NSDL

THE NATIONAL SCIENCE DIGITAL LIBRARY

Resources, Tools, and Services for the Educator

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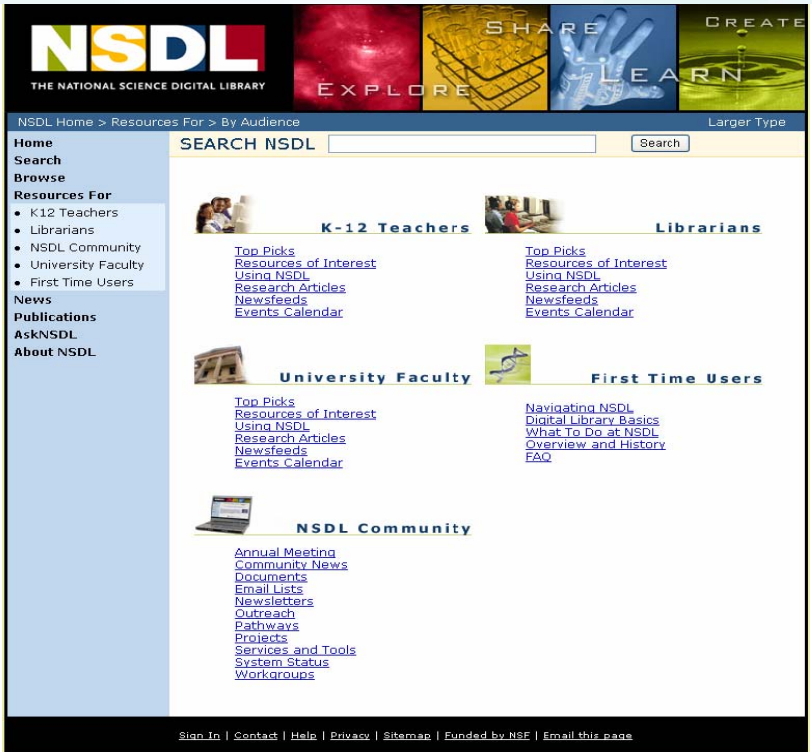
NSDL Education and Outreach Specialist

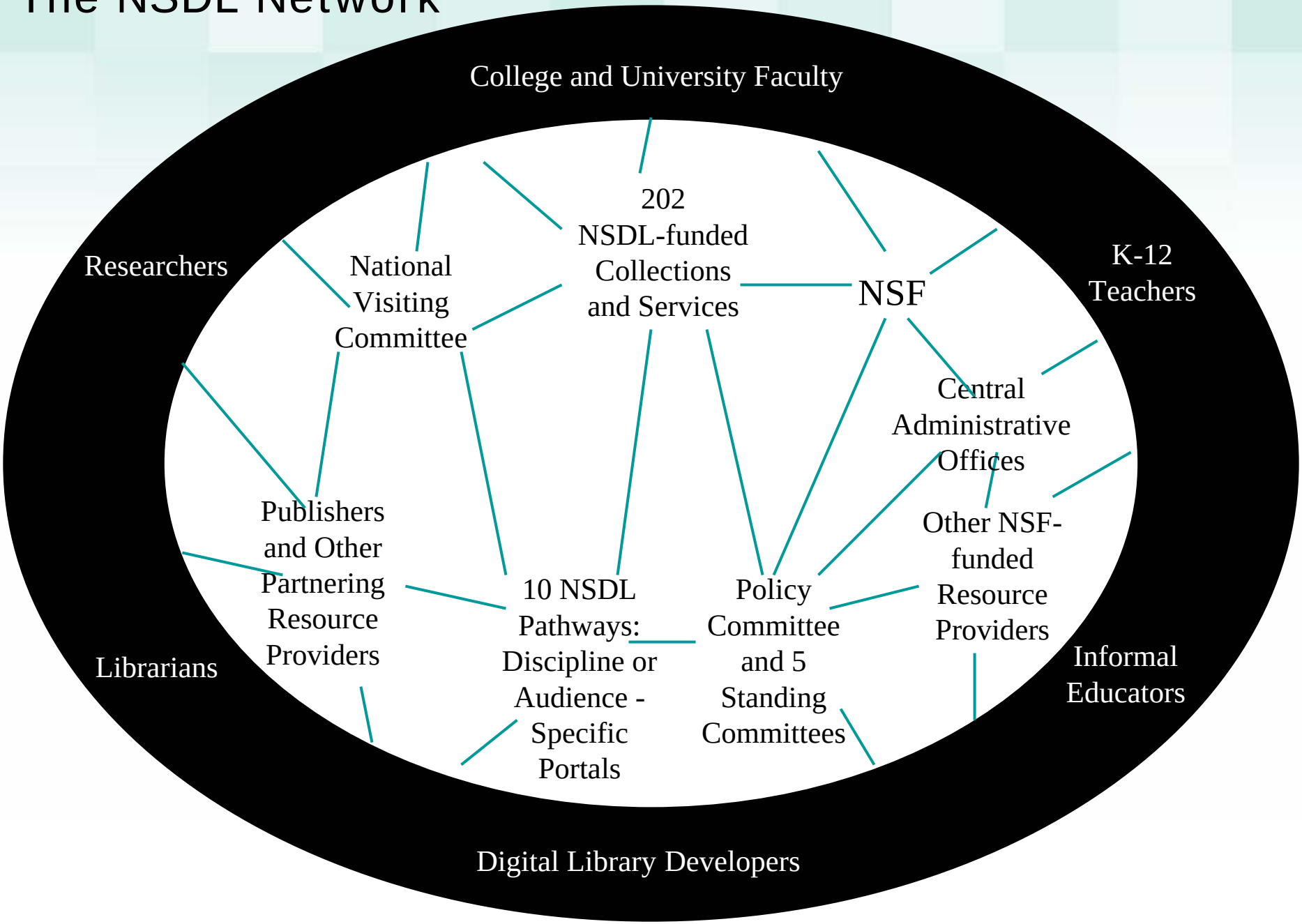
Teachers Domain Workshop
July 20, 2007

The National Science, Technology, Engineering, and Mathematics Education Digital Library (NSDL)



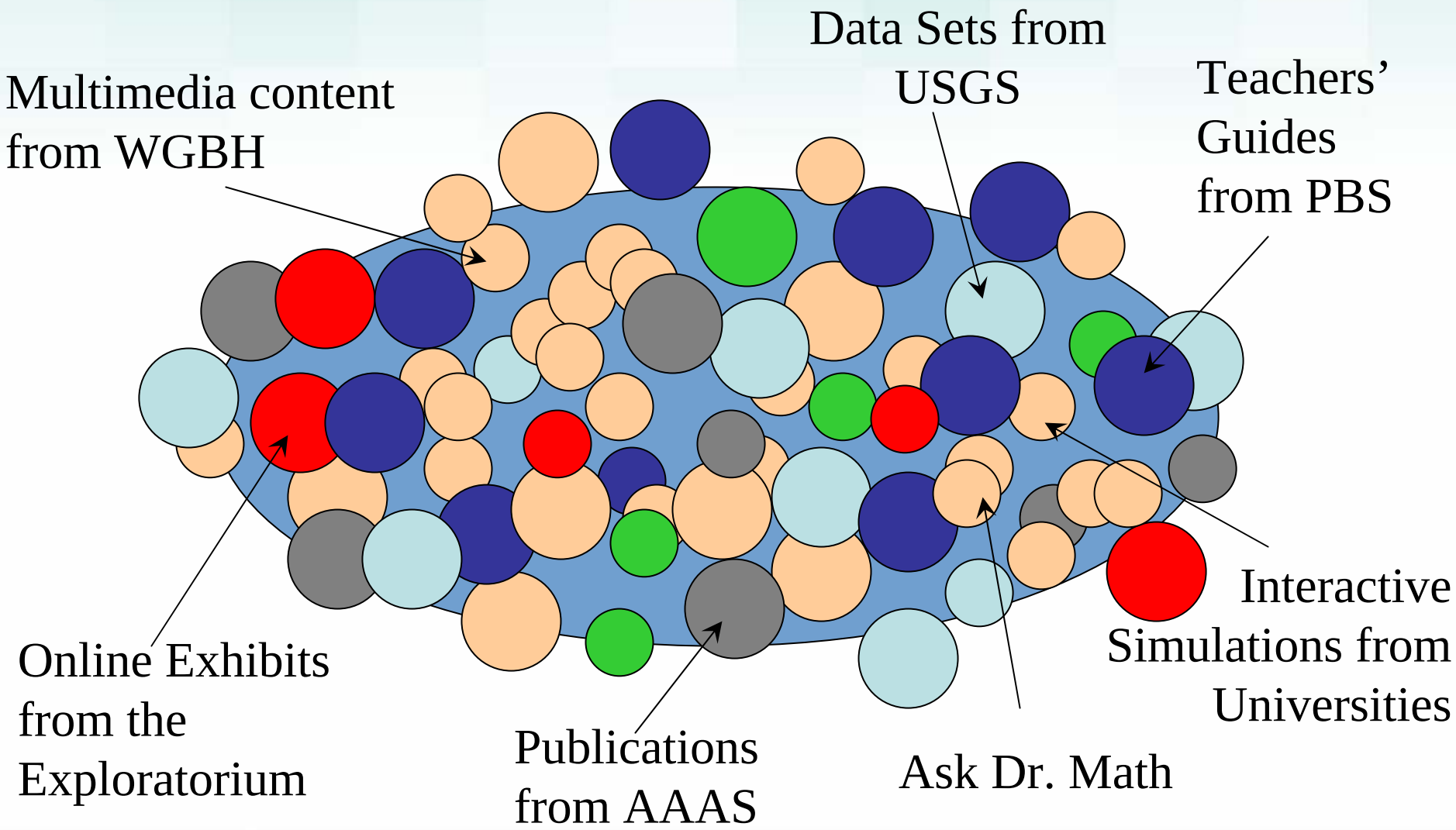
Established to catalyze and support continual improvements in STEM education at all levels (K-12, Higher Education, and Lifelong Learning).

The NSDL Network

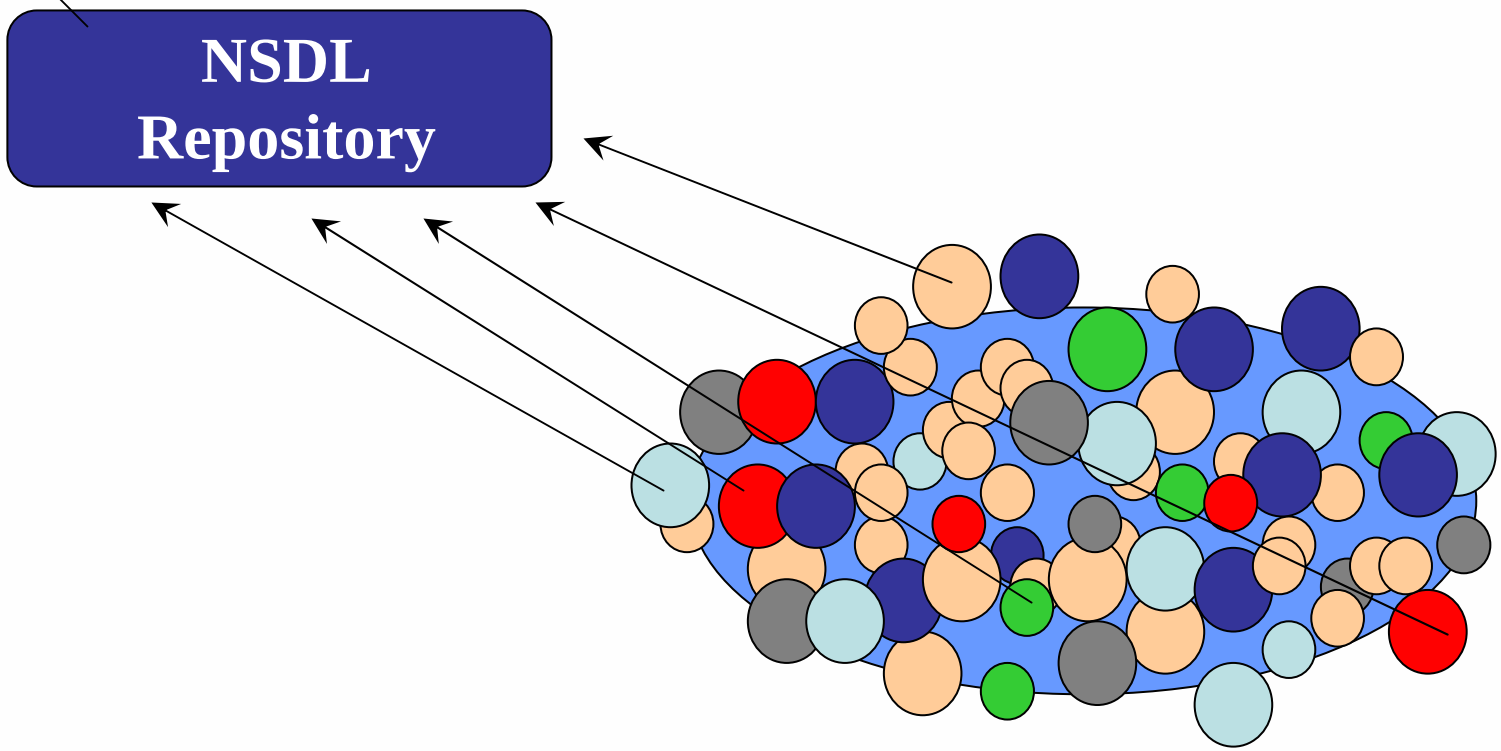


Why a Digital Library?

Resources are Scattered across the Internet

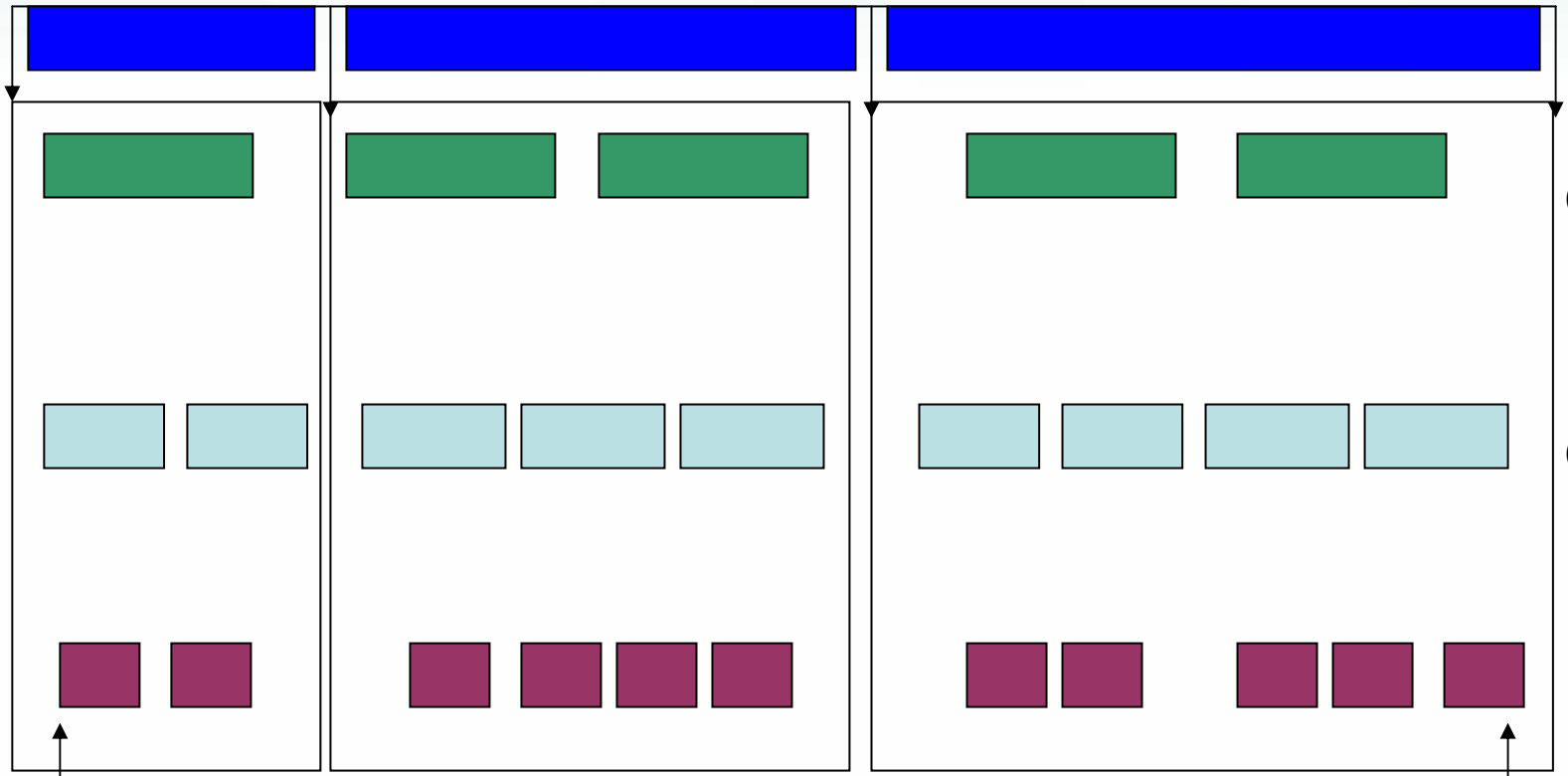


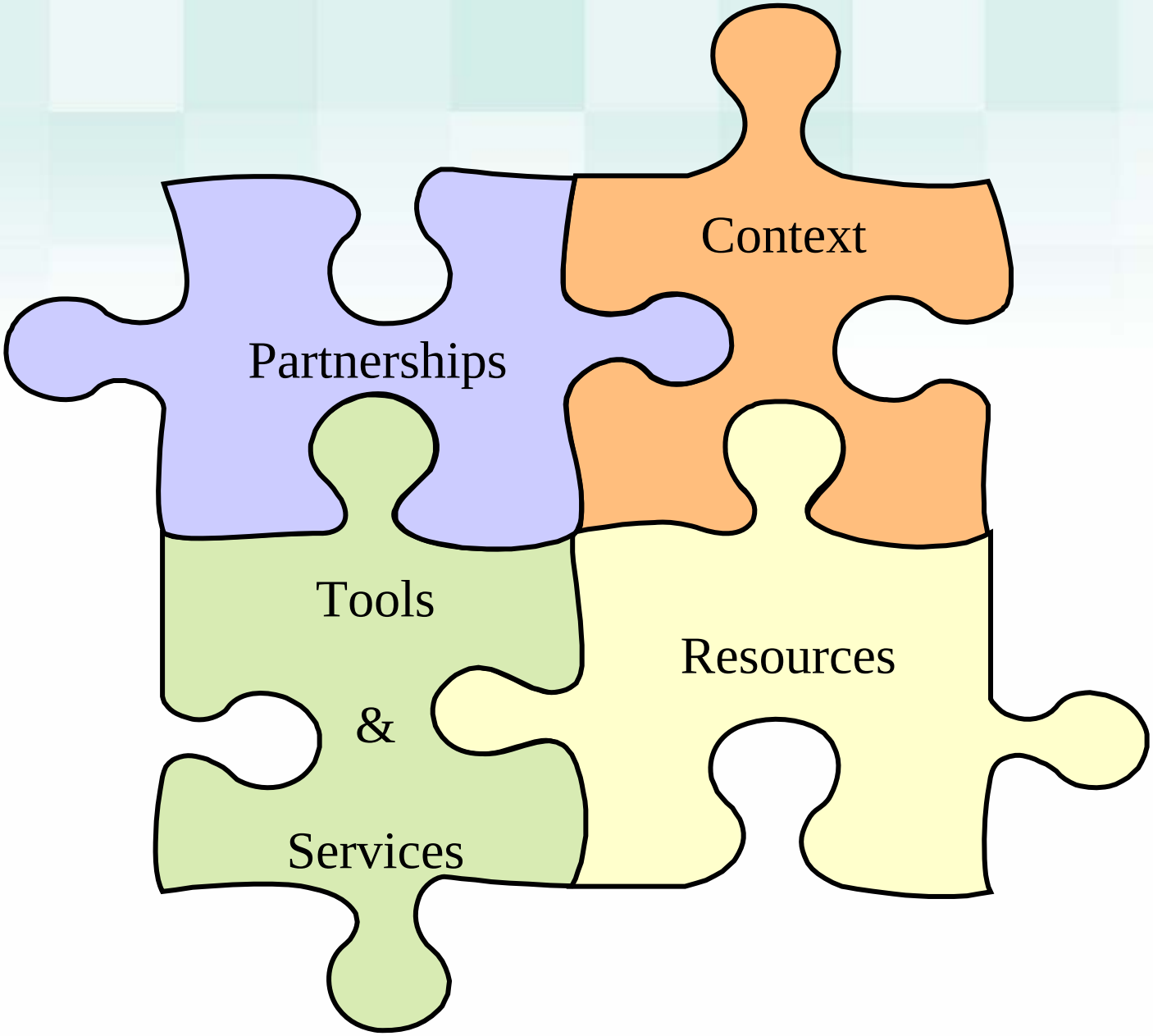
Digital Libraries Offer Coordinated Access



What is in NSDL?

Pathways: Audience & Discipline Related Portal Views Through NSDL






NSDL Middle School Portal
Search
Mathematics Pathway
Explore in Depth
Browse by Subject
We carefully comb the collection for the finest online resources to help you and your students thoroughly explore a teachable topic. See more ...
What's the Chance?
Concepts of Probability
GEOMETRY IN 3-D
Quick Take on...
One pagers that highlight three to four 'just-in-time' digital resources. See more ...
Factors
Pythagoras and His Theorem
Word Problems


A comprehensive compilation of the most current information on Alzheimer's Disease
SIGMA
RBI
Science
STKE
Signal Transduction Knowledge Environment
Amplification of Signaling Events in Bacteria
Frederick W. Dahlquist
STAY PLUGGED IN
with Science PODCAST
RECORDED LIVE on June 20, 2007


CORNELL LAB of ORNITHOLOGY
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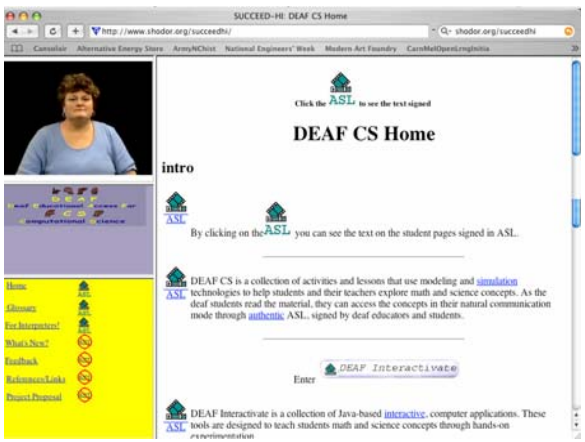
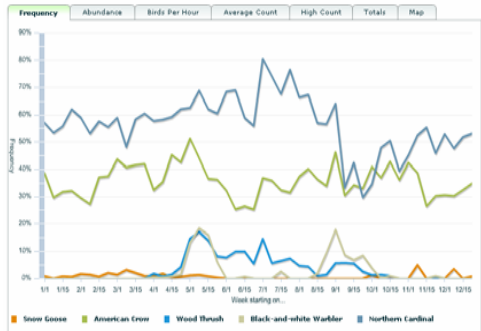
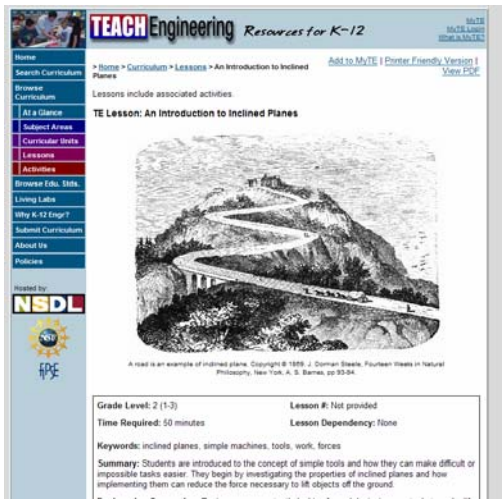
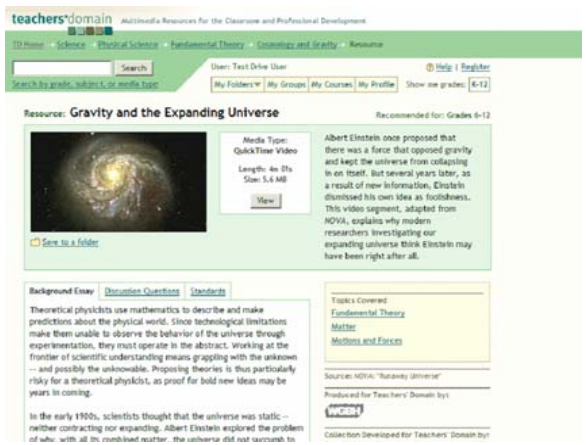
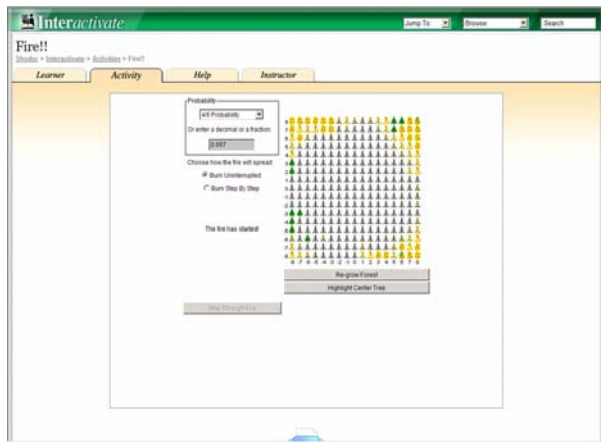
Virtual Tour
How to Reach Us
Job Opportunities
Sponsors
Sponsor Benefits
Research
Citizen Science
Conservation
Education

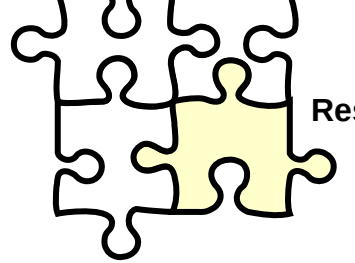

SUCCEED-HI: DEAF CS Home
DEAF CS Home
intro
By clicking on the ASL you can see the text on the student pages signed in ASL.
DEAF CS is a collection of activities and lessons that use modeling and simulation technologies to help students and their teachers explore math and science concepts. As the deaf students read the material, they can access the concepts in their natural communication mode through authentic ASL, signed by deaf educators and students.
Enter DEAF Interactivate
DEAF Interactivate is a collection of Java-based interactive, computer applications. These tools are designed to teach students math and science concepts through hands-on


Frequency
Abundance
Birds Per Hour
Average Count
High Count
Totals
Map
Snow Goose
American Crow
Wood Thrush
Black-and-white Warbler
Northern Cardinal


TEACH Engineering
Resources for K-12
Lessons include associated activities.
TE Lesson: An Introduction to Inclined Planes
Grade Level: 2 (1-3)
Lesson #: Not provided
Time Required: 50 minutes
Lesson Dependency: None
Keywords: inclined planes, simple machines, tools, work, forces
Summary: Students are introduced to the concept of simple tools and how they can make difficult or impossible tasks easier. They begin by investigating the properties of inclined planes and how implementing them can reduce the force necessary to lift objects off the ground.

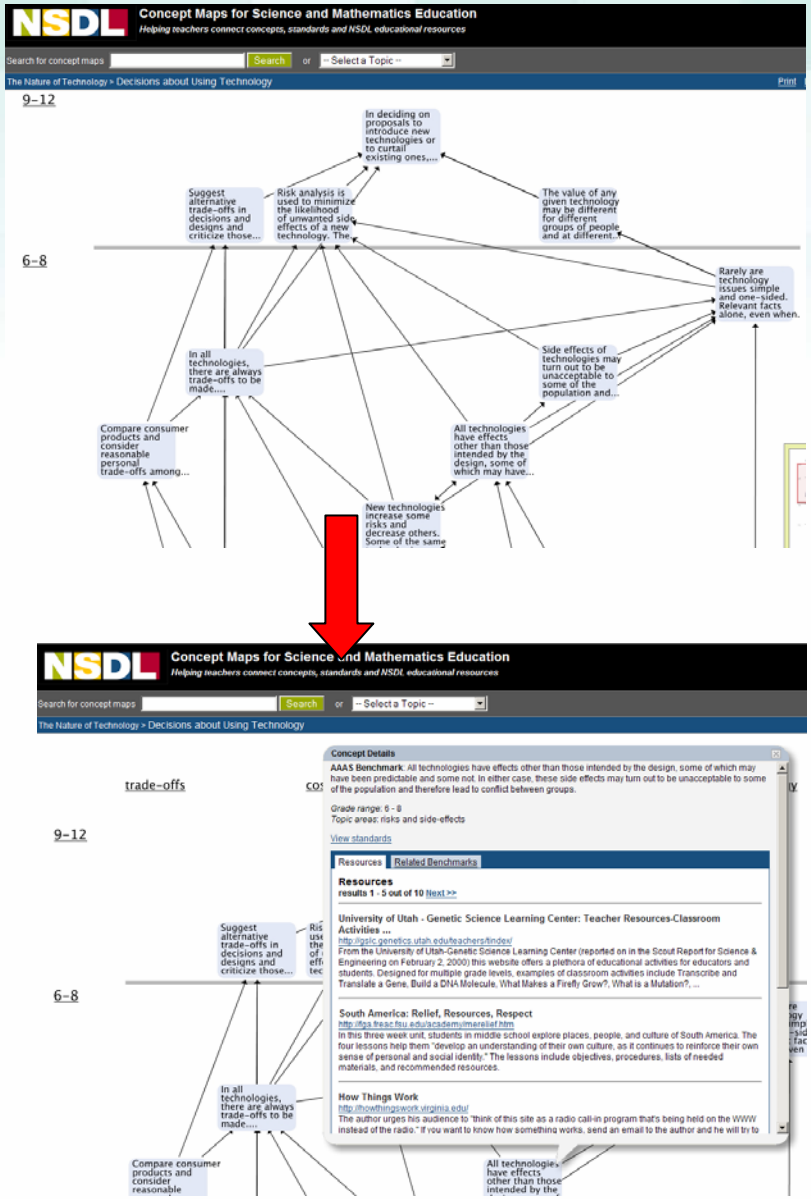

teachers'domain
Resource: Gravity and the Expanding Universe
Albert Einstein once proposed that there was a force that opposed gravity and kept the universe from collapsing in on itself. But several years later, as a result of new information, Einstein dismissed his own idea as foolishness. This video segment, adapted from NOVA, explains why modern researchers investigating our expanding universe think Einstein may have been right after all.
Background Essay
Discussion Questions
Standards
Theoretical physicists use mathematics to describe and make predictions about the physical world. Since technological limitations make them unable to observe the behavior of the universe through experimentation, they must operate in the abstract. Working at the frontier of scientific understanding means grappling with the unknown -- and possibly the unknowable. Proposing theories is thus particularly risky for a theoretical physicist, as proof for bold new ideas may be years in coming.
In the early 1900s, scientists thought that the universe was static -- neither contracting nor expanding. Albert Einstein explored the problem of why, with all its combined matter, the universe did not vacuum to


Interactivate
Fire!!
Learner
Activity
Help
Instructor



Resources

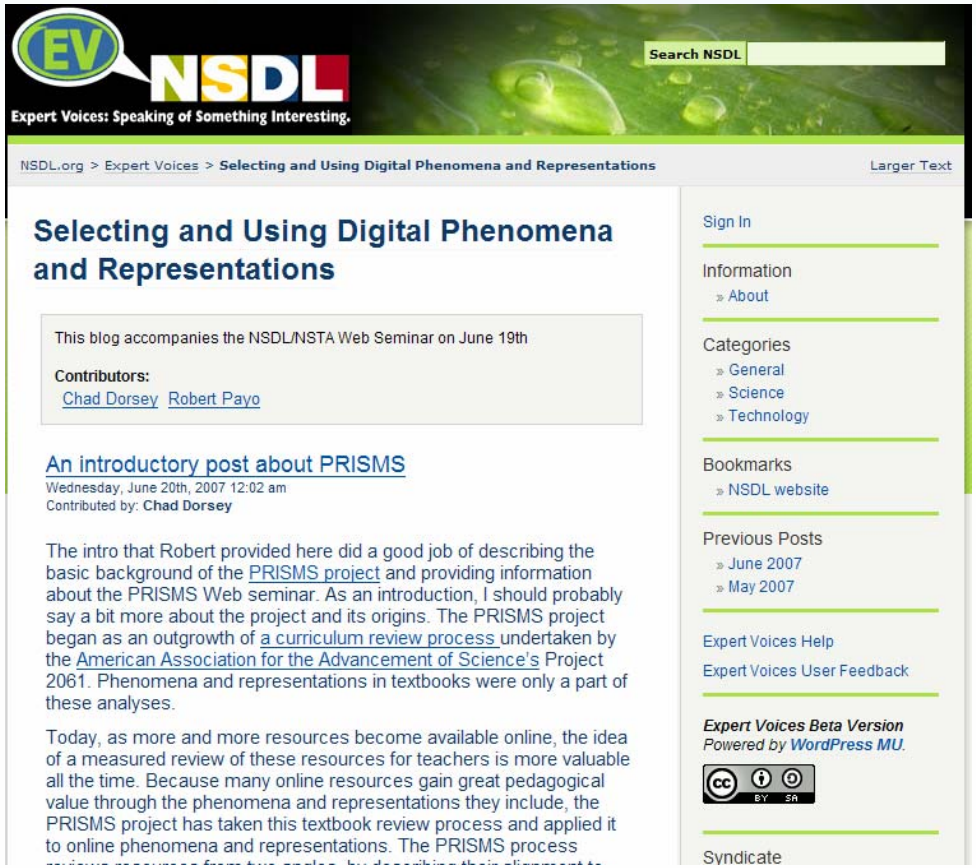
Concept Map Tool

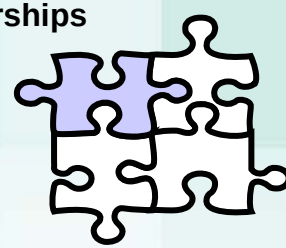


Tools & Services

NSTA / NSDL Web Seminar Series

Expert Voices: NSDL Blogosphere





Examples of Partnerships

K-12

- Pathways Partners
- National Science Teachers Association
- Project Tomorrow / NetDay
- Textbook publishers

Higher Education and Research

- Pathways Partners
- More than 20 journal and textbook publishers

Informal Education

- American Museum of Natural History
- Exploratorium
- Education Development Center

Educational Systems

- Southern Regional Education Board

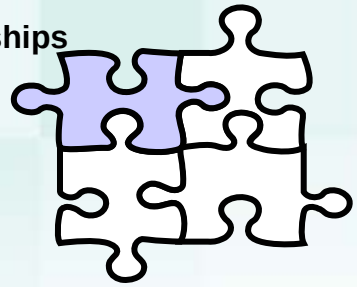
Federally-Funded Networks

- NSF-funded Research Centers Education Network
- National Digital Information and Infrastructure Preservation Program (NDIIPP)
- Engaging People in Cyberinfrastructure (EPIC)

Libraries and Digital Libraries

- Fedora Commons
- National Forum on Information Literacy

NSDL Pathways



- Educational level and discipline specific views of NSDL
- Built by leading organizations who are trusted by their target audiences
- Provide resources, tools, services, and professional development
- A method for professional organizations to engage and serve their membership communities

Pathway and Lead	Ed Level	Discipline
Applied Math and Science Education Repository (AMSER) Univ of Wisconsin, Madison	Community Colleges	Applied Mathematics & Science
BioSciEdNet (BEN) AAAS, plus >20 professional societies	Undergraduate & High School	Biology
ChemEd DLib ACS, JCE, ChemCollective	High School & Above	Chemistry
ComPADRE AAPT, APS, AIP/SPS & AAS	Undergraduate & High School	Physics & Astronomy
Computational Science Education Reference Desk (CSERD) Shodor Education Foundation	Undergraduate & High School	Computational Science
Engineering Pathway UC Berkeley, Univ of CO	Undergraduate & K-12	Engineering
Materials Digital Library Kent State University	Undergraduate & Above	Materials Science
Math Gateway Mathematical Assoc of America	Undergraduate	Mathematics
Middle School Portal Ohio State University	Middle Grades	Science, Mathematics, & Technology
Teachers' Domain WGBH Public Television	K-12	Life, Earth, Space, & Physical Sciences

Thank You!

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