				
Conferences	Web Seminars	Symposia		
Symposia		Certificate	Hours	Date
Earth Then, Earth Now: Our Changing Climate		View	4.5	Dec, 2008
Teach Science Concepts and Inquiry with Food		View	4.5	Dec, 2008

Technical Support Help Desk

- Recover password
- *How to Guide* - files
- System Check
- FAQ
- Phone Support
(M-F), 10 am – 6 pm
Eastern time



learningcenterhelp@nsta.org

System Check...



Building Content Knowledge

Science Objects System Check

Operating System	<input checked="" type="checkbox"/>	[more info]
Browser	<input checked="" type="checkbox"/>	[more info]
JavaScript	<input checked="" type="checkbox"/>	[more info]
Cookies	<input checked="" type="checkbox"/>	[more info]
Flash Player	<input checked="" type="checkbox"/>	[more info]
Quicktime	<input checked="" type="checkbox"/>	[more info]



National
Science
Teachers
Association

The NSTA Learning Center

- On-Demand Access
- 4,000+ resources
- Tools to help you organize, personalize, and document your growth over time.

Flavio Mendez

Senior Director

NSTA Learning Center

fmendez@nsta.org

The screenshot displays the NSTA Learning Center website. At the top, there's a navigation bar with links: Home, My Account, Subjects, Learning Resources & Opportunities, Professional Development Tools, and Education Administrator. Below this, a 'Welcome to Your Professional Development' section features a video of a smiling woman. To the right, there's a login section with a 'Click Here to Log In Now' link and social media sharing options. The main content area is titled 'Explore Learning Opportunities' and includes a search bar and a 'Go' button. Below the search bar, there are three columns: 'By Subject' (listing Earth & Space Science, Life Science, and Physical Science), 'By Grade Level' (listing Elementary, Middle School, High School, and College), and 'By State Standards' (with a dropdown menu to 'Choose a state'). Further down, there are sections for 'Do-it-Yourself Learning' (with a link to 'SEE ALL DIY LEARNING RESOURCES'), 'Live Online Seminars & Classes' (with a link to 'SEE ALL ONLINE EVENTS'), 'Books & Articles' (listing Books, Book Chapters, eBooks, and Journals), and 'In Person Experiences' (with a link to 'SEE ALL IN PERSON EVENTS'). At the bottom, there's a section for 'Our Content Collaborators' featuring logos for various organizations including NSF, NASA, NOAA, FDA, National Institutes of Health, Earth & Space Science, NSTA Press, MONTANA STATE UNIVERSITY, S.D. Bechtel, Jr. Foundation, NHTSA, Agilent Technologies Foundation, and NSDL. On the right side of the page, there are additional sections: 'Most Popular Science Objects' (listing Energy, Plate Tectonics, Energy, and Universe), 'Multimedia Overview' (with a 'View Overview of the NSTA Learning Center' link), 'Free Learning Resources' (listing 'Rock Cycle: Categories by Process' and 'Coral Reef Ecosystems: Ecosystems in Crisis'), and 'Testimonials & Awards' (with a paragraph about the effectiveness of Science Objects and SciPacks).



Thank you!

Join me for more Q&A after the evaluation

[Back to NSTA.org](#)
[Contact Us](#)
[Help](#)
[Feedback](#)

The NSTA Learning Center



- Home
- My Account
- Subjects
- Learning Resources & Opportunities
- Professional Development Tools
- Education Administrator

Welcome to Your Professional Development

The Learning Center is NSTA's e-professional development portal to help you address your classroom needs and busy schedule. You can gain access to more than 3,300 different resources that cater to your preference for learning. Over 925 resources, such as journal articles, science objects and web seminars are available [for free](#). A suite of practical tools such as My Library, My Transcript, and My Professional Development Plan and Portfolio tool help you organize, personalize, and document your growth over time. If desired, you may review an [archived Web Seminar](#) overview of the NSTA Learning Center, or download the ["How to Guide"](#) PDF (2.7 MB).



Explore Learning Opportunities

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

By Subject	By Grade Level	By State Standards
<ul style="list-style-type: none"> Earth & Space Science Life Science Physical Science 	<ul style="list-style-type: none"> Elementary Middle School High School College 	Select your state to begin: <input type="text" value="Choose a state"/>


Do-It-Yourself Learning
 Learn at your own pace online with these 1-2 or 6-10 hour interactive activities.


Live Online Seminars & Classes
 Learn online from certified instructors with your colleagues. 1-2 hour seminars, week and month long courses are available. Earn state

Login

[Click Here to Log In Now]

[RSS](#)
[SHARE](#)

Most Popular Science Objects

Viewed Emailed

1. Energy: Different Kinds of Energy
2. Plate Tectonics: Layered Earth
3. Energy: Thermal Energy, Heat, and Temperature
4. Universe: The Sun as a Star

[More Popular Resources...](#)

Multimedia Overview



View Overview of the NSTA Learning Center

[Learn More](#)

Flash Player Required

Free Learning Resources


[Solar System: A Look at the](#)



<http://www.lluminate.com>

National Science Teachers Association

Dr. Francis Q. Eberle, Executive Director

Zipporah Miller, Associate Executive Director
Conferences and Programs

Al Byers, Assistant Executive Director e-Learning

NSTA Web Seminars

Paul Tingler, Director

Jeff Layman, Technical Coordinator

