

# Internet2 and Ohio Schools:

**Opening the Classroom to a  
World of Information**



# Internet2 Available to Ohio Schools

- Funded by ODE and managed by mc•tsg and OARnet.
- School districts are responsible for additional charges if any.
- Districts that use the OECON network as Internet provider
- INFOhio is providing training.



# Internet2 Mission and Goals

- ***Internet2 Mission*** = Develop and deploy advanced network applications and technologies, accelerating the creation of tomorrow's Internet.
- ***Internet2 Goals***
  - Enable new generation of applications
  - Re-create leading edge R&E network capability
  - Transfer technology and experience to the global production Internet

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# What Is It Really?

- 10 years
- Newly designed high performance network
- Venue bringing together academics, business, scientists and educational institutions from all over the world
- Led by 208 research universities

INTERNET®



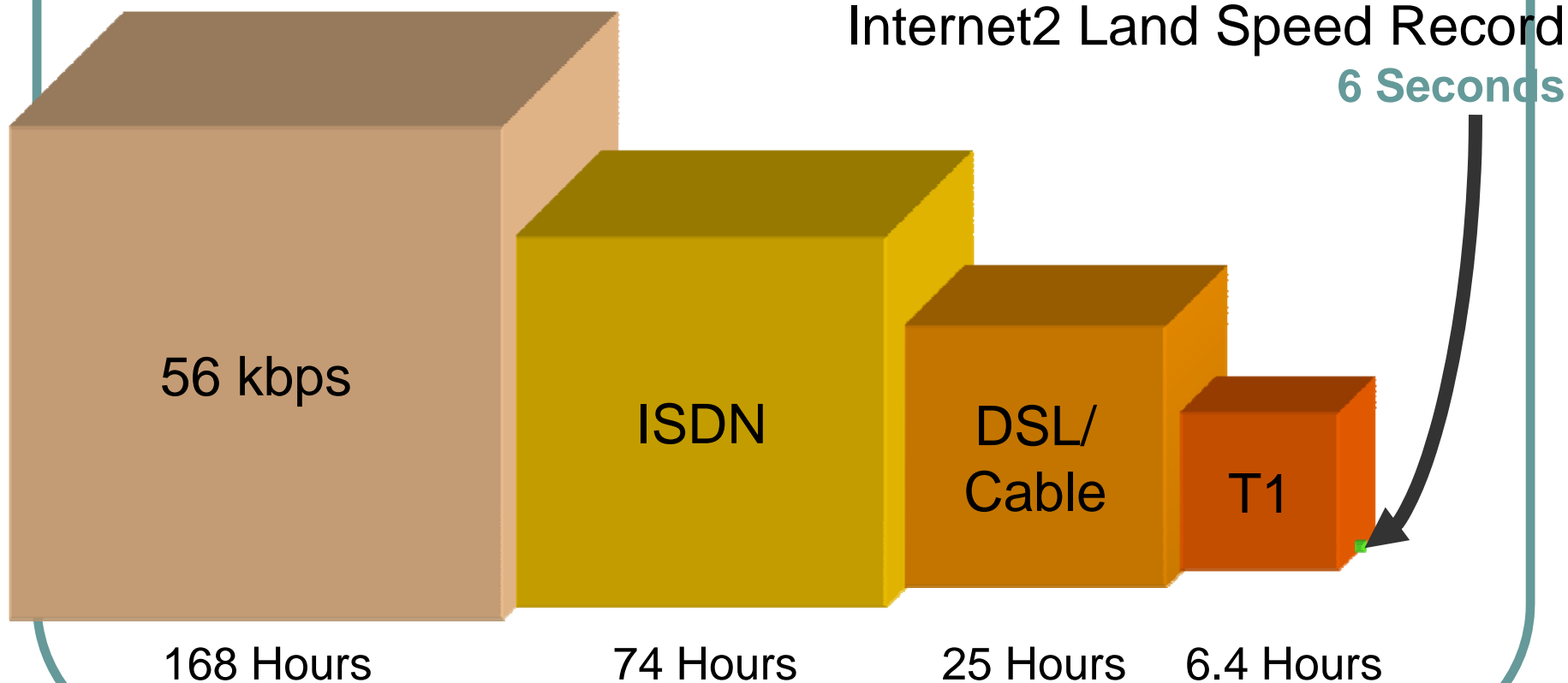
# What Is It Really?

- K12 involved for 5 years
- Save ITC's and state **MONEY**
- Saves **TIME**
- Seamless transition for users
- Internet2 Detective

<http://detective.internet2.edu>



# Time Required to Download 2-hour Course Lecture DVD



# Internet2 Partnerships

- Internet2 fosters the partnerships and collaboration that spurred the development of the Internet.
- Academia
- Industry
- Government
- International

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# K20 Initiative



- Connect and engage K-12s, museums, libraries, science and cultural centers, aquariums, community colleges, etc.
- Increased opportunities collaboration with higher ed and experts
- Join "muse", a social utility that connects you with Internet2-enabled technologies and educators

# Muse

- Muse is a social utility that connects Internet2-enabled technologies and educators regionally and around the globe
- <http://k20.internet2.edu/>



# Changing Teaching and Learning in the 21<sup>st</sup> Century Classroom

- What Internet2 Offers:
  - Real Time Collaboration
  - Immediate Access to Expertise and/or Audiences
  - Geographical Distribution
  - High Quality, Real-Time Audio and Video Interaction => **Engagement**

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# K20 Content Themes

- Rich Multi-Media Digital Libraries
- Remote Scientific Instruments
- Experiences and Expertise
- Creating New Knowledge
- Creating New Opportunities
- International Learning Communities



# NSDL - National Science Digital Library

- <http://www.nsdl.org/>



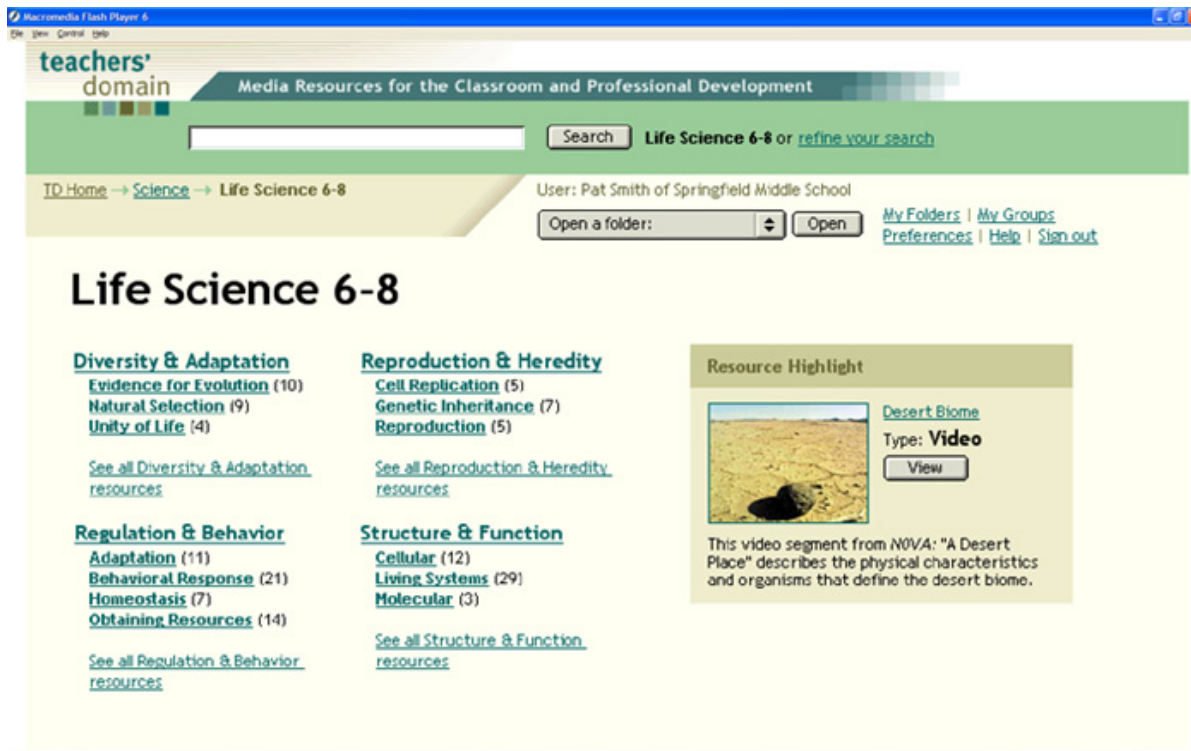
The screenshot shows the NSDL website homepage. At the top, there is a navigation bar with the NSDL logo, a search bar, and links for Login, Register, and Help. Below the navigation bar, there are several content sections:

- AskNSDL**: Information for experts. How to ask a question. NSDL invites you to use our AskNSDL virtual reference desk service to "Ask a Scientist or Engineer". Responses are provided by scientific and technical professionals from research, industry, government, and academia.
- NATIONAL SCIENCE DIGITAL LIBRARY**: NSF's online library of resources for science, technology, engineering, and mathematics education. This section includes two images: a tree and a person writing on a chalkboard.
- Resource of Interest**: Ask Dr. Math. Ask Dr. Math, which is operated at Drexel University, is the place to go to find answers to almost any kind of mathematics problem. An enormous browseable archive of questions and their solutions is divided into categories ranging from...
- New in the Library**: National Geographic Xpeditions. Created by the National Geographic Society and MCI, this mammoth site focuses on the 18 U.S. geographic standards along with a wealth of resources for teaching and learning about the physical world through Geography.
- NSDL Headlines**: ActionBioscience.org Conducting a User Survey. September 2004 -- ActionBioscience.org (<http://www.ActionBioscience.org/>), an education resource of the American Institute of Biological Sciences (AIBS), is conducting a user survey. The goal of the on-line survey, found at...

At the bottom of the page, there is a footer with the text: "Funded by NSF | Recommend A Resource | Contact | About | Privacy Policy".

Rich Multi-Media Digital Libraries

# Teachers' Domain - WGBH



The screenshot shows the Teachers' Domain website interface. At the top, there is a search bar with the text "Life Science 6-8 or refine your search". Below the search bar, there is a navigation menu with "TD Home" and "Science" links. The main content area is titled "Life Science 6-8" and features several categories of resources:

- Diversity & Adaptation**
  - [Evidence for Evolution](#) (10)
  - [Natural Selection](#) (9)
  - [Unity of Life](#) (4)
  - [See all Diversity & Adaptation resources](#)
- Reproduction & Heredity**
  - [Cell Replication](#) (5)
  - [Genetic Inheritance](#) (7)
  - [Reproduction](#) (5)
  - [See all Reproduction & Heredity resources](#)
- Regulation & Behavior**
  - [Adaptation](#) (11)
  - [Behavioral Response](#) (21)
  - [Homeostasis](#) (7)
  - [Obtaining Resources](#) (14)
  - [See all Regulation & Behavior resources](#)
- Structure & Function**
  - [Cellular](#) (12)
  - [Living Systems](#) (29)
  - [Molecular](#) (3)
  - [See all Structure & Function resources](#)

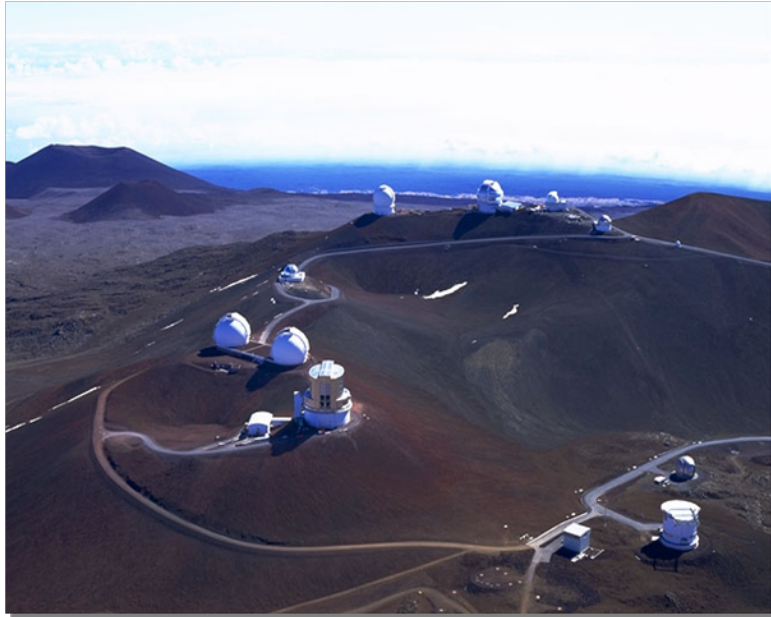
On the right side, there is a "Resource Highlight" section featuring a video titled "Desert Biome". The video is described as "This video segment from NOVA: 'A Desert Place' describes the physical characteristics and organisms that define the desert biome." A "View" button is provided for the video.

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

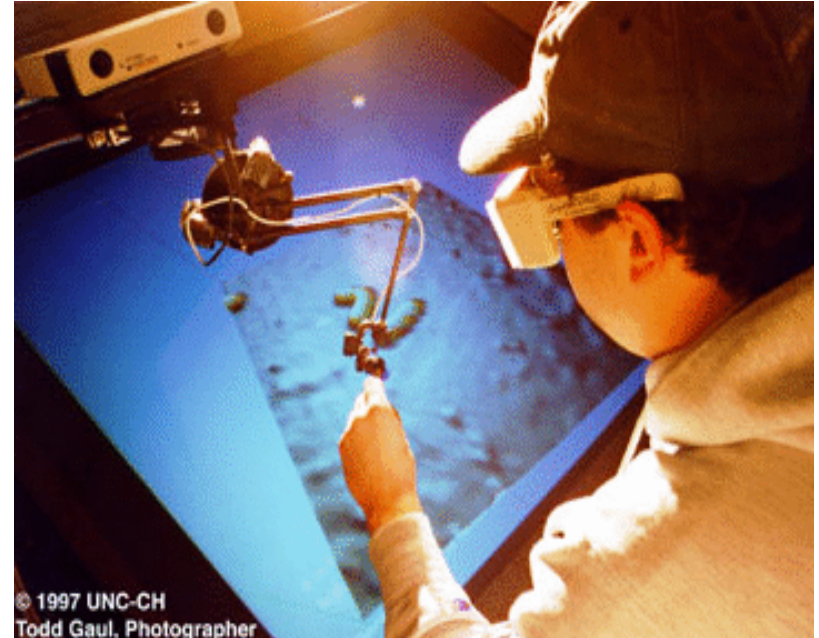
Rich Multi-Media Digital Libraries

# K20 Applications

## Remote Instrumentation



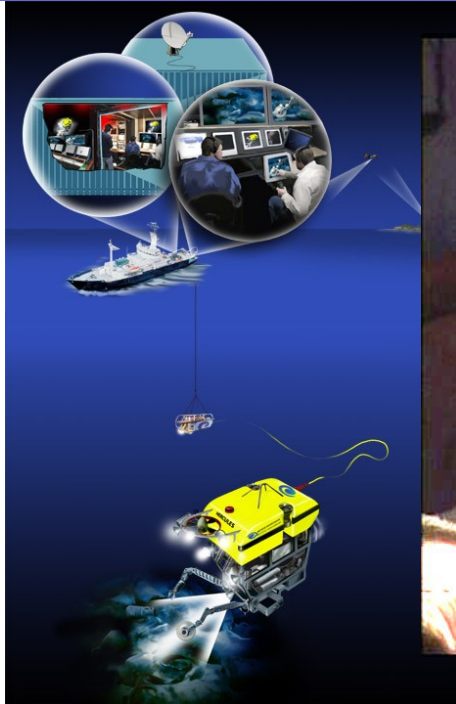
Mauna Kea Observatories



Distributed nanoManipulator

Remote Scientific Instruments

# JASON



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



Experiences and Expertise

# The Exchange: A Marketplace of Student Ideas

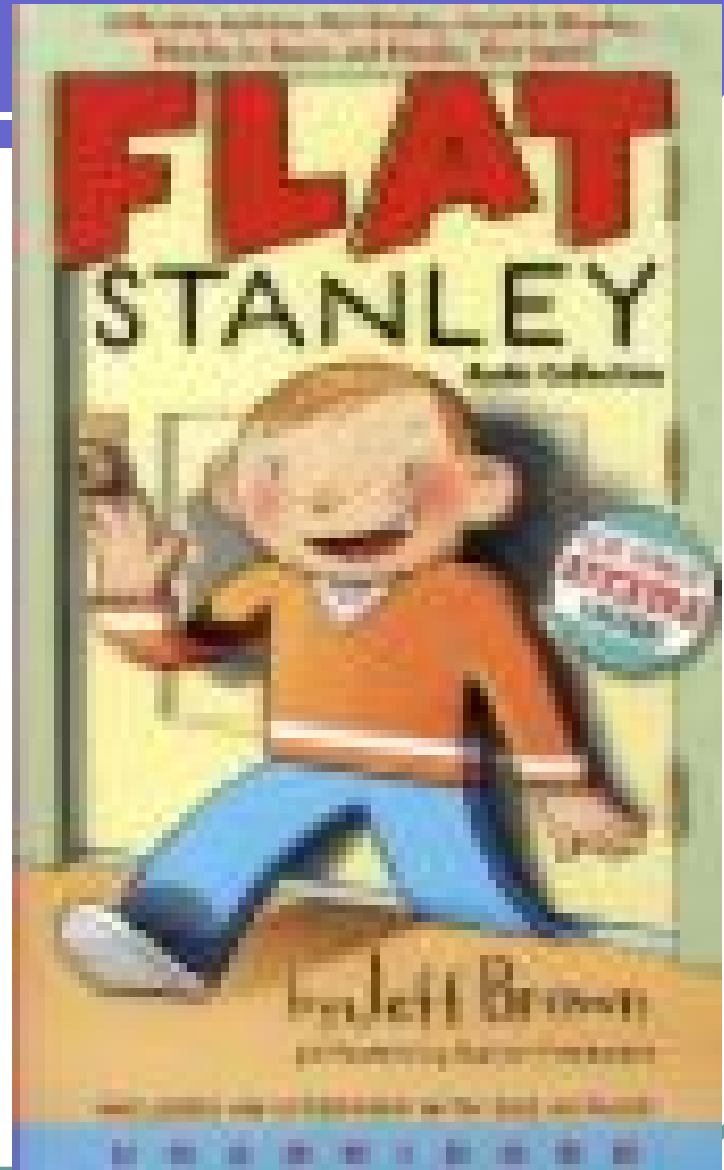


- The Exchange -- national program allows students all over the country to talk current constitutional issues, using Internet2 videoconferencing.
- September 23 Beachwood H. S. participated in "Issues Facing Presidential Candidates" video conference.
- [http://constitutioncenter.org/ncc\\_edu\\_TheExchange.aspx](http://constitutioncenter.org/ncc_edu_TheExchange.aspx)

Creating New Knowledge

# MAGPI

- Digital Flat Stanley



Creating New Opportunities

MAGPI

**Stand Up. Speak Out.**

**lend a hand**

Creating New Opportunities

# MAGPI



**America  
Reads the  
Constitution**

**Creating New Opportunities**

# MegaConference Jr.



<http://megaconferencejr.org/>

International Learning Communities

# MegaConference Jr.



International Learning Communities

# INFOhio Internet2 Training Plans

- Train the trainer opportunities
- Internet2 toolkits for technology and instructional staff
- Central clearinghouse for Internet2 information and opportunities
- Publicizing Internet2 opportunities
- Planning collaboratively Internet2 event

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# INFOhio Webpage Links

- Internet2 Backgrounder
  - <http://www.infohio.org/Educator/Internet2Background.html>
- Internet2 Technical Support
  - <http://www.infohio.org/Educator/Internet2Technical.html>
- Internet2 Instructional Support
  - <http://www.infohio.org/Educator/Internet2Instruction.html>



# Why?

- 21<sup>st</sup> Century Skills (Heavy on collaboration, communication, problem solving, higher level thinking, global awareness)
- K20 and other transition initiatives
- High quality projects
- Flat World

