

Welcome to MATEC NetWorks Webinar

Innovative STEM Resources from NSDL: Content, Context, Community

NetWorks is an NSF-funded ATE Resource Center supporting faculty in Semiconductor, Automated Manufacturing, and Electronics education

Classroom Ready Resources in the Digital Library

TechSpectives Blog

Webinars

All this and more at www.matecnetworks.org



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MARICOPA
COMMUNITY
COLLEGES

NetWorks is a part of MATEC a member of
the Division of Academic and Student Affairs
at the
Maricopa Community Colleges.



National
Science
Foundation

Funded, in part, by a grant from the
National Science Foundation.
DUE-0501626



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Poll

Raise hand/smile/clap



1 Participant

Chat

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Chat



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Whiteboard - Main Room

15/29 Welcome to MATEC NetWorks Webinar Follow Moderator Roam

Welcome to MATEC NetWorks Webinar

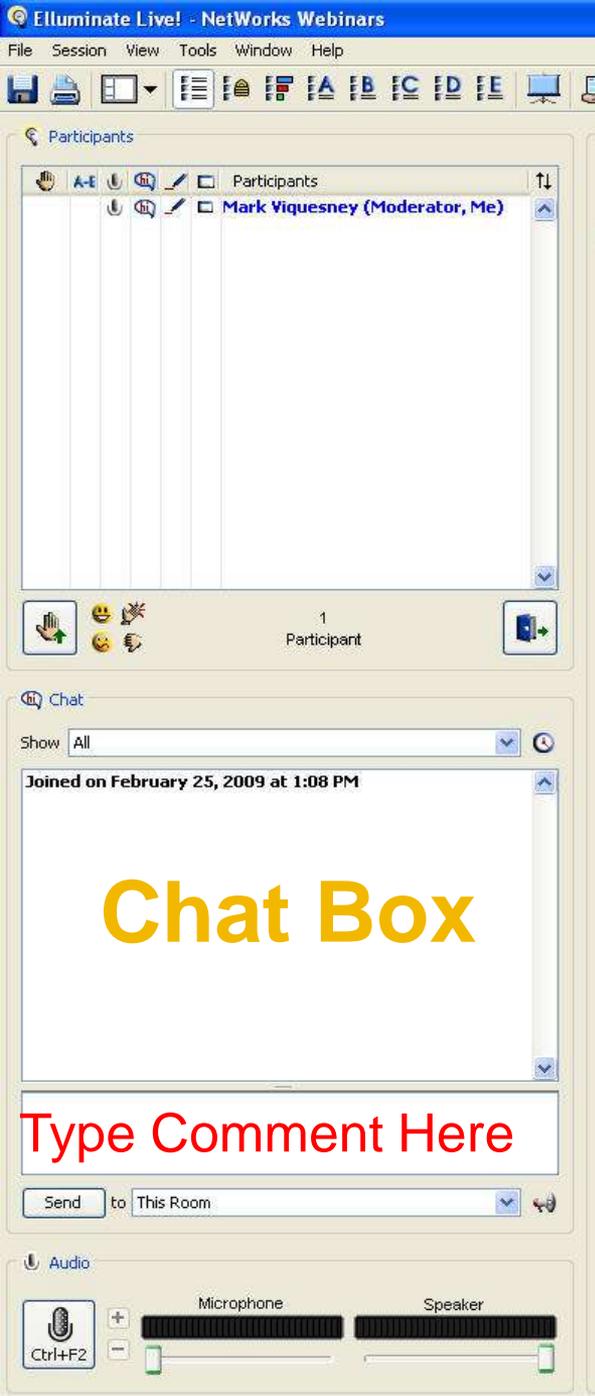
Whiteboard

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Chat Box

In the **Chat Box**, please type the name of your school or organization, your location, and how many people are attending with you today.

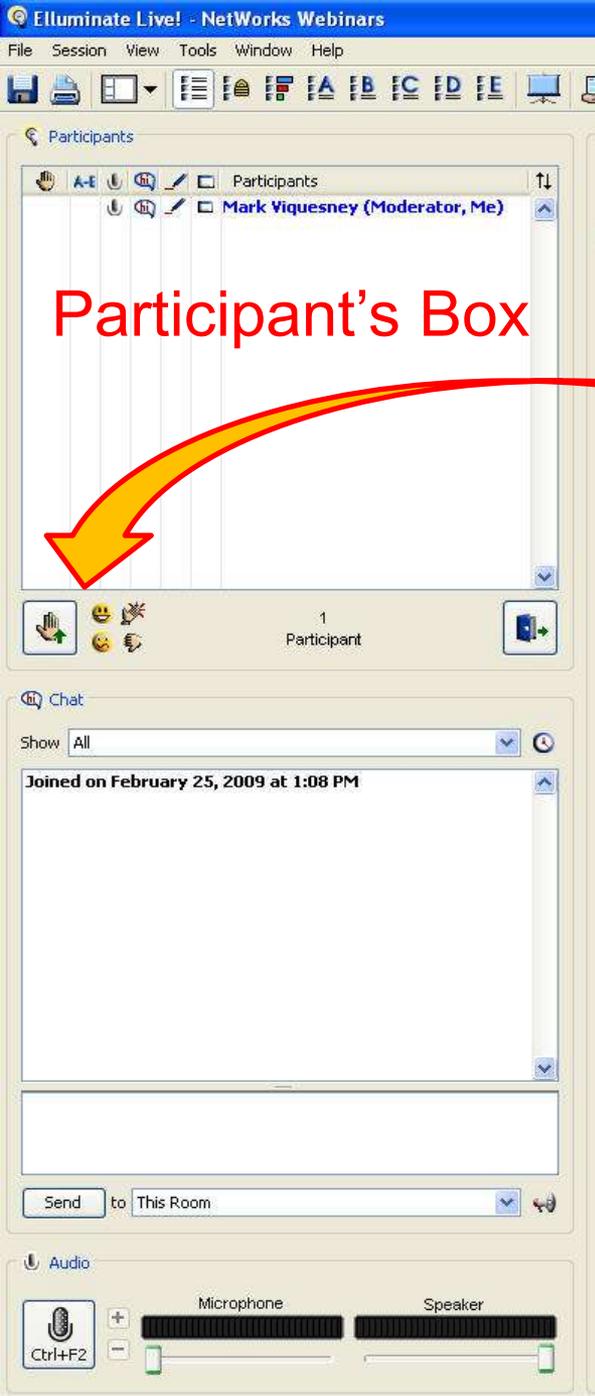


KS



Participant's Box

Allows you to non-verbally respond to the presenter's comments.



Participant's Box

Participant's Box

Smile



Raise Hand

Let the presenter know if you like what they say with a smile or clap. Raise a hand if you have a question – and then type it into the chat box.





Poll

Click A-E to take the Poll

This webinar will have a Poll. Please answer:
I heard about this webinar through:

- A. @matec
- B. Email from ETD list serv
- C. Email from NetWorks
- D. Friend or colleague
- E. Other (please type where in chat box)



NetWorks Webinar Presenters



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MATEC PI



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Colleagues at the NSDL Resource Center

Susan Van Gundy
Deputy Director
Director of Strategic Partnerships



Laura Moin
Outreach &
Professional Development Manager



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Starting with some questions....

Do you know about digital libraries, or have heard the term? (yes/no)

Have you used a digital library before?
(yes/no)



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What we'll cover....

Background and structure of NSDL

Trends in K-12 affecting college & university education

Facets of NSDL and the value of digital libraries

NSDL Pathways and other resources and services

Partnership building, ways to connect



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Funding Agency: National Science Foundation

- Education and Human Resources Directorate – Division of Undergraduate Education
- Initiated by NSF in 2000 as R&D project, now part of NSF's educational cyberinfrastructure

Scope: Education at all levels (K-12, Higher Ed, Lifelong Learning, Research)

- Science, Technology, Engineering, and Mathematics

Structure: Distributed holdings and services, provided and maintained by many organizations

- Resource Center – University Corporation for Atmospheric Research (UCAR)
- Technical Network Services – UCAR, Univ. of Colorado, Cornell
- Pathways Projects – 16 Pathways Partnerships
- Service and Research Projects – more than 200 awards



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The Changing Value Proposition for Digital Libraries...

Early on – **card catalog** – a single portal to organized, structured information about resources, with search and discovery over these metadata

Currently – **multilayered trust networks** – interrelationships between structured and unstructured information with focus on **context, utility, collaboration, and reuse**

Emerging as – **cyberlearning platform** – enabling innovation applied to STEM education



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NSDL Resource Center

- Mission

To support the NSDL community by coordinating resources, tools, information, and relationships that can enhance the quality, utility, and educational impact of NSDL projects, and ensure the long-term relevance and sustainability of the NSDL enterprise.

- Baseline Activities

Community coordination, annual PIs meeting, outreach, communications, professional development, presentations and workshops, brokering partnerships and opportunities, trends monitoring, stakeholder engagement



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NSDL 2000 - 2010

2001 Content – overcoming scarcity +
providing access

2010 Community, interconnection,
contextualization, personalization –
+ an explosion of creativity and
control over learning and information
spaces by younger and younger users



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... a glimpse of the truly challenging realities

“I am a new teacher and just secured a ... position in a low income district. ... I have an Earth Science credential but since I have just been thrown in I have hardly any lessons to give The book is not very good and the labs are pathetic. Does anyone have any good books or suggestions for hands on activities or suggestions that might be helpful for me, esp. for the Chem [class]? maybe easy Chem activities, low budget, that I could attempt We have very few resources at this school THANKS IN ADVANCE!!!!”



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Relevant trends....

Project Tomorrow: <http://tomorrow.org> - the 'free agent learner'

Using tech tools on their own for learning (G9-12):

-Played online game or simulation	18%
-Tutored other students	24%
-Sought help via online social network	26%
-Posted to a blog	12%
-Found experts to help me	13%
Sent tweet on topic	10%
Started a wiki/blog	9%
Created video/podcast	8%

Access to e-devices:

iPod	85%
Desktop computer	74%
Laptop/Tablet PC/Netbook	70%
Cell phone w/o Internet	67%
Smart phone w/Internet	31%
Flip camera	42%



Elements of the free-agent learner

- **Socially based leaning** – students want to leverage communications and collaboration tools to create and personalize networks of experts for their educational process



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Elements of the free-agent learner

- “Un-tethered” learning – tech-enabled learning beyond classroom walls; not limited by geography, constraints on access, community assets, teacher knowledge/skills



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Elements of the free-agent learner

- **Digitally rich learning** – engaging, immersive experiences; students as ‘consummate documentarians’

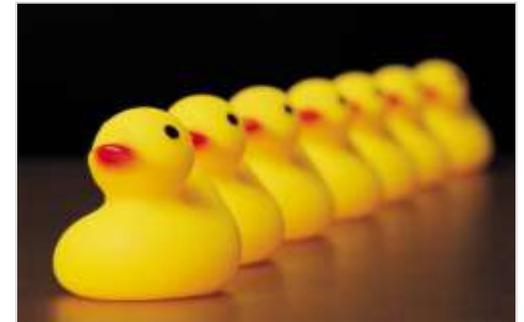


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Partnership for 21st Century Skills

- Core subject knowledge (three Rs)
combined with Readiness skills (four Cs):
 - Critical thinking and problem solving
 - Communication
 - Collaboration
 - Creativity and innovation
- <http://www.p21.org/index.php>



Do you see any of these tendencies among your students? (free-agent learner / 21st century skills)

A. Yes

B. No

C. Maybe / Sometimes

D. Never!



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What do you most need to support your teaching?

- Subject matter expertise
- Good classroom-ready resources
- Professional development
- Strategies for digital resource use in classrooms/labs
- What else? Use Chat....



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lluminate Live! - NetWorks Webinars

File Session View Tools Window Help

Participants

Participants

Mark Viquesney (Moderator, Me)

1 Participant

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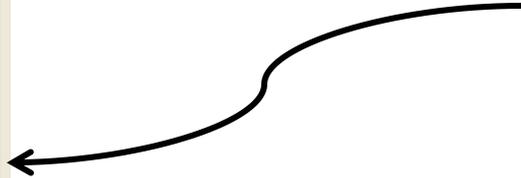
Audio

Microphone Speaker

Ctrl+F2



Type them in
your chat
window



KS

NSDL



Digital Learning Library

Collections
Contextualized Resources
Educational Tools and Services

Digital Learning Community

Professional Networks
Trends and Practices
Dissemination

Digital Learning Laboratory

Research
Tool Development
Platform Services



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NSDL Pathways

- Ed level and discipline-specific views of NSDL
- Built by leading organizations trusted by their target audiences
- Engage ~ 60 professional societies and organizations, and ~ 30 educational institutions and foundations
- Provide resources, tools, services, and professional development



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Community College



Biological Sciences



Chemistry



Physics & Astron



Computational Sci



Geosciences



Computer Science



Engineering



Materials Science



Undergrad Math



Middle School



Social Science Data



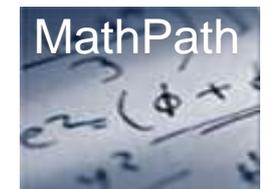
Informal Science & Math



Multimedia



Climate & Energy



K-6 Math

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NSDL Home

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[Larger Text](#)

Search The National Science Digital Library

NSDL is the Nation's online library for education and research in Science, Technology, Engineering, Mathematics.

Highlights

[October is the breast cancer awareness month](#)

According to the American Cancer Society, breast cancer is the second most frequent cancer type (after lung cancer), with 15% incidence. It is estimated that more than 200,000 new cases will be diagnosed before the end of 2010. However, there is much hope and optimism: in the last 30 years, the death rate has been decreasing for all ethnic groups, the rate of new cases has been declining in the last decade, and there are now about 2.5 million breast cancer survivors in the US. The first Susan G. Koman Race for the Cure took place in 1983, and 27 years later, these 5K runs/fitness walks are going strong. 25% of the net income from each race supports the Komen for the Cure Award and Research Grant Programs, while up to 75% of the income supports local community efforts funding breast health education and breast cancer screening efforts. Many factors may influence the incidence of breast cancer and NSDL has resources to help teachers guide their students in learning about them. For example, the [New Animal Study May Explain Why Alcohol Consumption Increases Breast Cancer Risk](#) is a report that our partners at the [BEN Pathway](#) make available to us along with many other related sources, such as the [What Is Breast Cancer?](#) Another possible risk factor in breast cancer is presented in the report [Breast Cancer Risk and Drinking Water Contaminated by Wastewater](#) from the [Engineering Pathway](#).

NSDL Pathways

[Learn More](#)

AMSER: Applied Math and Science Pathway
The Applied Math and Science Education Repository (AMSER) provides online resources and services for community and technical college faculty, staff and students.

[NSDL Pathways News](#)

<http://nsdl.org>

featured resource:

Yale Netcasts: Podcasting at Yale...



On this site, the Office of Public Affairs at Yale University offers Podcasts for students, staff, faculty and the general community.

This resource presents a range of podcasts from members of Yale's university community. Faculty members can broadcast messages regarding class work, upcoming activities and workshops, and even speak about new book releases or published research. Via their PC, Mac, or MP3 player, students can listen to lectures, hear news regarding their favorite Yale sports team, and obtain current information from faculty experts in various subjects. There are broadcasts available about arts and architecture; athletics; books and authors; business and management; cancer...

→ more info

→ more featured resources

new resources:

Processing Wheat for Food

Teachers' Domain presents this interactive lesson on wheat processing, including an introduction to the five kinds of wheat grown in the US and the anatomy of...

→ more info

Nanotechnology

Teachers' Domain presents this video as part of a series on advanced technological education. Nanotechnology is the study of controlling matter on a molecular...

→ more info

Technology Education Lesson Plans

These lesson plans were developed by Thirteen Ed Online master teachers. Starting

welcome

AMSER is a portal of **educational resources and services** built specifically for use by those in **Community and Technical Colleges** but **free** for anyone to use.

AMSER is funded by the National Science Foundation as part of the Science Digital Library project partnership with the Internet Society.

log in:

Username:

Password:

→ forget your password?

Browse Resources

(12 classifications) (224 resources)

Educational Technology

Classifications (GEM)

- Audio-visual equipment (8)
- Careers (9)
- Educational media (65)
- History (1)
- Informal education (12)
- Instructional issues (129)
- Integrating technology into the classroom (53)
- Multimedia education (54)
- Process skills (4)
- Staff inservice (1)
- Technology (114)
- Technology planning (20)

careers

Math and Science majors are needed to help scientists and future scientists collect and analyze data to create information and develop new statistical methodology (at a university statistics, mathematics, biostatistics, business, ecology, or psychology department).



http://amser.org

Also hosts: ATE Central site
http://atecentral.net/



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3D Graphics

This module, created by The Maricopa Center for Learning and Instruction, discusses the use of three-dimensional graphics in different industries. The presentation posits that while these graphics have been used...

<http://mcli.maricopa.edu/dvl/modules/3d>

→ [more info](#)

50 Tips and Tricks to Create a Learning Space

The popular virtual world of Second Life attracts Sim City addicts, entrepreneurs-in-training. The educational possibilities through Second Life are vast. The educational possibilities through Second Life are vast. <http://www.collegedegrees.com/blog/2008>

→ [more info](#)

JCE LivTexts

The mission of the JCE LivTexts collection is to provide chemistry instructors of chemistry a coherent and organized collection of resources that can be easily incorporated into the classroom for their students. The...

<http://jce.divched.org/JCEDLib/LivTexts/>

→ [more info](#)

The screenshot shows the website for the Maricopa Center for Learning & Instruction (MCLI). The header includes the MCLI logo and the text "maricopa center for learning & instruction" and "Division of Academic and Student Affairs - Maricopa Community Colleges". A search bar is located in the top right corner. The main navigation menu includes Home, Programs, Events, Resources, About us, and College Resources. The left sidebar lists categories: Digital Visual Literacy, Overview, Module, Contributors, Conferences & Workshops, Project Documentation, Podcasts & Videos, and Contact Us. The main content area is titled "3D Graphics" and includes an "INSTRUCTOR GUIDE" with links to "InstructorGuide_3Dgraphics_v2009", "3D Graphics Presentation", and "3D Graphics_v2009". It also features a "Practice Activity" titled "Exploring an online e-commerce 3D application: ecommerce_3d", a "Student Project (Using the GIT Tool)" with a link to "GIT", and a "Student Project Grading Rubric" with a link to "GIT_assignment_scoring_rubric". A "Quiz" section is also present with a link to "3D_assignment". A Creative Commons Attribution-NonCommercial 3.0 United States License logo is displayed, along with the text: "This Digital Visual Literacy Curriculum Module by The DVL Project is licensed under a Creative Commons Attribution-NonCommercial 3.0 United States License." At the bottom of the page, there is a "Send us your feedback" section and contact information for the Maricopa Center for Learning and Instruction (MCLI), including the address: "3411 W 4th St - Tempe, AZ 85281".



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← [Learn about NSDL Pathways](#)



ChemEd DL: Chemistry Education Pathway

<http://www.chemeddl.org/>

Provided by the American Chemical Society and the Journal of Chemical Education, at the University of Wisconsin. The ChemEd DL offers browsable access to multiple collections and services from the the Journal of Chemical Education DLib and the American Chemical Society Education Division. ChemEd DL creates news communities centered around different education levels (e.g. high school, undergraduate), provides resources in different sub-disciplines of chemistry (e.g. physical, inorganic), and different pedagogical areas (e.g. problem-based learning). [View Resources](#)

Collections

[Chemical Education Digital Library \(ChemEd DL\)](#)

<http://www.chemeddl.org/>

ChemEd DL aims to provide exemplary digital resources, tools, and online services to aid in teaching and learning chemistry. This means ChemEd DL offers access to multiple collections and services from the the Journal of Chemical Education, the American Chemical Society Education Division and the Ch... [Full Description](#)

Features

- [Browse multiple collections](#)
- [Communities](#) with common interests: General chemistry; Physical Chemistry; Inorganic Chemistry; High School Chemistry; Chemistry Laboratories; and many more
- [Periodic Table Live!](#)
- [Online services](#)
- [Molecules 360](#) - 3D, interactive molecular models



[He] 2s¹

Lithium

- Home
- Crystal Lattice
- Images
- Links



- Display unit cell
- Display lattice
- Wireframe
- Set & stick
- Van der Waals
- Ball
- Display ball atomwise
- Display distances in the cell

Double click on atoms to measure distances

New Browser

Body-centered cubic unit cell. In the extended body centered cubic lattice each atom has a coordination number of eight.

[Characteristics](#) | [Discovery](#) | [Found](#) | [Name](#) | [Preparation](#) | [Features](#) | [Uses](#)

Lithium, a metal, is the first element of the **2nd period**. It is the lightest element of the alkali metals (**Group 1A**). Other members of the group are sodium (Na), potassium (K), rubidium (Rb), cesium (Cs), and francium (Fr).

Lithium was discovered by [Arfwidson](#) in 1817 while he was working in the laboratory of the 19th century Swedish chemist [Berzelius](#).

The name lithium is derived from the Greek word, *lithos*, for stone, and the symbol Li is an abbreviation of that name.

It is the lightest of all the metals with a **density** = 0.534 g/cm³. In the solid state, the metal has a **body-centered cubic structure** like the rest of the alkali metals.

The abundance of lithium (and beryllium and boron) in the universe is much lower than that of the other 2nd-period elements. The reason for this has to do with the mechanism of formation of the elements in stars.

One reason for the vigorous reactivity is that the element has the **lowest ionization energy** of the 2nd period elements.

Lithium does not occur free in nature; combined it is found in small amounts in nearly all igneous rocks and in the waters of many mineral springs. Lepidolite (a lithia mica), spodumene, petalite, and amblygonite are the more important minerals containing it.

[Brandt](#) and also [Davis](#) were the first to isolate lithium metal, but significant quantities for study were not produced until 1855 by [Bunsen](#) and [Mathiessen](#).

The metal is produced electrolytically from fused lithium chloride (just as are sodium, magnesium, aluminum, and others).



Lithium is **silvery** in appearance, much like Na and K, two other members of the alkali metal series. It reacts with **air**, **water**, **acids**, and **oxes**, but not as vigorously as sodium.



NSDL Science Literacy Maps relate teaching and learning resources to the AAAS Project 2061 *Benchmarks for Science Literacy*

NSDL Science Literacy Maps
Helping teachers connect concepts, standards, and NSDL resources

Search for maps Search or

The Physical Setting > Weather and Climate

View Student Misconceptions | water cycle | atmosphere | climate change

Print view | Link to this page

Life is adapted to conditions on the earth, including the force of gravity that enables the planet to retain an adequate atmosphere, and an intensity of electromagnetic waves from the sun that allows water to be present in the liquid state.

The earth's climates have changed in the past, are currently changing, and are expected to change in the future, primarily due to changes in the amount of light reaching places on the earth and the composition of the atmosphere. The burning

Climatic conditions result from latitude, altitude, and from the position of mountain ranges, oceans, and lakes. Dynamic processes such as cloud formation, ocean currents, and atmospheric circulation patterns influence climates as well.

Greenhouse gases in the atmosphere, such as carbon dioxide and water vapor, are transparent to much of the incoming sunlight but not to the infrared light from the warmed surface of the earth. When greenhouse gases increase, more thermal energy is

Plants on land and under water alter the earth's atmosphere by removing carbon dioxide from it, using the carbon to make sugars and releasing oxygen. This process is responsible for the oxygen content of the air.

In a fluid, regions that have different temperatures have different densities. The action of a gravitational force on regions of different densities causes them to rise or fall, creating currents that contribute to the transfer of

The number of hours of daylight and the intensity of the sunlight both vary in a predictable pattern that depends on how far north or south of the equator the place is. This variation explains why temperatures vary over the course of the year.

Home Help

Search for maps

Search

or

-- Select a Topic --



NSDL [Science Literacy Maps](#) are a tool for teachers and students to find resources that relate to specific science and math concepts. The maps illustrate connections between concepts as well as how concepts build upon one another across grade levels. Clicking on a concept within the maps will show NSDL resources relevant to the concept, as well as information about related [AAAS Project 2061 Benchmarks](#) and [National Science Education Standards](#).

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Getting started

- » [How to use Science Literacy Maps](#)
- » [Frequently asked questions \(FAQ\)](#)

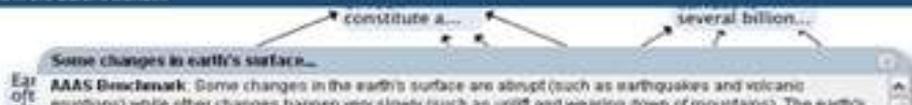
For developers

- » [Technical training](#)
- » [How to align resources to benchmarks](#)
- » [Service API documentation](#)

See Also

- » [Text-based Version](#)

Current map: Changes in the Earth's Surface



NSDL Science Literacy Maps

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Featured Benchmark What's This?

[View Student Misconceptions](#)

Benchmark Details

In science, the testing, revising, and occasional discarding of theories, new and old, never ends. This ongoing process leads to a better understanding of how things work in the world but not to absolute truth. *1A/H3bc* (ID: SMS-BMK-1716)

Grade range: 9 - 12

NSDL Resources | **NSES Standards** | Related Benchmarks

Results 1 - 5 out of 14
1 2 3 Next >>

Studying Genomes: From the Lab to the Classroom
http://nsdl.org/resources_for/k12_teachers/?pager=professional_development&resour...

From time to time, shifts occur in the scientific view of be

In science, the testing, revising, and occasional discarding of theories, new and old, never ends. This ongoing process leads to a better

Scientific Theories > theory modification > grades 9-12
In science, the testing, revising, and occasional discarding of theories, new and old, never ends. This ongoing process leads to a better understanding of how things work in the world but not to absolute truth. [View in new window](#)

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Student Misconceptions

The ideas "the sun is a star" and "the earth orbits the sun" appear counter-intuitive to elementary-school students. ^[1] The ideas "the sun is a star" and "the earth orbits the sun" are not likely to be believed or even understood in elementary grades. ^[2] Whether it is possible for elementary students to understand these concepts even with good teaching needs further investigation. ^[3]

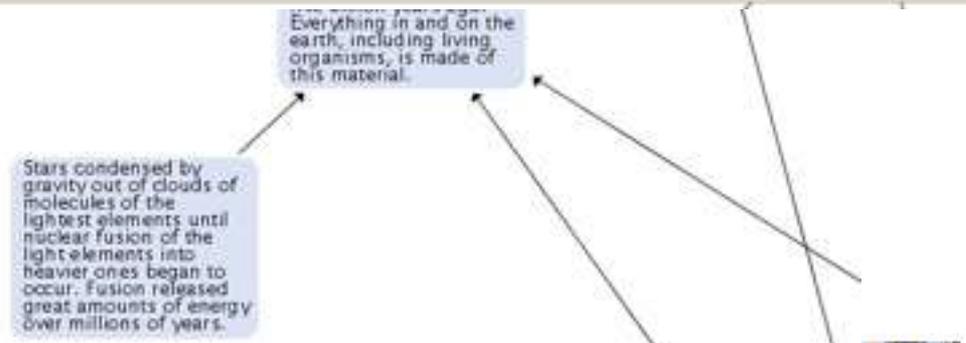
Explanations of the day-night cycle, the phases of the moon, and the seasons are very challenging for students. To understand these phenomena, students should first master the idea of a spherical earth, itself a challenging task. ^[4] Similarly, students must understand the concept of "light reflection" and how the moon gets its light from the sun before they can understand the phases of the moon. Finally, students may not be able to understand explanations of any of these phenomena before they reasonably understand the relative size, motion, and distance of the sun, moon, and the earth. ^[5]

References

- [1] Baxter, J. (1989). Children's understanding of familiar astronomical events. *International Journal of Science Education*, 11, 502-513.
- Vosniadou, S., Brewer, W. (1992). Mental models of the earth: A study of conceptual change in childhood. *Cognitive Psychology*, 24, 535-585.
- [2] Vosniadou, S. (1991). Designing curricula for conceptual restructuring: lessons from the study of knowledge acquisition in astronomy. *Journal of Curriculum Studies*, 23, 219-237.
- [3] American Association for the Advancement of Science, Project 2061 (2001). *Atlas for Science Literacy*, 44.
- [4] Vosniadou, S. (1991). Designing curricula for conceptual restructuring: lessons from the study of knowledge acquisition in astronomy. *Journal of Curriculum Studies*, 23, 219-237.

relative

9-12



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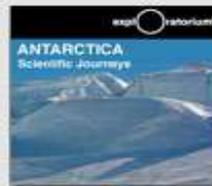




- Topics**
- Chemistry
 - Earth Science
 - Life Science
 - Nanotechnology
 - Technology
 - Polar Science

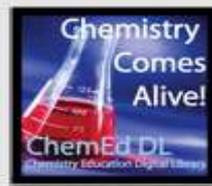
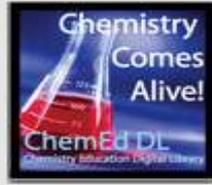
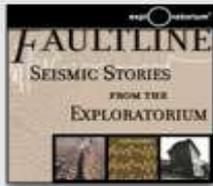
- Contributing Partners**
- AMSER
 - ChemEd DL
 - Exploratorium
 - NCAR & UCAR

What's New for K-12 Teachers

		
Project BudBurst Act...	Nitrogen Triiodide ...	Diving Under the Ice...

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 - NSDL Expert Voices...
 - National Science Fo...

Featured Content

		
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Vroom! Nanocars ...	Ice Bomb	Death by PowerPoint
		
Faultline Seismic Stories	AMSER	Global Warming & Climate Change

- TOP DOWNLOADS**
-  [Diving Under the ...](#)
Exploratorium
 - [Mercury Beating...](#)
ChemEd DL (Chem...
 - [Edible Geology ...](#)
Exploratorium
 - [How Can We Re...](#)
National Center for...
 - [Telecommunicati...](#)
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NSDL Math Common Core collection

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NSDL Home > Browse > Common Core > Math > NSDL Mathematics Resources for Common Core Standards Larger Text

The NSDL Math Common Core Collection contains digital learning objects that are related to specific Math Common Core State Standards.

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- Kindergarten
 - [Counting and Cardinality](#)
 - [Operations and Algebraic Thinking](#)
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 - [Number and Operations in Base Ten](#)
 - [Numbers and Operations-- Fractions](#)
 - [Measurement and Data](#)
 - [Geometry](#)

Search for: Search Results per page: 10

The NSDL Math Common Core Pilot Collection features digital learning objects that NSDL has associated with the [Math Common Core State Standards](#)

What Does It Mean to Associate Digital Resources with Standards?

A primary goal of the NSDL Math Common Core Collections project is to explore new processes for associating digital learning objects with educational standards. The release of this pilot collection represents a starting point for making those resource-to-standards relationships. We are careful not to claim that the resources in this collection are "aligned", which may imply a precision that we don't believe can be achieved unless a resource is developed explicitly to address given standards. Instead, NSDL is interested in surfacing information from educators about the utility of existing resources to support their needs for instruction and assessment around the Common Core. As a result, the resources in this pilot collection have been associated with Common Core Standards through a three-tier internal review process. The collection will next be shared with partner communities of teachers and mathematics experts to provide input on the relative utility of the resources for different learning tasks. NSDL will capture these practitioner data and reassociate them with the resource collection, so that by late 2010, teachers will be able to see the original standards mapping for each resource along with educator-generated information about its usefulness.

What Resources are in the Pilot Collection?

Our initial collection launch focuses on two critical mathematical concepts that build across grade levels: Fractions and Measurement. These themes tie together multiple domains as described in the Common Core documents including:

- Measurement and Data
- Geometry
- Numbers and Operations - Fractions
- Operations and Algebraic Thinking
- Ratios and Proportional Relationships
- The Number System
- Expressions and Equations
- Statistics and Probability
- Functions
- Algebra

Be Notified As the Collection Grows

[Follow NSDL Math Common Core on Twitter](#)

Funded through a grant from the National Science Foundation.



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...and NSDL Bilingual resources



A place to build and strengthen your connections with
the NSDL Community Network

 Search

HOME ABOUT INITIATIVES EVENTS FORUMS GROUPS PROJECT UPDATES NSDL.ORG

My Page My Groups Log Out

Home

VIEW EDIT OUTLINE REVISIONS TRACK

Bilingual Resources

Posted Tue, 09/21/2010 - 3:13pm by lmoim

Here are some of our NSDL resources in non-English Language. Most of them are in Spanish but there is also representation from other languages. We will keep adding more resources regularly so please, check this page frequently and recommend resources in non-English language to us via our [Recommend Resources](#) page.



Glossaries

Math: [Bilingual Mathematics Dictionary](#) English-Spanish, accessible through the [AMSER -Internet Scout Project](#) and through [Math Forum @ Drexel](#).

Earth Science: [Earth Science Bilingual and ESL Glossaries](#) from our [DLESE](#) partner for terminology in Spanish, Bengali, Chinese, Haitian, Korean, Polish and Russian.

Content

Chemistry

1. The [VSEPR methods](#) French-English site provides a discussion of the Valence Shell Electron Pair Repulsion (VSEPR) theory of bonding geometries and animated molecular models, from our [CSERD Pathway](#) partner
2. [Matter: Atoms from Democritus to Dalton](#) provides an overview of atomic theory from Democritus to Dalton and reviews John Dalton's 4 basic theories on matter. The page is also available in Spanish.



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lluminate Live! - NetWorks Webinars

File Session View Tools Window Help

Participants

Participants

Mark Viquesney (Moderator, Me)

1 Participant

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Joined on February 25, 2009 at 1:08 PM

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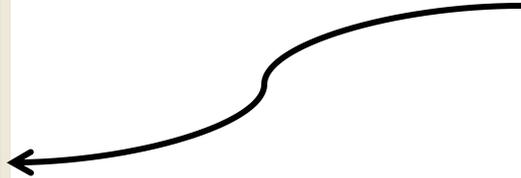
Audio

Microphone Speaker

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KS

Leveraging the NSDL -

consulting on digital library development

wikis, listservs, and other collaboration tools

toolbars and other browser plug-ins

teacher and faculty professional development

cataloging tools

search services

Metadata & DL Mgmt

Services

Teaching & Learning

educational standards assignment and alignment

strand map browse interface

instructional materials authoring tools

authentication and group management

newsfeeds and podcasts

Expert Voices blog

metadata enhancement

COMMUNITY NEWS

- » **New portal for informal science educators: howtosmile.org**
Posted: Oct 05, 2010
Category: News
- » **PolarTREC research experience application deadline: October 1, 2010**
Posted: Sep 29, 2010
Category: Call for Participation

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WHAT WE'RE READING

STEM Education Has Little to Do With Flowers
Someone who's had it with the STEM acronym!

Anchoring Communities and Trust Markets - Advantages Shift to the Users
What is "apomediation" ?

A selection of Pew Internet reports....
Texting teens - mobile use - future of the Internet - social media

NREL releases BioEnergy Atlas...
Bioenergy Atlas released...

New Challenges, New Strategies: Building Excellence in Undergraduate STEM Education
CCLI/TUES site, new publication, and searchable abstracts

[more](#)

[Submit an item](#)

TWITTER FEED

- » **NSDLHED: NSDL's howtosmile.org web site launches - best in informal science and math activities and much more!**
<http://howtosmile.org>
- » **NSDLHED: PolarTREC applications deadline Oct 1 - teacher/researcher collaboration in polar regions:**
<http://www.polar trec.com/researchers/application>

[more](#)

COMMUNITY BLOG

- » **Last chance to register for Annual Meeting and submit posters! Friday Oct 1...**
- » **Registration open for 2010 NSDL Annual Meeting...**
- » **NSDL 2010 Annual Meeting Call**

PROFESSIONAL LEARNING

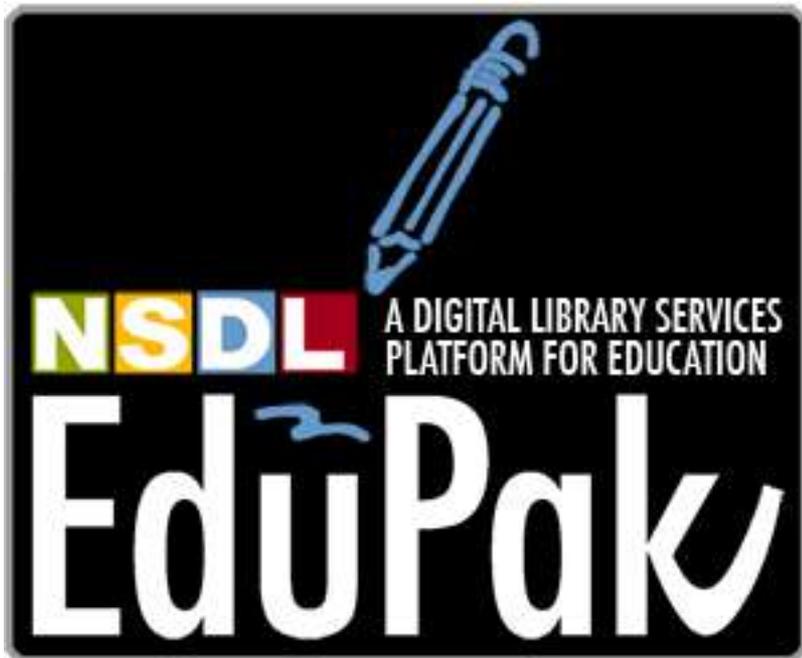
- » **NSDL Brown Bag: Annual Meeting 2010 Orientation**
Start Date: Thursday, October 14, 2010 - 1:00pm
- » **Christian Brothers Conference**
Start Date: Thursday, November 18, 2010 - 8:00am

2010 Annual Meeting



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NSDL Cataloging System (NCS):

Interactive collection
metadata management system

NSDL Data Repository (NDR):

Open source Fedora-based digital
object repository software

Data Discovery System (DDS):

Search application with flexible
configuration capabilities



Expert Voices: Blogging with integrated NSDL
search, resource linking, and publication



Strand Map Service: dynamically generate
concept browsing interfaces based on AAAS
Project 2061 Benchmarks for Science Literacy



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Lessons Learned

- Start where users are, understand that, and stay responsive to changing needs and realities
- Leverage NSDL strengths for community & partner relationships building and brokering



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Connecting with NSDL

Add resources to NSDL

Add resources to *NSDL on iTunes U*

Participate in NSDL workshops, web seminars,
and other professional development

Use NSDL tools

Apply for NSDL funding through the annual NSF
solicitation (generally released in January of
each year and due mid-April)



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Partnering with NSDL; Other initiatives

NSDL RFP

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5487&org=DU&from=home

Partnering with NSDL

<http://nsdl.org/contribute/?pager=proposers>

STEM Exchange <http://nsdlnetwork.org/stemexchange>

Learning Registry <http://nsdlnetwork.org/learningregistry>

NSDL Math Common Core collection

<http://nsdl.org/browse/commcore/math/>



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Outreach Materials:

<http://nsdl.org/pd/?pager=materials>

- Resource lists with URLs for Higher Ed, undergrad Mathematics, K-12
- General FAQ
- How to Participate
- Pathways handout



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Questions.....

Contact NSDL:

<http://nsdl.org/about/contactus/>

(link in footer of pages on nsdl.org)

Direct email: eileen@ucar.edu



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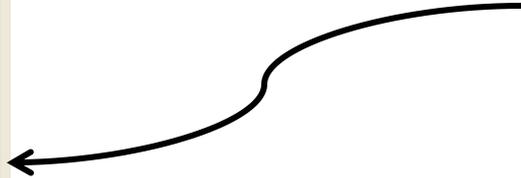
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How Can We Better Serve You?

Whether you are joining us live or watching the recorded version of this webinar, please take 1 minute to provide your feedback and suggestions.

<http://www.questionpro.com/t/ABkVkZIOXB>



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MATEC NetWorks Webinar

Innovative STEM Resources from NSDL:

Content, Context, Community

Classroom Ready Resources in the Digital Library

TechSpectives Blog

Webinars

All this and more at www.matecnetworks.org



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SEARCH RESULTS

Searched For: **electronics**

Results 1 - 10 of 243



AC Electronics

A page filled with over 80 learning objects including Oscilloscopes, Capacitors, Inductors, Transformers, and more.



Electronics Infoline

This website has exciting electronics, components, and information for electronics enthusiasts. This website is great for students and hobbyists.



Systems View of Electronics

Today, the greater part of a tech's work is done with systems containing many ICs, plug-in modules, sub-systems, and more.



Electronics Circuits

The first courses taught in most 2-year technical schools are electrical theory, current, voltage sources, and more.



Electronics Labs

Welcome to Electronics Lab! Here you can find tutorials and downloads. I hope you enjoy the tour.



DC Electronics

A website with many learning objects on DC electronics including Ohm's Law, Magnetism, Parallel Circuits, Series Circuits, and more.



Electronics Tutorials, Electronics materials

Link to more than 90 tutorials that are available through optical communication. Animations and more.



Introduction to Electronics

The dictionary defines electronics as a branch of physics and engineering that deals with the control of electrons.

Title: [Work Ready Electronics](#)

Alternate Title: WRE

Uri: <http://www.work-readyelectronics.org>

Description: Set of online resources for faculty instructing electronics courses in areas such as AC and DC circuits, Switch mode power supplies, Data Conversion, Wireless Communication, and others.

WRE

Classification: [Electrical Engineering -- Circuit Theory](#)

[Electrical Engineering -- Communications](#)

[Electrical Engineering -- Controls and Systems](#)

[Electrical Engineering -- Electronics](#)

[Professional Development -- Career and Personal Development](#)

Date Issued: 2006-06-19

Resource Type: [Unit/Module](#)

Audience: [Industry Personnel](#)

[Government Personnel](#)



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What Is It?



Events

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- If you guess correctly, you will be entered into a prize drawing.
 - [EMAIL](#) your answer before 12/31/09.
- The answer & winner will be revealed in the Jan./Feb. [@MATEC](#)

TECHSPECTIVES BLOG

Join a discussion or start your own at [TECHSPECTIVES](#)

[THIS FRIDAY - FREE WEBINAR](#)

by Mark Viquesney - Dec 08, 2009

This semester I had a very interesting group of students - One student was in

▶ [THIS FRIDAY - FREE WEBINAR](#)

[ON THE WINGS OF A BUTTERFLY](#)

[REACHING AND TEACHING ACROSS GENERATIONS - FREE WEBINAR DECEMBER](#)

[10 EMERGING TECHS FOR 2010](#)

COMMUNITY RESOURCES

NETWORKS Community Resource Links.

- ▶ [FACULTY ADVISORY BOARD](#)
- ▶ [RECOMMENDED LINKS](#)
- ▶ [NATIONAL SURVEY RESULTS - 2009](#)

WELCOME TO OUR COMMUNITY



SOCIAL NETWORKING



- ▶ [BECOME A FAN OF NETWORKS ON FACEBOOK!](#)





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Date	Webinars
December 11 th	REACHING AND TEACHING ACROSS GENERATIONS
February 12 th	EVALUATING STUDENT IMPACT
March 12 th	INDUSTRY EXPECTATIONS OF GRADUATES
April 9 th	CONVERGING TECHNOLOGIES CAREER EXPLORATION
May 14 th	REVITALIZING ELECTRONICS PROGRAMS
June 10 th	RECRUITING DIVERSE POPULATIONS

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Educating America's Technical Workforce

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July 26-29 Orlando, FL

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WWW.HIGHIMPACT-TEC.ORG

PAST WEBINAR RECORDINGS

Webinar	Date	Link
Nanotechnology in the Classroom Laboratory	11/13/09	VIEW
Sustaining Technical Programs	10/09/09	VIEW
Energy Utilization	09/11/09	VIEW
Teaching and Learning with i-Technologies	08/14/09	VIEW
Developing Strong Evaluations for ATE Projects Part II	07/10/09	VIEW
Developing Strong Evaluations for ATE Projects Part I	07/09/09	VIEW
Learning Objects: What are they? How do I use them?	06/18/09	VIEW
Electronics 2010: eSyst Update 6	05/15/09	VIEW
Making Your Program Flexible	04/17/09	VIEW



Webinar Recordings

To access this recording, visit

www.matecnetworks.org,

Keyword Search:

“webinar Innovative STEM Resources”



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NetWorks Upcoming Webinars

November 12: Electronics Education Today

December 10: Emerging Technologies

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lara.smith@domail.maricopa.edu



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