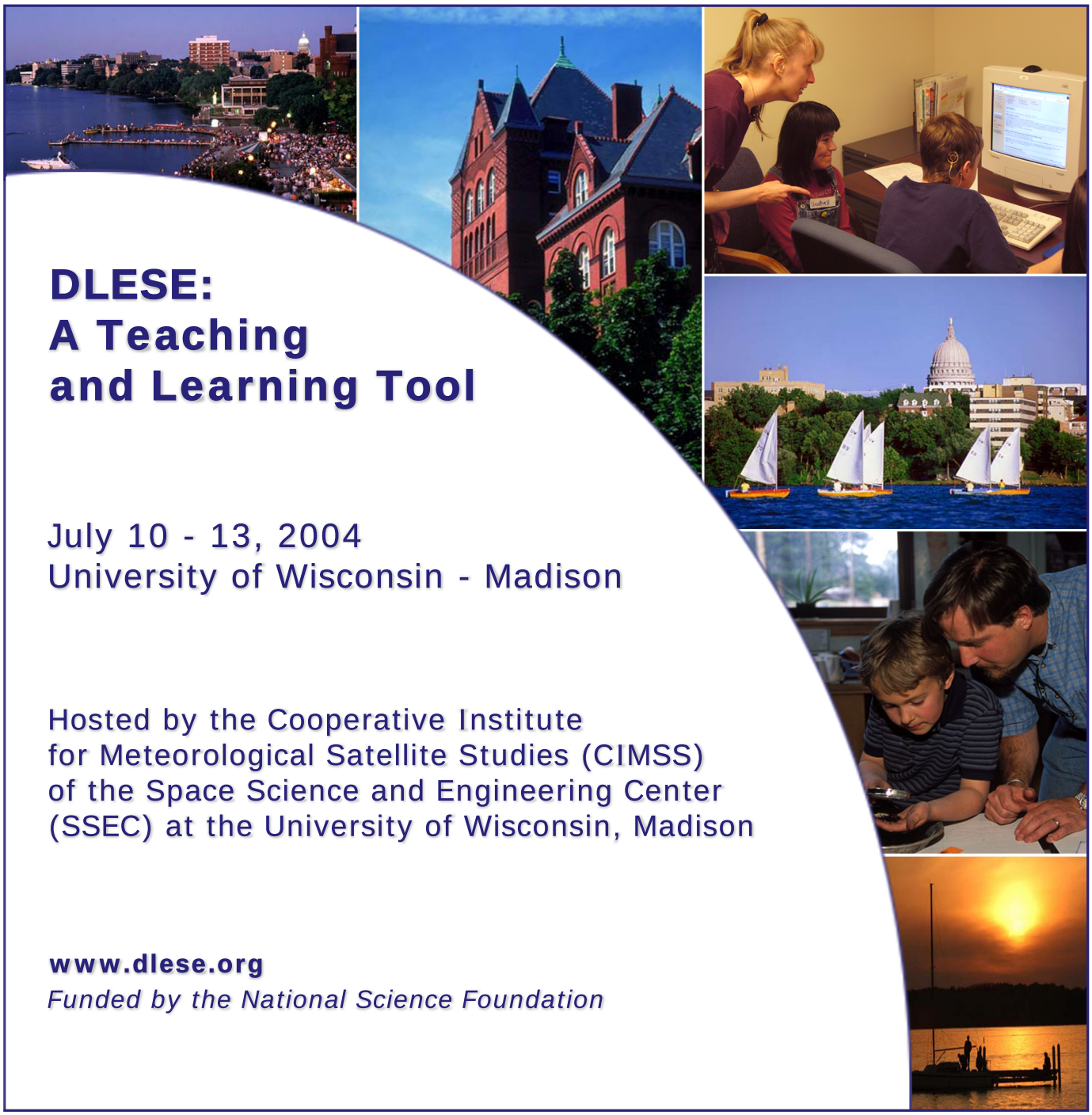
DLESE 2004 Annual Meeting

Digital Library for Earth System Education



DLESE: A Teaching and Learning Tool

July 10 - 13, 2004
University of Wisconsin - Madison

Hosted by the Cooperative Institute for Meteorological Satellite Studies (CIMSS) of the Space Science and Engineering Center (SSEC) at the University of Wisconsin, Madison

www.dlese.org

Funded by the National Science Foundation

Dogan Seber, Ph.D.
Chair
DLESE Steering Committee
Digital Library for Earth System Education
seber@sdsc.edu

July 10, 2004

Dear Colleague:

Welcome to the 2004 DLESE Annual meeting, hosted by the Cooperative Institute for Meteorological Satellite Studies and the Space Science and Engineering Center at the University of Wisconsin, Madison. The DLESE Annual Meeting provides a unique venue for sharing between educators, scientists, service providers, evaluators, and resource and collection developers. This year we are holding the 5th Annual Meeting—a milestone activity in our efforts. During the past five years DLESE has achieved a tremendous success and built on the capacity- and community-creating energy of its founding vision. This gathering is intended to foster collaboration, inspiration, and the continued building and evolution of DLESE. There remains much work to be done, and this meeting is one opportunity for you to contribute to that evolution.

The theme of this year's meeting is *DLESE: A Teaching and Learning Tool.* Over the next few days you will learn how to use DLESE and meet in working groups to help strategize around four broad goals: defining and developing a quality and comprehensive collection, reaching new users, making effective use of library resources and services, and enhancing the diversity of DLESE. As a participant in this meeting you have been included in a strand discussion/work group related to one of the four goals. The Annual Meeting organizers have worked very hard to make this meeting happen. I hope that this gathering will be beneficial to you and that you will have a productive meeting.

As always, the Steering Committee welcomes your thoughts and insights concerning DLESE activities. Annual meetings are especially great places for you to get to know the DLESE Management team and to share your ideas and concerns with them. Please feel free to approach me, or any of my colleagues on the Steering Committee, and introduce yourself. We are here, as a group, to serve your needs and those of the larger community of educators and learners that comprise DLESE.

I hope to have the opportunity to meet with you personally, share ideas, and discuss how DLESE can support your goals for improving Earth system education.

Again, welcome!

Dogan Seber
DLESE Steering Committee Chair

DLESE 2004 Annual Meeting
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Cover design: Marianne Weingroff, DLESE Program Center

DLESE 2004 Annual Meeting - Skills Workshop Program
July 10, 2004

Workshops take place in various laboratory facilities across the campus. Consult the map on the back cover to find the building for the workshop you will be attending. There is a brief plenary session in the dining facilities at Gordon Commons, following breakfast. Generally speaking, you should allow 10 -15 minutes for transition time between buildings, such as between the Witte Residence Hall, or Gordon Commons dining facilities and the scheduled laboratory buildings for the workshops. Van Hise lab may require 15-20 minutes from the Gordon Commons area. Student assistants (in red DLESE t-shirts) will be available from Gordon Commons to guide participants to the appropriate buildings.

► Indicates workshops suitable for new users of DLESE

Friday, July 9

12:00 pm – 6:00 pm – Check-in ..... Witte Residence Hall Lobby
Arrivals outside of these hours, please check-in at the Witte Residence Hall desk

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Saturday, July 10

7:00 am – 8:00 am – Breakfast ..... Gordon Commons

8:00 am – 8:15 am –Skills Workshop Plenary Meeting ..... Gordon Commons

8:15 am – 8:30 am – Transportation to computer labs, if needed ..... Gordon Commons

11:00 am – 5:00 pm – Check-in ..... Witte Residence Hall Lobby
Arrivals outside of these hours, please check-in at the Witte Residence Hall desk

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Saturday, July 10

8:30 am – 11:30 am - Session One

1. Using DLESE Effectively for Earth Science Education
   WILLIAM HUSKIN ..... Gordon Commons, ARCH Lab

2. ►Building & Contributing a Collection to DLESE: Policies, Processes and Support from Start to Finish (Part 1)
   HOLLY DEVAUL ..... White Library 1193B

3. Customizing DLESE Resource Discovery Using Web Services
   JOHN WEATHERLEY ..... White Library 2257

4. Global Climate Modeling Research for the Classroom
   MARK CHANDLER ..... Pyle Center 209

5. ►Using GPS in the Field
   MARK FRANCEK ..... Van Hise 250

6. Integrating Learning Technologies that Support All Students with DLESE
   SHARON LOCKE ..... Van Hise 259A

7. ►Observe the Earth and Visualize the Future
   JOHN MOORE ..... Van Hise 274

8. ►Building Data Literacy with Real Data and Real Tools
   BRUCE CARON .....Comp Sci & Stats B207

Complete Skills Workshop Evaluation Form

12:00 pm – **1:15 pm Newcomers Lunch** .....Gordon Commons
New to DLESE or to a DLESE annual meeting? Join us for a special luncheon for newcomers—it's an opportunity to get acquainted with other attendees, ask questions about the library, find out how it is of use to your education efforts, and learn how to make the most of the Annual Meeting.

A separate seating area is available for those who wish lunch but don't wish to participate in the Newcomer session. Confirmation of evening picnic activities site will also be made at this time (in case of rain).

1:15 pm – **1:30 pm Transportation if needed**..... Walk or shuttles to various computer labs

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1:30 pm – **4:30 pm Session Two:**

9. ►The Earth Exploration Toolbook
   TAMARA LEDLEY .....Comp Sci & Stats B203
10. Fundamentals of Evaluating Geoscience Education Projects
    SUSAN BUHR .....Comp Sci & Stats B109
11. Building and Contributing a Collection to DLESE: Policies, Processes and Support from Start to Finish (Part 2)
    KATY GINGER ..... White Library 1193B
12. ►Selecting Standards-Based K-12 Resources
    TED WILLARD .....White Library 2257
13. ►Using GIS to Organize, Analyze, and Publish Data
    ALBERT LEWANDOWSKI .....Van Hise 250
14. ►Designing and Using Active and/or Inquiry-Based Learning
    ROGER PALMER.....Van Hise 274
15. Developing Effective Digital Resources
    ANN EGGER .....Comp Sci & Stats B207

Complete the Skills Workshop Evaluation Form

3:00 pm – 5:00 pm – Strand Leaders/Facilitators Workshop ..... Grainger Computer Lab 2290
Vivian Williamson, Stephanie Stockman. All strand leaders are asked to attend.

5:00 pm – 6:00 pm – Transportation.....Walk or shuttles to Tripp Commons

5:30 pm – 7:30 pm – Welcome Reception / Picnic .....Tripp Commons
Welcoming remarks: Steve Ackerman, Site Host
In case of rain, Carson Gully, 2nd floor

7:00 pm – 8:00 pm – Transportation.....Walk or shuttles from Tripp Commons to Witte Residence Hall

Skills Workshop Abstracts
Saturday, July 10, 2004

► Indicates workshops suitable for new users of DLESE

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1. ►Using DLESE Effectively for Earth Science Education
WILLIAM HUSKIN, CENTRAL BURKS SCHOOL DISTRICT

Earth Science is the interaction of spheres: Hydrosphere, Lithosphere, Atmosphere, and Biosphere. DLESE offers support services for developing resources for Earth science education. This workshop will explore how DLESE supports the classroom teacher. Engaging in hands-on science is the way to teach. Projects such as GLOBE, NASA Earth Systems Enterprise, and CLOUDSAT all use hands-on techniques, involving students in their own education, and are standards-based. This is presented by a classroom teacher of 26 years and an AMS Atmospheric/Oceanographic Education Resource Agent.

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2. ►Building and Contributing a Collection to DLESE: Policies, Processes and Support from Start to Finish: Part 1
HOLLY DEVAUL, DLESE PROGRAM CENTER

This two-part workshop will provide you information on the processes and policies that guide collection development and accessioning in DLESE. We will cover the intellectual endeavor of articulating the scope of the collection, and selecting and reviewing resources as well as an introduction to the technical tools and supports available to make your collection a reality. Materials will include all relevant documents and information necessary for contributing a collection to DLESE.

Part 1: This workshop will provide you with a framework and guidance on the intellectual task of defining and building a collection of digital resources within the context of the DLESE accessioning policy and processes. We will discuss and provide examples of scope statements, a key document that defines a collection. Developing processes and criteria for creating or selecting resources for your collection will be discussed, using examples from DWEL (the Digital Water Education Library) and other projects. Guidelines for creating a review system for eligibility in the DLESE Reviewed Collection will be discussed. The DWEL Workhub will be showcased as a technical tool for facilitating distributed collection building and review processes. Opportunities for small group activities will be interspersed throughout the morning.

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3. Customizing DLESE Resource Discovery Using Web Services
JOHN WEATHERLEY, DLESE PROGRAM CENTER

This half-day workshop will show how to incorporate the discovery and display of DLESE resources into a web site or desktop application using web services. The workshop will cover the web service and interoperability protocols available at DLESE, describe the RSS (Really Simple Syndication (a.k.a. Rich/RDF Site) news feeds that are offered and provide a hands-on example of using the web services to construct a custom discovery search interface in a web page. The web services and protocols allow web site and application designers to access DLESE resources over the Internet and provide their user audience with a customized, contextualized view of the resources. For example, the *IdeaKeeper* project at the University of Michigan is using DLESE web services to search for and display DLESE resources in a Windows and Mac based desktop application used in the classroom, and the Florida Center for Ocean Sciences Education Excellence (FCOSEE) has incorporated an ocean sciences DLESE search and discovery interface into their web portal (http://floridacosee.net/). Participants will interact with existing web pages and desktop applications that use the web services and see specific examples illustrating how the services and tools can be used, implemented and installed within their own web site or application. The workshop is meant for instructional designers, web site administrators, or software

engineers. Familiarity with HTML and knowledge of JSP or other CGI technologies will be helpful. Participants will be given an opportunity to install and modify some examples and are encouraged to bring their own laptop to the workshop.

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4. Global Climate Modeling Research for the Classroom
MARK CHANDLER, COLUMBIA UNIVERSITY

Global climate models (GCMs) are one of the primary tools of climate research today. Unfortunately, few educators have access to such models. Our goal is to improve the quality of teaching and learning climate-change science by providing broader access to an actual GCM and to help teachers use a research-quality climate model effectively in the classroom. The main objectives of this workshop are two-fold: 1) Train educators to use a GCM that operates on desktop computers through a graphical user interface. The training encourages educators to involve students in the full scientific process by covering: hypothesis development, experiment design, running simulations, visualization and analysis of data, and reporting results. And 2) Facilitate collaborations between universities and the K-12 community, and between educational institutions and research scientists so students become familiar with the critical role that teamwork plays in climate science today. To fulfill our goal, we created a suite of software called EdGCM, which includes a desktop version of the NASA Goddard Institute for Space Studies GCM.

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5. ►Using GPS in the Field
MARK FRANCEK, CENTRAL MICHIGAN UNIVERSITY

In this hands-on introduction to GPS, we will use Lowrance GPS units for position acquisition, waypoint creation of features on campus, and navigation to these features. We begin the session with a brief discussion on the origins of GPS, how it works, and sources of error. Using web resources available from the DLESE collection, we will determine the best time to collect GPS data and view waypoints we created with aerial photography. Next, we use GPS units in the field to acquire position and elevation data, create a waypoint, and then navigate to an unknown waypoint. Point data collected in the field will then be entered into Microsoft Excel and then displayed in ArcView or ArcGIS. The session concludes with an overview of how GPS is revolutionizing research in the earth sciences. Handouts on GPS operation and exemplary GPS web sites are provided.

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6. Integrating Learning Technologies that Support All Students with DLESE Resources
SHARON LOCKE, UNIVERSITY OF SOUTHERN MAINE

Digital resources allow for flexibility in teaching that can enhance learning for students with diverse backgrounds and learning styles. Using examples from DLESE, participants will learn the characteristics of effective digital resources that incorporate flexibility, usability, and accessibility to address the needs of all learners. The session will include demonstrations of assistive technologies that improve access to digital resources. Working in small groups, participants will develop strategies for using the tools and resources of DLESE to scaffold learning for students with a range of learning modalities.

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7. ►Observe the Earth and Visualize the Future
JOHN MOORE, BURLINGTON COUNTY INSTITUTE OF TECHNOLOGY

This workshop will identify and examine resources of satellite imagery and real-time Earth systems data and demonstrate how to incorporate them into a Geographic Information System that allows students to observe the Earth from a new geo-referenced perspective, i.e. SPACE to EARTH and EARTH to SPACE (SEES Model). Participants in this workshop will receive an introduction to GIS and the educational resources available to educators from both ESRI and Intergraph Corporation, partners in

the GLOBE Program. An overview of how GLOBE student data can be incorporated into themes that enable students to not only view satellite imagery but also look at ground truth data will be explored. Participants will use imagery from NASA, NOAA, and the USGS as well as LandSat imagery, aerial photography, and U.S. Census data. Student observation projects such as NASA' S''COOL and next year's CLOUDSat Project, all adding data layers to give students a more comprehensive look at a study/observation site, will be discussed. Participants will explore the possibilities of how these projects can lead to new and exciting opportunities utilizing DLESE and the Geoscience infrastructure. A look at how all this applies to National Science Standards, Geospatial Workforce Readiness Standards, as well as Environmental and Technology Standards, Project-Based Learning and Scientific Inquiry, all while promoting Earth System Education in the pre-college community, will have workshop participants ready for the classroom. This workshop will enable participants to experience collaborative projects using current technologies that demonstrate that an International Classroom is no longer just a dream.

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8. ►Building Data Literacy with Real Data and Real Tools in the Classroom: From Middle School to Undergraduate Education
BRUCE CARON, NEW MEDIA STUDIO

The Data Discovery Toolkit and Foundry offers an end-to-end solution for earth data access and visualization on the student's desktop. The application development environment is based on a combination of IDL (a commercial data-use software, for data access and manipulation) and Macromedia Director (a widely used authoring environment, for interactive user interface development). The result is a capability to put research level tools into simple, interactive user applications. This workshop will show how you can join the Foundry as a member and use the free tools to build your own custom application. This workshop is for anyone interested in bringing real data to the desktop. For beginners, this workshop explains the data pathway from the earth data archive, to the scientist, to the application builder, and finally the classroom or museum kiosk. For application developers (or those who might like to try their hand) this workshop will also outline the use of the plug-in technology that moves data from IDL to Director. A sample software product will be distributed. This product, the World Ocean Atlas 1998 Viewer, was the result of the Ocean strand of the 2002 DLESE meeting, and was created by The New Media Studio and Bill Prothero at the University of California at Santa Barbara (UCSB). Both the working cross-platform application and the source code will be distributed.

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9. ►The Earth Exploration Toolbook: Using Real Data to Investigate the Streamflow-Precipitation Relationship
TAMARA LEDLEY, TERC

Investigate the relationship between streamflow and precipitation by accessing real streamflow and precipitation data and, using a spreadsheet program, prepare a graph that will help you analyze the relationship between them. This activity will prepare you to help your students explore key factors that influence the relationship between streamflow and precipitation for the Sudbury River in Massachusetts. You will gain enough knowledge about how to access streamflow and precipitation data so that you can prepare a customized version of the activity to investigate this relationship for a watershed and river in your own region. This activity is featured as one chapter in the Earth Exploration Toolbook (EET). EET chapters provide step-by-step instructions for using Earth science datasets and software tools in educational settings. Each chapter walks users through an example—a case study in which the user accesses data and uses analysis tools to explore issues or concepts in Earth system science, and gives the user enough knowledge to modify the activity to be effective in his/her own situation. Participants in this workshop will find out how the Earth Exploration Toolbook can support their efforts to increase the use of Earth science data and data analysis tools with their students. Attendees will also become familiar with other EET chapters and data analysis resources by accessing them through DLESE.

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10. Fundamentals of Evaluating Geoscience Education Projects
SUSAN BUHR, UNIVERSITY OF COLORADO

Many geoscience educators, scientists, and developers need to evaluate their educational efforts and/or to communicate with professional evaluators. This workshop will furnish participants with a basic overview of the elements and purposes of evaluation. Workshop participants will learn about: 1) the difference between "formative" and "summative" evaluation; 2) typical steps involved in creating and implementing an evaluation plan; and 3) qualitative and quantitative data collection methods and when to use each. Using a case study approach, participants will gain hands-on experience identifying a "measurable" evaluation goal and will develop a plan for evaluating it.

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11. Building and Contributing a Collection to DLESE: Policies, Processes and Support from Start to Finish: Part 2
KATY GINGER, DLESE PROGRAM CENTER

This two-part workshop will provide you information on the processes and policies that guide collection development and accessioning in DLESE. We will cover the intellectual endeavor of articulating the scope of the collection, and selecting and reviewing resources as well as an introduction to the technical tools and supports available to make your collection a reality. Materials will include all relevant documents and information necessary for contributing a collection to DLESE.

Part 2: This workshop covers the technical aspects of collection building: collection types, metadata frameworks, creating metadata records, and sending metadata records to DLESE. Participants receive sample records illustrating different DLESE collections types and their corresponding metadata framework. Participants are introduced to controlled vocabularies and cataloging best practices for creating metadata records. Strategies for getting your own existing metadata into DLESE are discussed. Tools to generate metadata are demonstrated (includes the new DLESE Catalog System). Methods for getting metadata records to DLESE are offered (includes OAI).

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12. ►Selecting Standards-Based K-12 Resources
TED WILLARD, AAAS

Now that there is a consensus on what students should know and be able to do, educators need resources to help their students achieve. This workshop will focus on what factors make a resource particularly effective. We will also look at how current and future aspects of the DLESE interface make it easier to look for standards-based resources.

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13. ►Using Geographical Information Systems to Organize, Analyze, and Publish Data
ALBERT LEWANDOWSKI, PORT HURON AREA PUBLIC SCHOOLS

Participants will practice locating and obtaining GIS data available through the DLESE web site. Next, we'll use ArcGIS X.x to display, arrange, and explore the information. Finally, we'll publish the results using ArcGIS Publisher. Publisher is like Acrobat Reader for GIS. It produces stand-alone projects that allow others to arrange, view, and publish the included data in a variety of ways.

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14. ►Designing and Using Active and/or Inquiry-Based Learning with DLESE Resources
ROGER PALMER, BISHOP DUNNE HIGH SCHOOL

This session will introduce users to the DLESE site and data through hands-on inquiry-based lessons that participants can take directly back to their classrooms. Participants will have the chance to become familiar with how to design an inquiry based lesson using the DLESE web site. Do it today, use it tomorrow!

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15. Developing Effective Digital Resources
ANNE EGGER, SAN JUAN COLLEGE

This workshop will offer an introduction to *Visionlearning*, an award-winning NSF-funded project soon to be available as a reviewed collection through DLESE. Visionlearning and DLESE share the goal of promoting access to high-quality educational resources in interdisciplinary science. By the end of this workshop, participants will have had a chance to thoroughly explore a resource that has produced demonstrable improvements in student learning in the classroom and is recognized by teachers for its ease of use. Participants will 1) examine the design and pedagogical effectiveness of Visionlearning and 2) create their own online classroom using the Visionlearning resources.

Skills Workshop Participants
In session order

Participants registered for skills workshops under a separate process from meeting registration. Efforts were made to place participants in their first-choice workshop. Due to cancellation of some workshops, participants may have been assigned to second- or third-choice workshops. **Workshop presenter(s) are indicated in bold type.**

Morning Session

1. ►Using DLESE Effectively for Earth Science Education

	NAME	AFFILIATION	EMAIL
1	**Huskin, William**	**Central Burks School District**	
2	Bellinger, Keith	Longstreth Elementary School	
3	Bellon, Bill	Space Science & Engineering Cntr, University of Wisconsin	
4	Bogard, Antoine	NYC Public School 197M	
5	Chee Wah, Brenda	Clark Atlanta University	
6	Dabel, Peggy	Adams Middle School m	
7	Davis, Edith	Baylor University	
8	Detwiler, Paul	City College of San Diego	
9	Ernst, Lisa	DLESE/California Teachers pilot program	
10	Ettinger, Stephen	DLESE Program Center	
11	Gant, Karen		
12	Hill, Heather	University of South Florida	
13	Holzman, Neil	Lamont-Doherty Earth Observatory, Columbia University	
14	Keierleber, Angela	Colton Joint Unified School District	
15	Lomax, Edward	Georgia State University	
16	McCollum, Timothy	Charleston Middle School	
17	Murray, Daniel	University of Rhode Island	
18	Olivier, Cheryl	Attleboro Public Schools	
19	Parliment, Sharon	Knox Trail Jr. High School	
20	Pyrtle, Ashanti	University of South Florida	
21	Rivet, Ann	Teachers College, Columbia University	
22	Selvig, Linda	DLESE Ambassador Centennial High School	
23	Spence, Tyler	James Madison Memorial High	
24	Tuthill, George	Montana State University	
25	Walton Faria, Barbara	Thompson Middle School	

2. ►Building and Contributing a Collection to DLESE: Polices, Processes, and Support from Start to Finish – Part 1

	NAME	AFFILIATION	EMAIL
1	**Devaul, Holly**	**DLESE Program Center**	
2	**Ginger, Katy**	**DLESE Program Center**	
3	Adams, Dawn	Tapestry	
4	Aiken, Carlos	University of Texas at Dallas	
5	**Aivazian, Bryan**	**DLESE Community Services**	
6	Batzli, Samuel	University of Wisconsin	
7	Belasco, Jo	Tapestry	
8	Brown, Wynne	Center for Image Processing in Education	
9	Drobnes, Emilie	NASA	
10	**Geary, Ed**	**University Corporation for Atmospheric Research (UCAR); DLESE Community Services**	
11	Kyro, Laura	Washington University-St. Louis	
12	Low, Russanne	University of Minnesota	
13	Lynds, Susan	Cooperative Institute for Research in Environmental Sciences (CIRES); University of Colorado	
14	**Olds, Shelley**	**DLESE Program Center**	
15	Russell, Gail	University of Southern Mississippi	

3. Customizing DLESE Resource Discovery Using Web Services

	NAME	AFFILIATION	EMAIL
1	**Weatherley, John**	**DLESE Program Center**	
2	Bhushan, Sonal	DLESE Program Center	
3	Lee, Soo-Young	TERC	
4	Santini, Cindy	San Diego Supercomputer Center	

4. Global Climate Modeling Research for the Classroom

	NAME	AFFILIATION	EMAIL
1	**Chandler, Mark**	**Columbia University**	
2	Birnbaum, Stuart	University of Texas at San Antonio	
3	Egger, Anne	Visionlearning and Stanford University	
4	McCaffrey, Mark	Cooperative Institute for Research in Environmental Sciences	
5	Sohl, Linda	Lamont Doherty Earth Observatory (LDEO), Columbia University	
6	Wilson, James	Madison East High School	

5. ► Using GPS in the Field

	NAME	AFFILIATION	EMAIL
1	**Francek, Mark**	**Central Michigan University**	
2	Davis, Melinda	Fort Valley State University	
3	Davison, Justin	Burlington County Institute of Technology	
4	Dimmick, Howard	Science Education Consultant	
5	Garcia, Linda	Southern Hills Middle School	
6	McGee, Florence	Pinellas County Schools Dunedin Elementary	
7	Olsen, Timothy	Environmental Remote Sensing Center at University of Wisconsin	
8	Rogers, Elizabeth	College of Charleston	
9	Scotchmoor, Judy	University of California-Berkeley, Museum of Paleontology	

6. Integrating Learning Technologies that Support All Students with DLESE

	NAME	AFFILIATION	EMAIL
1	**Locke, Sharon**	**University of Southern Maine**	
2	Bryce, Lois	University of South Florida	
3	Davis, Lynne	DLESE Program Center	
4	Detwiler, David	Lakewood High, Pinellas Co. Schools, Florida	
5	Fagan-Brown, Lisa	Florida	
6	Lodge, Angela	University of South Florida College of Marine Science	
7	McClung, Don	Osseo Area Schools	
8	McDougal, Andrea	Lakewood High School	

7. ► Observe the Earth and Visualize the Future

	NAME	AFFILIATION	EMAIL
1	**Moore, John**	**Burlington County Institute of Technology**	
2	Chernosky, Margaret	Bangor High School	
3	Lorenzoni, Laura	University of South Florida	
4	Smith, David	DLESE Program Center	
5	Stewart, Ray	Elyria City Schools	
6	Tyner, Elizabeth	University of South Florida	

8. ► Building Data Literacy with Real Data and Real Tools in the Classroom: From Middle School to Undergraduate Education

	NAME	AFFILIATION	EMAIL
1	**Caron, Bruce**	**New Media Studio**	
2	Borman, Gregory	NYC Department of Education	
3	Bowen, Anne Dara	San Diego Supercomputer Center	
4	Braney, Mary	Knox Trail Junior High School	
5	Estey, Lou	UNAVCO	
6	Harger, Elaine	W. Haywood Burns School	
7	Hylton, Alisa	Central Piedmont Comm. College	
8	Kruger-Knuepfer, Joyce	Seton Catholic Central High School	
9	Lukes, Laura	Ohio State University	
10	Matsumoto, George	Monterey Bay Aquarium Research Institute (MBARI)	
11	Powell, Jozan	Bank Street Graduate School of	

Afternoon Session

9. ►The Earth Exploration Toolbook: Using Real Data to Investigate the Streamflow-Precipitation Relationship

	NAME	AFFILIATION	EMAIL
1	**Ledley, Tamara**	**TERC; DLESE Data Services**	
2	Bellon, Bill	Space Science & Engineering Center, University of Wisconsin	
3	Davis, Melinda	Fort Valley State University	
4	Dimmick, Howard	Science Education Consultant	
5	Ledley, Miriam	Needham High School	
6	Parliment, Sharon	Knox Trail Junior High School	
7	Selvig, Linda	DLESE Ambassador Centennial High School	
8	Tyner, Elizabeth	University of South Florida	
9	Walton-Faria, Barbara	Thompson Middle School	
10	Wilson, James	Madison East High School	

10. Fundamentals of Evaluating Geoscience Education Projects

	NAME	AFFILIATION	EMAIL
1	**Buhr, Susan**	**Cooperative Institute for Research in Environmental Sciences (CIRES) – University of Colorado; DLESE Evaluation Services**	
2	Murray, Daniel	University of Rhode Island	
3	Birnbaum, Stuart	University of Texas-San Antonio	
4	Bowen, Anne Dara	San Diego Supercomputer Center	
5	Chee Wah, Brenda	Clark Atlanta University	
6	Lynds, Susan	Cooperative Institute for Research in Environmental Sciences (CIRES) – University of Colorado, Boulder	
7	Pyrtle, Ashanti	University of South Florida	
8	Smith, David	DLESE Program Center	

11. Building and Contributing a Collection to DLESE: Policies, Processes and Support from Start to Finish – Part 2

	NAME	AFFILIATION	EMAIL
1	**Ginger, Katy**	**DLESE Program Center**	
2	Adams, Dawn	Tapestry	
3	Aiken, Carlos	University of Texas-Dallas	
4	Aivazian, Bryan	Natrona County School District; DLESE Community Services	
5	Batzli, Samuel	Environmental Remote Sensing Center (ERSC); University of Wisconsin, Madison	
6	Belasco, Jo	Tapestry	
7	**Devaul, Holly**	**DLESE Program Center**	
8	Drbones, Emilie	NASA	
9	Low, Russanne	University of Minnesota	
10	Malmquist, David	Virginia Institute of Marine Science	
11	McCaffrey, Mark	Cooperative Institute for Research in Environmental Sciences (CIRES) – Univ. of Colorado, Boulder	
12	**Olds, Shelley**	**DLESE Program Center**	
13	**Ostwald, Jonathan**	**DLESE Program Center**	
14	Russell, Gail	University of Southern Mississippi	
15	**Weatherley, John**	**DLESE Program Center**	

12. ►Selecting Standards-Based K-12 Resources

	NAME	AFFILIATION	EMAIL
1	**Willard, Ted**	**American Association for the Advancement of Science AAAS) Project 2061**	
2	Bhushan, Sonal	DLESE Program Center	
3	Bogard, Antoine	NYC Public School 197M	
4	Borman, Gregory	NYC Department of Education	
5	Lee, Soo-Young	TERC	
6	Lomax, Edward	Georgia State University	
7	McClung, Don	Osseo Area Schools	

13. ►Using GIS to Organize, Analyze, and Publish Data

	NAME	AFFILIATION	EMAIL
1	**Lewandowski, Albert**	**Port Huron Area Public Schools**	
2	Chernosky, Margaret	Bangor High School	
3	Davis, Edith	Baylor University	
4	Garcia, Linda	Southern Hills Middle School	
5	Lodge, Angela	College of Marine Science University of South Florida	
6	Santini, Cindy	San Diego Supercomputer Center	
7	Sohl, Linda	Lamont Doherty Earth Observatory (LDEO) Columbia University	

14. ►Designing and Using Active and/or Inquiry-Based Learning with DLESE Resources

	NAME	AFFILIATION	EMAIL
1	**Palmer, Roger**	**Bishop Dunne High School**	
2	Braney, Mary	Knox Trail Regional Jr High School	
3	Bryce, Lois	University of South Florida	
4	Dabel, Peggy	Adams Middle School	
5	Davis, Lynne	DLESE Program Center	
6	Detwiler, Paul	City College of San Diego	
7	Fagan-Brown, Lisa	Florida	
8	Harger, Elaine	W. Haywood Burns School	
9	Hill, Heather	University of South Florida	
10	Holzman, Neil	Lamont-Doherty Earth Observatory Columbia University u	
11	Hylton, Alisa	Central Piedmont Community College	
12	Lorenzoni, Laura	University of South Florida	
13	Matsumoto, George	Monterey Bay Aquarium Research Institute (MBARI)	
14	McCollum, Timothy	Charleston Middle School	
15	McGee, Florence	Pinellas County Schools Dunedin Elementary	
16	Olivier, Cheryl	Attleboro Public Schools	
17	Rivet, Ann	Teachers College Columbia University	
18	Rogers, Elizabeth	College of Charleston	
19	Spence, Tyler	James Madison Memorial High	
20	Tuthill, George	Montana State University	

15. Developing Effective Digital Resources

	NAME	AFFILIATION	EMAIL
1	**Egger, Ann**	**Stanford University**	
2	Estey, Lou	UNAVCO, Inc.	
3	Ettinger, Stephen	DLESE Program Center	
4	Gant, Karen	Carol City Elementary School	
5	Ithier-Guzman, Warner	University of South Florida	
6	Keierleber, Angela	Colton Joint Unified School Distric	
7	Kruger-Knuepfer, Joyce	Seton Catholic Central High School	
8	Kyro, Laura	Washington University-St. Louis	
9	Lukes, Laura	Virginia Tech/Ohio State University	
10	Powell, Jozan	Bank Street Graduate School of Education	
11	Scotchmoor, Judy	Museum of Paleontology University of California	

DLESE 2004 Annual Meeting Program
University of Wisconsin-Madison
July 11 – 13, 2004

Saturday, July 10

7:00 am – 8:00 am – Breakfast ..... Gordon Commons

8:00 am – 4:30 pm –Skills Workshops ..... Gordon Commons
See details in full Saturday Skills Workshop program ..... page 3

11:00 am – 5:00 pm – Check-in ..... Witte Residence Hall Lobby
Arrivals outside of these hours, please check-in at the Witte Residence Hall desk

12:00 pm – **1:15 pm Newcomers Lunch** ..... Gordon Commons
New to DLESE or to a DLESE annual meeting? Join us for a special luncheon for newcomers—it's an opportunity to get acquainted with other attendees, ask questions about the library, find out how it is of use to your education efforts, and learn how to make the most of the Annual Meeting. A separate seating area is available for those who wish lunch but don't wish to participate in the Newcomer session. Confirmation of evening picnic activities site will also be made at this time (in case of rain).

3:00 pm – 5:00 pm – Strand Leaders/Facilitators Workshop ..... Grainger Computer Lab 2290
Vivian Williamson, Stephanie Stockman. All strand leaders are asked to attend.

5:00 pm – 6:00 pm – Transportation ..... Walk or shuttles to Tripp Commons

5:30 pm – 7:30 pm – Welcome Reception / Picnic ..... Tripp Commons
Welcoming remarks: Steve Ackerman, Site Host
In case of rain, Carson Gully, 2nd floor

7:00 pm – 8:00 pm – Transportation ..... Walk or shuttles from Tripp Commons to Witte Residence Hall

Sunday, July 11

7:00 am – 8:00 am – Breakfast ..... Gordon Commons

8:15 am – 8:30 am ..... Walk to Educational Science Bldg, IMDC, from Gordon Commons

8:30 am – 10:00 am – Opening Session ..... Educational Science Bldg, IMDC

- *Meeting Welcome:* Steve Ackerman, Conference Site Host, UW-Madison
- *UW Welcome:* Ed Meachen, Associate Vice President of UW System-wide Information Technology
- *DLESE Leadership:* Dogan Seber, Chair, DLESE Steering Committee
- *NSF Perspectives:* Mike Mayhew, National Science Foundation
- *Using DLESE for Teaching and Learning*: Russanne Low, University of Minnesota; and Rajul Pandya; UCAR/SOARS Program
- *Meeting Goals and Objectives:* David Steer, Planning Committee Chair
- *Meeting Logistics:* Maria Vasys, Site Coordinator

10:00 am – 10:30 am – Break ..... Grainger Atrium

10:30 am – 12:00 pm – Exploring the Issues .....assigned Strand Rooms
1st Strand Working Session: The strand format provides an opportunity for participants to become familiar with issues of interest, with DLESE resources, and to engage themselves in future development of DLESE as it evolves to the premier teaching and learning tool for Earth System Education of the 21st century. Meeting participants will attend a strand that focuses on areas of interest based on preferences expressed during registration (see Strand overview and Strand participants).

This session will provide the background information necessary to develop group and individual goals. Session 1 goals are: to get acquainted with fellow strand members and their priorities and interests; identify an on-line report-out form (Swiki) editor for the group; review previous meeting outcomes; understand the enabling question and suggested deliverables; and develop an engagement plan for the afternoon mini-workshops session. Participants will register with the library during this session. Room assignments remain the same for all strand sessions, unless otherwise noted. Report progress on strand Swikis (online work area).

Defining and Developing a Quality and Comprehensive Collection

Strand 1 - How can an educator/school/district use DLESE to create or supplement curricula?
Randy Sachter, Nederland Middle/Senior High School..... Sunday and Monday: Grainger 1175

Strand 2 - How do we assess quality for visualizations, models, data and other data-related resources?
Michelle Hall, Science Education Solutions ..... Sunday and Monday: Grainger 1185

Strand 3 - How can we strengthen and expand the formal review process? How do we increase participation of the community?
Annette DeCharon, Bigelow Laboratory for Ocean Sciences; Don Elthon, University of Houston.....
..... Sunday and Monday: Grainger 1230

Strand 4 - How can the community better leverage and facilitate collaborations? How do we link data providers, tools creators and curriculum developers through the library?
Diane Schweizer, NASA ..... Sunday and Monday: Grainger 1240

Reaching New Users through Outreach Materials, Library Resources and Services

Strand 5 - How can we better train and engage pre-service teachers to use DLESE?
Russanne (Rusty) Low, University of Minnesota..... Sunday: Grainger 2270; Monday: Grainger 2280

Strand 6 - How can we better train and engage in-service teachers?
Albert Lewandowski, Port Huron Area Public Schools... Sunday: Grainger 1140; Monday: Grainger 1070

Strand 7 – How can we encourage scientific researchers to contribute to DLESE?
Richard Clark, Millersville University ..... Sunday: Grainger 1170; Monday: Grainger 1220

Strand 8 – How should DLESE include contributions from education researchers and the broader education community? What is the place for education research within DLESE?
Jill Singer, Buffalo State College ..... Sunday: Grainger 1180; Monday: Grainger 2185

Making Effective Use Of Library Resources And Services

Strand 9 – How can we better assess the effective use of DLESE resources used by teachers and learners in the K-12 education community?
Frank Ireton, SSAI and NESTA..... Sunday and Monday: Grainger 1270

Strand 10 – How can we better assess the effective use of DLESE resources used by teachers and learners in the undergraduate community?
Cathryn Manduca, Carleton College ..... Sunday: Grainger 2170; Monday: Grainger 2080

Enhancing the Diversity of DLESE

Strand 11 – How can educators and developers use DLESE to best meet the needs of diverse learners? How does the DLESE collection and system currently reflect the needs of diverse users and educators and what strategic partnerships should be developed to enhance the diversity of DLESE?
Dawn Adams, Tapestry; Frank Hall, University of New Orleans; Sharon Locke, University of Southern Maine ..... Sunday: Grainger 2180; Monday: Grainger 2120

12:00 pm – 1:30 pm – Lunch..... Gordon Commons

Share Fair presenters may also set up at this time ..... Fluno Center, 2nd floor

1:30 pm – 3:00 pm – Strand Exploration Phase ..... Selected Computer Labs and Rooms
This session is designed to allow new and experienced users to become more familiar with DLESE and their strand topic by attending one of the five concurrent mini-workshops listed below, or by self exploration in the computer lab. We recommend that new users attend a mini-workshop or work directly in the open computer lab (White Library lab, 2nd floor) with an experienced DLESE user. Participants are not assigned to specific mini-workshops, however, suggestions for mini-workshops appropriate to each strand are found in the Strand Overview section.

1. Just for Faculty: On-line Resources Linking Methods and Examples
This session will focus on how faculty design a class. Based on a discussion of the problems faculty face in creating lectures and labs, we will explore on-line resources designed to ease class preparation and enhance student learning.
Cathryn Manduca, Carleton College..... Van Hise 250

2. Using DLESE Effectively for Earth Science Education
This workshop will explore how DLESE supports the classroom teacher. Engaging in hands-on science is the way to teach—involving students in their own education.
William Huskin, Central Bucks School District..... Van Hise 259A

3. Using DLESE: Finding Resources to Enhance Teaching
This session will address the challenges that educators face in finding appropriate electronic resources for integrating into their teaching. We will discuss how digital libraries can aid in this effort, and strategies for effective searching. A connection between learning goals and resource type is presented with specific examples. Participants will have an opportunity to explore the examples as well as perform their own targeted searches to support topics they will teach in the coming year.
Holly Devaul, Shelley Olds, DLESE Program Center..... Gordon Commons, ARCH Lab

4. Reviewing Digital Resources for Educational Uses
Did you use a DLESE resource and find it wonderful? Or terrible? Did you find a way to modify a DLESE resource to make it work better for a particular audience or locale? DLESE encourages you to share such insights with other educators and learners in the DLESE community. Participants in this workshop will learn how to provide feedback on DLESE resources via the Community Review System (CRS), and how to access feedback which has been provided by previous users of the resource.
Kim Kastens, Lamont Doherty Earth Observatory, Columbia University..... White Library 1193B

5. Providing a High Quality DLESE Experience for All
The National Science Foundation has funded an effort to assess the effectiveness of the current policies and procedures for assuring the high quality of all resources and services within DLESE, and to develop a plan for implementing a more comprehensive, integrated approach. This session will review current thinking about what the ideal DLESE might be, and some of the key questions that need to be addressed to reach that idea.
Michelle Hall, Science Education Solutions; Don Elthon, University of Houston; Annette DeCharon, Bigelow Laboratory for Ocean Sciences ..... Van Hise 274

Open Lab for self exploration..... White Library lab, 2nd floor

3:00 pm – 3:30 pm – Break – Sundae bar with Babcock Hall ice cream ..... Grainger Atrium

3:30 pm – 4:30 pm – Using DLESE to Improve Earth System Education
Jack Fellows, DLESE Executive Director..... Educational Science Bldg, IMDC

3:30 pm – 4:30 pm – Share Fair Setup: Fluno Center ..... Fluno Center, 2nd floor
Participants presenting during the Share Fair will set up their posters and presentation materials.

4:30 pm – 5:30 pm – Town Hall Meeting ..... Educational Science Bldg, IMDC
All participants are encouraged to attend this informational meeting with the DLESE Steering Committee and the DLESE Management Council. This is your opportunity to meet new and continuing Steering Committee members and Management Council staff, ask questions, and directly provide your input to DLESE leaders to help shape the future of DLESE.

5:30 pm - 6:00 pm – **Strand Leader Meeting** ..... Fluno Center 219
Dave Steer, Stephanie Stockman. All strand leaders are asked to attend.

6:00 pm – 10:00 pm – Share Fair and Reception..... Fluno Center, 2nd floor
The Share Fair provides an opportunity for participants to share resources, collections, or services they have created. Come enjoy refreshments and a light dinner as you talk with presenters about their work and how it can be used in your classroom to enhance teaching and learning. See Share Fair abstracts and presenters.

Monday, July 12

7:00 am – 8:00 am – Breakfast ..... Gordon Commons

8:30 am – 10:00 am – Plenary Session..... Educational Science Bldg, IMDC

Review of Meeting Goals/Objectives: David Steer, Planning Committee Chair

Steering Committee Slate Ratification: Dogan Seber, Steering Committee Chair

Keynote Address: Should We Be Alarmed? Jean May-Brett. Jean is the Math Science Partnership Program Coordinator for the Louisiana Department of Education, and was Assistant Director of Educational Television Technology at Louisiana Public Broadcasting. During her 25-year teaching career Jean taught middle and high school Earth Science, Environmental Science, and Mathematics, in New York and Louisiana.

Meeting Logistics: Maria Vasys, Site Coordinator

10:00 – 10:30 Break ..... Grainger Atrium

10:30 am – 12:00 am - Strand Engagement Phase.....assigned Strand Rooms
2nd Strand Working Session: Goals and activities include a short review of prior day activity; assign issues, topics, or goals that strands will discuss; develop and record brief individual post-meeting engagement goals as well as strand goals; and determine what activity, funding proposal, or strategy related to your strand would enhance DLESE as a Teaching and Learning Tool. Record your ideas and plans on strand Swikis.

12:00 pm – 1:30 pm – Lunch.....Gordon Commons

1:30 pm – 3:00 pm – Strand Synthesis Phase .....assigned Strand Rooms
3rd Strand Working Session – Strands will further refine ideas for addressing goals and elaborate on strategies and specific actions. In the past, these actions have included submitting proposals, collaborating with DLESE, and developing new resources or collections. Please record ideas and resources identified into the strand Swikis.

3:00 pm – 3:30 pm – Break .....Grainger Atrium

3:30 pm – 5:30 pm – Strand Extension Phase.....assigned Strand Rooms
4th Strand Working Session: Strands will finalize strategies and actions. Each group should also include any opportunities for collaboration or strategic partnerships; identify opportunities and articulate key needs; develop post-meeting plans to continue strand topic development (post-meeting goals and plans/milestones). Prepare for strand report-out session. Please record ideas and resources identified, and post-meeting, plans into online report out form.

5:30 pm – 6:00 pm .....Walk to Memorial Union

5:40 pm – 6:00 pm – Strand Leaders Meeting ..... Grainger 2165
Dave Steer, Stephanie Stockman. All strand leaders are asked to attend.

6:00 pm – 10:00 pm – **Evening Banquet** .....Great Hall of the Memorial Union, 4th floor

6:00 pm – 6:30 PM	Reception with appetizers
6:30 pm – 8:00 PM	Buffet Dinner
8:00 pm – 10:00 PM	Polka Party!
8:30 pm – 10:15 pm	Walk or transportation back to Witte Residence Hall

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Tuesday, 13 July

7:00 am – 8:00 am – Breakfast .....Gordon Commons

8:30 am – 10:00 am – Strand Group Report-Out Session ..... Educational Science Bldg, IMDC
Strands will report on strategies, actions, and post-meeting goals. Each group has 5 minutes to report out.

10:00 am – 10:30 am – Closing Session ..... Educational Science Bldg, IMDC

Steering Committee Final Remarks: Dogan Seber, Chair Steering Committee

Closing: David Steer, Planning Committee Chair

Final Logistics: Maria Vasys

12:00 pm – 9:00 pm – Field Trip to Devil's Lake State Park - gather at Gordon Commons by Noon for a timely departure.

DLESE 2004 Annual Meeting
Social Events

Newcomer's Lunch

Time: Saturday July 10, 12:00 pm – 1:15 pm
Location: Gordon Commons at:
717 W Johnson Street
Madison, WI 53706
Bldg 188
See map on back cover

Welcoming Reception & Picnic

Time: Saturday July 10, 5:30 pm to 7:30 pm
Location: Tripp Commons picnic area, located along shores of Lake Mendota
North of Bldg 181 - See map on back cover (top left corner)
Alternate Location: In case of rain, this event will be held at:
Carson Gully, 1515 Tripp Circle, Madison, WI 53706 (See map - Bldg 181)

Banquet

Time: Monday July 12
6:00 to 6:30 pm – Reception and appetizers
6:30 to 8:00 pm - Buffet Dinner
8:00 to 10:00 pm – Polka party
Location: Great Hall in Memorial Union, 800 Langdon Street, Madison, WI 53706
See map on back cover - Bldg 83

Field Trip to Devil's Lake

Located in Baraboo, Wisconsin Devil's Lake State Park is situated along the Ice Age Trail

Time: Tuesday, July 13

12:00 pm **Depart** from Gordon Commons with box lunches

1:00 pm **Explore Upper Narrows** of the Baraboo River in Rock Springs, along the northern limb of the Baraboo syncline

2:00 pm **Head to Devil's Lake** Devil's Lake State Park is simply spectacular! Some call it the Grand Canyon of the Midwest Devils Lake is geologically unique Situated within the Baraboo region, the area straddles the boundary between the Driftless Area of southwestern Wisconsin and the glaciated Eastern Uplands Three fascinating periods of Earth's history are preserved here:
Pleistocene Ice age (~18,000-15,000 years ago);
Cambrian (~500 million years ago); and
Pre-Cambrian (~17 billion years ago)

5:00 pm Parfrey's Glen, located about 4 miles east of Devil's Lake State Park, reaches a depth of nearly 100 feet at its uppermost part The Glen's walls are composed of alternate layers of sandstone (representing Cambrian beach deposits) and conglomerate layers containing rounded quartzite boulders representing times when hurricane driven waves smashed into the quartzite islands and washed pieces of it onto the sandy ocean bottom offshore

6:30 pm **Dinner** In Prairie du Sac

8:00 pm **Leave** for Madison

9:00 pm **Arrive** at Witte Hall

Strand Overview

The strand format of DLESE Annual Meetings is designed to enable community members to discuss and strategize a particular topic or area, defined by the *Enabling Question* for each strand. To support the work of each strand, a leader and/or co-leader has been chosen to facilitate the discussions. Strands may break into subgroups to examine specific aspects of the enabling question if they choose. Each strand should also choose a strand editor to summarize and record the discussions on each online workspace—the strand Swiki.

Guidance
Each Swiki has guiding questions and comments to facilitate the work of the groups; these are included for reference, below. Completing these will assist the Annual Meeting Planning Committee in writing the final report on the meeting which will be submitted to the National Science Foundation. The session numbers below refer to sessions in the overall meeting program:

Sunday 10:30 am – 12:00 - Strand Working Session 1: Understand Enabling Question and Review Prior Work

Introductions: Members introduce one another as directed by strand leader. Identify Swiki recorder. Review information related to the enabling question:

- Identify the issue or problem

Participants read the enabling question and answer it individually. Form groups of 4 to compare, contrast, and discuss their responses. List common components in writing. One person from each group briefs other groups of the strand. ***Record common elements.***

Review prior DLESE annual meeting recommendations that are related to the enabling question. Use "Jigsaw" technique to inform all strand members of previous efforts. Each strand will be provided with packets of outcomes and recommendations developed during the 2003 meeting that are pertinent to the enabling question. Subgroups within the strands will separately analyze and summarize one portion of the material. Each sub-group then reports their finding to the entire group. ***Record summary of key elements.***

Refine enabling question based on group discussion if necessary. ***Record.***

Discuss appropriate individual goals pertinent to the strand that support participant interests and can be accomplished in the 3-6 months post-meeting. ***Record common themes.***

Review mini-workshops or self-explorations that would be useful when developing individual and group goals related to the strand. Outline a specific plan to accomplish this (who, what, when, where, why and how) in Session 3. ***Record plan.***

Sunday 1:30 – 3:00 – Attend Mini-Workshops or work with a peer
This session is designed to allow each strand member to seek the information that best matches their level of expertise and interest level. Mini-workshops are structured introductions to various aspects of *DLESE: A Teaching and Learning Tool*.

Strand 1: Recommended mini-workshops and/or activity: *Just for Faculty: On-line Resources Linking Methods and Examples* (Manduca); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in White Library 2nd floor lab to explore aspects of DLESE relevant to your strand

Strand 2: Recommended Mini-Workshops or activity: *Using DLESE Effectively for Earth Science Education* (Huskin); *Providing a High Quality DLESE Experience for All* (Hall)*; Using DLESE: Finding*

Resources to Enhance Teaching (Devaul); *Reviewing Digital Resources for Educational Use* (Kastens). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 3: Recommended Mini-Workshops or Activity: *Providing a High Quality DLESE Experience for All* (Hall); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul); *Reviewing Digital Resources for Educational Use* (Kastens). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 4: Recommended Mini-Workshops or Activity: *Using DLESE Effectively for Earth Science Education* (Huskin); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 5: Recommended Mini-Workshops or Activity: *Just for Faculty: On-line Resources Linking Methods and Examples* (Manduca); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 6: Recommended Mini-Workshops or Activity: *Just for Faculty: On-line Resources Linking Methods and Examples* (Manduca); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 7: Recommended Mini-Workshops: *Using DLESE Effectively for Earth Science Education* (Huskin); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 8: Recommended Mini-Workshops: *Providing a High Quality DLESE Experience for All* (Hall); *Using DLESE Effectively for Earth Science Education* (Huskin). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 9: Recommended Mini-Workshops or Activity: *Providing a High Quality DLESE Experience for All* (Hall); *Using DLESE Effectively for Earth Science Education* (Huskin); *Reviewing Digital Resources for Educational Use* (Kastens). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 10: Recommended Mini-Workshops: *Providing a High Quality DLESE Experience for All* (Hall); *Just for Faculty: On-line Resources Linking Methods and Examples* (Manduca); *Reviewing Digital Resources for Educational Use* (Kastens). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

Strand 11: Recommended Mini-Workshops: *Providing a High Quality DLESE Experience for All* (Hall); *Using DLESE: Finding Resources to Enhance Teaching* (Devaul). Or work with a peer in Witte lab to explore aspects of DLESE relevant to your strand.

<u>Monday 10:30 am – 12:00 – Strand Working Session 2: Develop Strand and Personal Goals</u>

Review prior day activity. Use minute paper technique: What aspects of DLESE did you learn about in the previous sessions that support this strand? Strand members briefly respond to this question in writing. Discuss and ***record.***

Clearly define your goal. What activity, funding proposal or strategy related to your strand would enhance DLESE as a Teaching and Learning Tool?

Review suggested deliverables:
Are they appropriate and interesting to the group or is something missing that is more important (***record responses***)?

Assign issues, topics or goals that strand sub-groups will address. ***Record.***
Develop and brief individual post-meeting engagement goals appropriate to strand topic. ***Record individual goals.***

Monday 1:30 pm – 5:30 pm – Strand Working Sessions 3-4: Develop Deliverables and Action Plans

These sessions are designed to provide time to refine and develop recommendations that can improve DLESE as a teaching and learning tool. Those deliverables could take the form or explicit recommendations or results from searches, reviews or analyses of DLESE resources. Optimally, the strand will develop an action plan that could eventually lead to a funding proposal from the strand to improve some aspect of teaching and learning with DLESE digital resources. Examples of prompts that are available in the Swiki are listed below. These questions are only a guide to spur thorough discussion of the topic. The Swiki is designed to allow your strand maximum flexibility in entering the information you feel is most pertinent to enhancing DLESE: A Teaching and Learning Tool.

Determine the scope and limitations of your action:

- How will the community benefit from your action? ***Record.***
- What are the costs associated with carrying out the project? ***Record.***
- What are the main obstacles that will be encountered? Can they be overcome? If so, how? ***Record.***

Review the support required to carry out the project:

- Who are the key people or key organizations (e.g. schools, school boards, municipal council, chamber of commerce, volunteer organizations, etcetera) that can support your project? ***Record.***
- What type of support can they provide? ***Record.***
- How will you involve them in your project? ***Record.***

Put your action plan in writing:

- Define the major steps in the action plan/ ***Record.***
- Assign the various tasks among the group members*). **Record.***
- Establish a schedule with a deadline. ***Record.***

How will you know that you met the goals? ***Record.***
How will you determine if the results of your action plan were as expected? ***Record.***
How can you determine the strengths and weaknesses of your action plan? ***Record.***
How will know that the community benefited from your actions? ***Record.***

Complete PPT report out (Session 9).

Strand Participants

Strand assignments were made on the basis of preferences expressed in the registration process. If no such preferences were indicated, strand assignments were made by the Planning Committee. A number of individuals will 'float' between strands, so certain people may move from strand to strand during the meeting.

Defining and Developing a Quality and Comprehensive Collection

Strand 1 – Lead: Randy Sachter
How can an educator/school/district use DLESE to create or supplement curricula?

	Name	Affiliation	Email
1	Batzli, Samual	University of Wisconsin-Madison	
2	Behrens, Judy	Texas State University-San Marcos	
3	Bellinger, Keith	Longstreth Elementary School	
4	Braney, Mary	Knox Trail Regional Junior High	
5	Dabel, Peg	Adams Middle School	
6	Dahlman, LuAnn	TERC; DLESE Data Services	
7	Davis, Melinda	Fort Valley State University	
8	DeLuna, Joann	South San Antonio School District, Shepard Middle School	
9	Detwiler, David	Lakewood High School	
10	Detwiler, Paul	City College of San Diego	
11	Ernst, Lisa	Alice Fong Yu Middle School	
12	Griess, Chuck	University of South Florida	
13	Hill, Heather	University of South Florida	
14	McCollum, Timothy	Charleston Middle School	
15	Ostwald, Jonathan	DLESE Program Center	
16	Pratt-Sitaula, Beth	University of California-Santa Barbara	
17	Spence, Tyler	James Madison Memorial High School	
18	Walton-Faria, Barbara	Thompson Middle School	

Strand 2: Lead – Michelle Hall
How do we assess quality for visualizations, models, data and other data-related resources?

	Name	Affiliation	Email
1	Aiken, Carlos	University of Texas-Dallas	
2	Bigham, Paul	Azalea Elementary School	
3	Birnbaum, Stuart	University of Texas-San Antonio	
4	Bowen, Anne Dara	San Diego Supercomputer Center	
5	Brown, Wynne	Center for Image Processing in Education	
6	Davison, Justin	Burlington County Institute of Technology	
7	de la Chica, Sebastian	University of Colorado-Boulder	
8	Gant, Karen	Carol City Elementary School	
9	Ginger, Katy	DLESE Program Center	
10	McAuliffe, Carla	TERC	
11	McCaffrey, Mark	Cooperative Institute for Research in Environmental Sciences (CIRES) – Univ. of Colorado; National Oceanic and Atmospheric Administration (NOAA)	
12	Russell, Gail	University of Southern Mississippi	
13	Santini, Cindy	San Diego Supercomputer Center	
14	Tower, Margaret	Chicago Public School Foreman High	

Strand 3 – Co-leads: Annette de Charon, Don Elthon
How can we strengthen and expand the formal review process? How do we increase participation of the community?

	Name	Affiliation	Email
1	Bellon, Bill	Space Science & Engineering Center, University of Wisconsin	
2	Condit, Christopher	University of Massachusetts-Amhe	
3	Holzman, Neil	Lamont-Doherty Earth Observatory Columbia University	
4	Hubenthal, Michael	IRIS Consortium	
5	Kastens, Kim	Lamont-Doherty Earth Observatory Columbia University DLESE Collection Services	
6	Larsen, Suzanne	University of Colorado-Boulder	
7	Lynds, Susan	Cooperative Institute for Research in Environmental Sciences	
8	Olds, Shelley	DLESE Program Center	
9	Sammons, James	Sammons' INK, Ltd.	
10	Tahirkheli, Sharon	American Geological Institute DLESE Collection Services	
11	Webb, Thompson	Brown University	
12	Wuebbles, Donald	University of Illinois	

Strand 4 – Lead – Diane Schweizer
How can the community better leverage and facilitate collaborations? How do we link data providers, tools creators and curriculum developers through the library?

1	Arko, Robert	Columbia University	
2	Barker, Lecia	University of Colorado DLESE Evaluation Services	
3	Chandler, Mark	Columbia University	
4	Chernosky, Margaret	Bangor High School	
	~~Dorofy, Darryl~~ CANCELLED	~~Burlington County Institute of Technology~~ C	
5	Eriksson, Susan	UNAVCO, Inc.	
6	Estey, Louis	UNAVCO, Inc.	
7	Freuder, Rita	University of New Hampshire	
8	Geary, Edward	University Corporation for Atmospheric Research DLESE Community Services	
9	Gu, Qianyi	University of Colorado at Boulder	
10	Habermann, Ted	National Oceanic and Atmospheric Administration (NOAA) National Data Centers	
11	Johnson, Ann	ESRI (Environmental Systems Research Institute)	
12	Krohn, Dennis	US Geological Survey	
13	Mahootian, Farzad	University of Alaska	
14	Marquis, John	Southern California Earthquake Center	
15	Phillips, Jean	University of Wisconsin-Madison	
16	Powell, Jozan	BankStreet University	
17	Wolf, Alan	University of Wisconsin-Madison	

Reaching New Users through Outreach Materials, Library Resources and Services

Strand 5 – Lead: Russanne Low
How can we better train and engage pre-service teachers to use DLESE?

	Name	Affiliation	Email
1	Dimmick, Howard	Science Education Consultants	
2	Garcia, Linda	Southern Hills Middle School	
3	Hylton, Alisa	Central Piedmont Community College	
4	Lodge, Angela	College of Marine Science University of South Florida	
5	McGee, Florence	Dunedin Elementary	
6	Rivet, Ann	Teachers College Columbia University	
7	Rogers, Elizabeth	College of Charleston	
8	Stewart, Raymond	Public School	
9	Weingroff, Marianne	DLESE Program Center	

Strand 6 – Lead: Albert Lewandowski
How can we better train and engage in-service teachers?

	Name	Affiliation	Email
1	Aivazian, Bryan	Natrona County School District; DLESE Community Services	
2	Barstow, Daniel	TERC	
3	Haddad, Nick	TERC	
4	Henderson, Sandra	University Corporation for Atmospheric Research, Education and Outreach	
5	Hessler, Edward	Minnesota Science Teachers Assn.	
6	Kruger-Knuepfer, Joyce	Seton Catholic Central High School	
7	Labossiere, Kelly	RJ Coelho Middle School	
8	Lehto, Lanny	American Geological Institute	
9	Lyon, Ellen	Forest Grove Public Schools	
10	Moore, John	Burlington County Institute of Technology	
11	Palmer, Roger	Bishop Dunne High School	
12	Palmer, Anita	GIS etc.	
13	Smith, David	DLESE Program Center	
14	Tuthill, George	Montana State University	

Strand 7 – Lead: Richard Clark
How can we encourage scientific researchers to contribute to DLESE?

	Name	Affiliation	Email
1	Bryce, Lois	College of Marine Science University of South Florida	
2	Caron, Bruce	New Media Studio	
3	Davis, Edith	Baylor University	
4	Devaul, Holly	DLESE Program Center	
5	Dalbotten, Diana	National Center for Earth-surface Dynamics; University of Minnesota	
6	Haller, Douglas	Consultant	
7	Klaus, Christopher	Argonne National Laboratory Advanced Photon Source	
8	Kyro, Laura	Washington University-St. Louis	
9	Lorenzoni, Laura	University of South Florida	
10	Malmquist, David	Virginia Institute of Marine Science	
11	Matsumoto, George	Monterey Bay Aquarium Research Institute (MBARI)	
12	Scotchmoor, Judy	Museum of Paleontology University of California	
13	Simoniello, Chris	University of South Florida	
14	Teed, Rebecca	Carleton College	
15	Wilson III, James	Madison East High School	

Strand 8 – Lead – Jill Singer
How should DLESE include contributions from education researchers and the broader education community? What is the place for education research within DLESE?

	Name	Affiliation	Email
1	Butcher, Kirsten	DLESE Program Center	
2	Fox, Sean	Carleton College	
3	Gautier, Catherine	University of California-Santa Barbara	
4	Lee, Soo-Young	TERC	
5	Reeves, Thomas	University of Georgia DLESE Evaluation Services	
6	Ridky, Robert	US Geological Survey	
7	Roscoe Iverson, Ellen	Carleton College	
8	Schwerin, Theresa	Institute for Global Environmental Strategies	

Making Effective Use Of Library Resources And Services

Strand 9 – Lead: Frank Ireton
How can we better assess the effective use of DLESE resources used by teachers and learners in the K12 education community?

	Name	Affiliation	Email
1	Bhuta, Kapila	Los Angeles Unified School District	
2	Chen, Shu-Hsien	Queens College-CUNY	
3	Davis, Lynne	DLESE Program Center	
4	Ercegovac, Zorana	Windward School University of California-Los Angel	
5	Fagan-Brown, Lisa	J. B. Sanderlin Elementary Schoolg	
6	Harger, Elaine	W. Haywood Burns School	
7	Huskin, William	Central Bucks School District	
8	Keierleber, Angela	Colton Joint Unified School District	
9	Ledley, Tamara	TERC DLESE Data Services	
10	Ledley, Miriam	Needham High School	
11	Lomax, Edward	Georgia State University	
12	McClung, Donald	Osseo Area Schools	
13	Okereke, Emmanuel	Graduate student/teacher intern	
14	Olivier, Cheryl	Attleboro Public Schools	
15	Parliment, Sharon	parls@seb.k12.ma.us	
16	Sohl, Linda	Lamont Doherty Earth Observatory, Columbia University	
17	Willard, Ted	American Association for the Advancement of Science (AAAS)g	
18	Zhu, Xuening	Rutgers University Libraries	

Strand 10 – Lead: Cathryn Manduca
How can we better assess the effective use of DLESE resources used by teachers and learners in the undergraduate community?

1	Charlevoix, Donna	University of Illinois	
2	Egger, Anne	Stanford University	
3	Francek, Mark	Central Michigan University	
4	Fulker, David	University Corporation for Atmospheric Research; NSDL	
5	Lowes, Leslie	Jet Propulsion Laboratory	
6	Lukes, Laura	Virginia Tech/Ohio State Universit	
7	McDaris, John	Carleton College	
8	Murray, Daniel	University of Rhode Island	
9	Olsen, Timothy	ERSC at University of Wisconsin-Madison	
10	O'Neill, Lauren	University of SC/Fast Forward	
11	Rotenberg, Sandra	Solano Community College	
12	Van Esselstyn, David	Long Island University	
13	Walker, C. Scott	Northern Arizona University	
14	Weatherley, John	DLESE Program Center	

Enhancing the Diversity of DLESE

Strand 11 – Co-leads: Dawn Adams, Frank Hall, Sharon Locke
How can educators and developers use DLESE to best meet the needs of diverse learners? How does the DLESE collection and system currently reflect the needs of diverse users and educators and what strategic partnerships should be developed to enhance the diversity of DLESE?

	Name	Affiliation	Email
1	Belasco, Jo	Tapestry	
2	Bhushan, Sonal	DLESE Program Center	
3	Bogard, Antoine	NYC Public School 197M	
4	Borman, Gregory	NYC Department of Education	
5	Chee Wah, Brenda	Clark Atlanta University	
6	Drobnes, Emilie	GSI	
7	Fried, Barry	John Dewey High School	
8	Graves, Sheila	Montgomery Public Schools	
9	Ibarra, Myriam	Nottingham High School	
10	Ithier-Guzman, Warner	University of South Florida	
11	Khan, Huda	University of Colorado-Boulder	
12	McDougal, Andrea	Lakewood High School	
13	Pandya, Rajul	University Corporation for Atmospheric Research	
14	Rogan, Brian	Gann Academy	
15	Sampy, Andreya	Middle school resource co-teacher	
15	Selvig, Linda	DLESE Ambassador Centennial High School	
16	Tyner, Elizabeth	University of South Florida	
17	Wright, Natalie	Montgomery Public Schools	

Strand Floaters

	Name	Affiliation	Email
1	Ackerman, Steve	University of Wisconsin-Madison	
2	Buhr, Susan	Cooperative Institute for Research in Environmental Sciences University of Colorado DLESE Evaluation Services	
3	Coble, Paula	NASA Earth Science Enterprise	
4	DiLeonardo, Chris	Foothill College	
5	Ettinger, Stephen	DLESE Program Center	
6	Fellows, Jack	University Corporation for Atmospheric Research; DLESE Executive Director	
7	Greely, Teresa	Marine Science College University of South Florida	
8	Huntoon, Jackie	National Science Foundation	
9	Kane, Hildy	DLESE Program Center	
10	Kelly, Karon	DLESE Program Center	
11	Krohn, Dennis	US Geological Survey	
12	Marlino, Mary	DLESE Program Center	
13	Mayhew, Mike	National Science Foundation	
14	May-Brett, Jean	Lousiana Dept. of Education	
15	McEniry, Mary	University of Wisconsin	
16	McIlvain, Eileen	DLESE Program Center	
17	Piper, Will	DLESE Program Center	
18	Pyrtle, Ashanti	University of South Florida	
19	Seber, Dogan	University of California-San Diego	
20	Shah, Mital	US Geological Survey	
21	Steer, David	The University of Akron	
22	Steinkamp, Pat	DLESE Program Center	
23	Stockman, Stephanie	Science Systems and Applications, Inc	
24	Stremel, Michael	DLESE Program Center	
25	Vasys, Maria	University of Wisconsin-Madison	
26	Williamson, Vivian	University of St. Thomas	

Strand Online Report-Out Form and Instructions (Swiki)

Online report-out forms are available at **http://swiki.dlese.org/ReportOut2004/** for strands to record goals, ideas, strategies, resources, and plans. These strand sites will remain available after the meeting as a permanent record of the work done at the 2004 DLESE Annual Meeting.

These online report-out forms are on a web server called a ***Swiki*** (a combination of two software programs named respectively, Squeak and Wiki (*wiki-wiki* = Hawaiian for *quick*). A Wiki is a server program that allows users to collaborate on forming easily editable web pages.

A Wiki or Swiki is not like a conventional web site; there is no "webmaster" and any participant can add, delete, or edit the content of the site. There is no inherent structure, so it can grow in whatever directions best suit its users. Using the Swiki is easy, but if you're new to the technology you may want to familiarize yourself with how it works.

Each Strand Online Report-Out Form includes the title of the strand, the strand's enabling question, the strand leader (name and email), the strand online editor (add name and email), and strand participants (names). The strand Swikis are set up to record the work of each strand corresponding to the sessions in the meeting program:

- Session 1: Plenary opening session. No strand work to record unless members wish to record thoughts generated by this session on their Swiki.
- Session 2: Introductions and Problem Statement. This area is provided on each strand's Swiki to record discussions that promote understanding of the strand's enabling question and to review prior work on the topic area.
- Session 3: Mini-workshops. Participants may attend one of the five mini-workshops (see description on page 19) or, alternatively, use this time to network with others or explore using DLESE in one of the available computer labs. This area on each strand's Swiki provides some suggestions for each specific strand.
- Session 6: Strand working time. This area is provided on each Swiki to Develop Strand and Personal Goals. Strands may record their group goals as well as individualized personal goals.
- Sessions 7 and 8: Strand working time. This area is provided on each Swiki to develop deliverables and action plans for each strand.

Each strand Swiki also contains suggestions for suggested deliverables for each strand (See Strand Overview for a summary of this information).

Working with the Swiki

Creating New Pages

Creating a new page is a simple process.

1. Go to the page from which you want the new page to link (the page where you want a link to appear).
2. Click the *Edit* link under *Swiki Features* in the left hand sidebar or click the *Edit* icon at the bottom of the page.
3. Add the name of the page you wish to create at the appropriate place or point in the current page's text. Be sure to surround the new page name with * (star) characters, for example *Our Strand's First Substrand*.
4. Click on the *Save* button below the text editing area. You will arrive back at the page where you created the link to your new page.

5. Click on the *Create* button next to the new page name.
6. Add your content to the new page.
7. Click *Save*. Your new page is now linked to the page on which you created the link.

Adding and Editing Information

There are two ways to add information to a page.

1. Click the *Edit* link or icon on the page you wish to modify. You can then add or edit the page in the box provided. Click *Save* when you're done.
2. Some pages may have an append box into which you can directly enter text. Click the *Add to the Page* button below the box when you are done. This method only allows you to add information, not to change any which already exists.

You can either enter your text directly or you can create it in a text editor or word processor and then paste it in. If you're comfortable with writing HTML you can use tags to format text and the Swiki will interpret them. The Swiki also has its own formatting tags which you can use. See the editing tips for an overview or click on the *Help* link or button for complete details.

Because a large number of people may be adding information to a page, it's a good idea to precede your additions or changes with your initials enclosed in parentheses, to make following the thread of the discussion easier.

Don't worry about making a mistake or deleting content. The Swiki has a *History* feature to deal with this (see below).

If you want to create your own append box you can do so by putting a + (plus) character by itself on a line in the page source. For more options when dealing with append boxes click on either the *Help* link or icon.

The History Feature

Every addition and edit to a Swiki page is kept in a history file. This makes it easy to roll back to any previous version of a page or to retrieve content that has been inadvertently deleted. To use this feature do the following:

1. Click the *History* link or icon.
2. From the list, choose the version you wish to return to. Most often, this will be the version immediately below the current version. Ignore the +/- button unless you want to compare two versions of the page for differences.
3. Select and copy all of the text in the *Edit Text* box.
4. Click the *Edit* icon.
5. Replace the current page content by pasting in the recovered content.
6. Click the *Save* button.

Uploading Files

You can upload images or documents to the Swiki. Since these files can often be large, please keep uploads to 10MB or less per strand, if possible.

1. Click on either the *Uploads* link or icon to access the uploads page.
2. Files that are specific to a strand should be uploaded to a page in the strand, usually the one from which they will be accessible. To do this select the *Upload to the page* button if it isn't already selected.
3. If you wish to have a link to the uploaded file created automatically, select *Add a reference to the upload at the end of the page*. Note that the link will appear at the end of the page, but you can cut and paste it to anywhere that you wish.

4. Click on the *Browse* button to navigate to the location of the file you wish to upload on your computer.
5. Click on the *upload to the page* or the *upload to the Swiki* button to complete the upload. You should now see your file listed with other uploaded files.

Locking the Swiki

There are times when you may want to keep other users from adding to or modifying a page, although this should not happen during the strand Sessions. However, in case your group does decide that you do need to protect the content of any of the strand's pages, this can be accomplished by clicking on the "Lock" link or icon. You will need to supply a password for the page. It's important that you *remember* that password or you won't be able to unlock it to change it! You may wish to make someone in the group responsible for recording this lock password elsewhere than in the Swiki.

Basic Text Editing for the Swiki

The underlying environment that provides the editable workspaces and the navigation between the reports is called a Swiki (an implementation of a Wiki written in Squeak/Smalltalk). This environment is quite flexible by nature, and to exploit its flexibility requires an understanding of some basic Swiki rules. Don't worry initially about all of the features it provides. Learning what you need to know to start adding and editing takes only a few minutes and in most cases, is all you'll need.

If you're familiar with HTML you'll find that all of the formatting tags you know and use will be interpreted correctly by the Swiki. If you don't know HTML, that's fine too, as the Swiki has its own formatting to do many of the same things.

What follows is a quick introduction to formatting content using the Swiki tags. You can see a more complete reference by clicking on the *Help* link or icon. Formatting can be done either at the time the text is entered (or pasted if you're using a text editor or word processor), or it can be added when you edit a page.

- Linking to pages or files
    - Links to pages and files are always put between * (star) characters.
    - You create a new page by adding a link to it on an existing page.
    - To create a link to a page that exists on this site, type *Existing Page's Name*. The page name is what you see in the title bar when viewing a page and in the *Title* box, when editing.
    - To create a link to an existing page on an external site, type: *http://externalpage.url*.
    - If the link is to an image (URL ends in '.gif', '.jpeg', '.jpg', or '.png'), the image will be placed on the page at the location of the link. You can move the image by moving the link.
    - You can link to a file that exists in this site's *Uploads* area. To view a list of available files, click the *Uploads* link or icon. To create the link, go to the page where you want to make the link and click the *Edit* link or icon. Type the filename between *+ and +*. For example, *+myUpload.pdf+* will create a link to the uploaded file *myUpload.pdf*. In this case you will need to use both the + (plus) and * (star) characters.
    - To create a link to send email, type *name@domain.ext*.
- Horizontal rules (divider)
    - You can create a horizontal rule by making a new line that contains only an _ (underscore) character. This is often useful for separating topics on a page.
- Paragraph breaks
    - You can make breaks between paragraphs by pressing the enter key twice. The blank line this creates in the edit window will be translated into a paragraph break in the view window.

- Lists
  - Numbered lists can be created by starting each entry in the list with a # (pound or hash) character.
  - Bulleted lists can be created by starting each entry in the list with a - (hyphen or dash) character.
  - Lists can be nested by combining # and - characters at the beginning of a line.
- HTML tags
  - To make text bold, surround it by and .
  - To make text italicized, surround it by and .
  - To make text underlined, surround it by <u> and </u>.
  - To add a break between paragraphs use <p>.
  - To make the next line of text start on a new line without a paragraph break use <br>.
  - To add a block of existing HTML code, simply copy and paste it in and enclose it within <html> and </html> tags and the Swiki formatting rules will not apply.
- Special characters
  - There are three characters (&, <, >) that have special meaning in HTML and the Swiki adds two characters (*, @) to that list. In order to use these characters in regular text, you will have to type the following substitutes. Don't forget the final semi-colon.
    - To get & type &
    - To get < type <
    - To get > type >
    - To get * type ☆
    - To get @ type &at;

AMENDED SHARE FAIR DESCRIPTIONS
This section replaces pages 41- 49 in the DLESE 2004 Annual Meeting notebook

Share Fair
Sunday, July 11, 2004

Location:
Set-up Time: 12:00 – 1:30 pm and 3:30 – 4:30 pm - Fluno Center
Share Fair Time: 6:00 pm – 9:00 PM

The Share Fair provides an opportunity for participants to share resources, collections or services they have created with the DLESE community. Meeting participants will be able to informally talk with the various developers, try out various resources and make new friends. Some of these resources may assist in the work of your strand, as well.

As is true of the meeting as a whole, the Share Fair is a wonderful opportunity to form collaborations among educators, materials and services developers, researchers and collections builders.

Presenters may set up their areas on Sunday during the lunch hour from 12:00 pm – 1:30 pm, and from 3:30 pm – 4:30 pm, in the Fluno Center, 2nd floor. Spaces are available on a first come-first served basis, with the exception of those who made requests for co-location or other special requirements.

Share Fair Abstracts
(alphabetically by primary presenter's last name)

Teaching with Applets
STEVE ACKERMAN, TOM WHITAKER

We have been developing web-based interactive exercises to teach Earth sciences, with an emphasis on weather and climate, for over 7 years. These education applets have been designed to address particular learning needs identified in classroom teaching at the introductory level. We will share with participants the most recent developed applets, discuss upcoming modules, and evaluation procedures.

Tapestry
DAWN ADAMS, JO BELASCO

Early stages of work on developing a prototype for a digital library of Indigenous science resources highlights key issues related to diversifying DLESE collections. These include resource identification and assessment, definitions of "standards of scientific accuracy," and organization (browsers, metadata, and search engine terms).

3D Virtual Photorealistic Models of Outcrops to Teach Undergraduates
CARLOS AIKEN, XU XUEMING

We have been building 3D photorealistic models of outcrops for research for the last 5 years. In the last two years we have been integrating our models into use during field trips in order to better see and understand 3D geologic concepts. We now use them before the field trip, on the trip, and after the trip during which the student's conventional field mapping data are integrated and compared to the 3D digital virtual model. The digital data of these same features are then extracted and compared and discussed. We use the GeoWall at UTD to great success for this and on other schools' 3D immersive visualization systems (CAVES) also. We will show several examples of this on the computer. Problems of acquiring

(with fast laser scanners, GPS and digital cameras), visualizing and analyzing such large sophisticated data sets will be shown.

WisconsinView.org - New Member of the AmericaView Consortium
SAM BATZLI, TIM OLSEN
http://www.wisconsinview.org

WisconsinView provides access to remote sensing data and products to the public through its web site (http://wwwwisconsinvieworg). The goal is to forge new partnerships and enhance the coordination of remote sensing data access and use across the state of Wisconsin. *WisconsinView* became a full member of the AmericaView Inc. consortium in April 2004, It is led by the University of Wisconsin - Madison Environmental Remote Sensing Center (ERSC) in partnership with the State Cartographer's Office. As it matures, *WisconsinView* will be much more than an archive of digital imagery. It will involve a cooperative, broadly based consortium of data users and suppliers, a major statewide remote sensing education and outreach program, and will continue research into new applications of satellite data in academia, government and business.

Introducing Geoscience Data in an Informal Science Setting
ANNA DARA BOWEN

Over the past few months, Middle and High school groups that have come to the San Diego Supercomputer Center (SDSC) for a tour of the facility have participated in an educational program that highlights geoscience data and research. The challenge for the SDSC education group in planning the curriculum for this program was in introducing geoscience data in a manner that the students and teachers will find engaging and compelling (assuming that the students might have little or no Earth science background), while still providing a framework that would extend into a standards-based Earth science curriculum. The entire lesson had to be presented in a 1-1.5 hour time frame. This poster will present an overview of the educational program that was given to the school groups, the challenges the education group encountered in introducing geoscience data to students and teachers in this setting, as well as plans to make this effort into an on-line tutorial so that teachers across the nation can access it.

EDGCM - Global Climate Modeling Research for the Classroom
MARK CHANDLER

It is likely that climate change will impact many aspects of the global environment and world economy. Thus, it is important for everyone to have a basic knowledge of the Earth's climate system so that informed judgments may be shaped with regard to critical issues. Additionally, teachers need to be provided with the resources required to engage students in the scientific and technological processes used by scientists to forecast climate changes. In so doing, students will become knowledgeable in a topic that will surely affect their lives and we can better prepare the next generation of scientists who will be asked to grapple with a myriad of complex climate issues.

Computer-driven global climate models (GCMs) are the primary tools used in climate research. Unfortunately, few educators have access to GCMs, which require supercomputers to run and the lack of familiarity with the tools and methodologies for studying climate often engender public distrust of important scientific findings. Also, graduate geoscience programs must include the teaching of fundamental techniques at a stage when students could be participating in research. Our goal is to improve the quality of teaching and learning of climate-change science through broader access to GCMs and to provide appropriate technology and materials to help teachers use these models effectively.

A GCM, developed at NASA, is currently in use by scientists to study climates of the past, present and future. To fulfill our goal, the authors have created EdGCM, a desktop version of the GCM. To operate the GCM in the classroom we have developed a user-friendly interface that simplifies management of

simulations. Experiments are automatically archived in a searchable database and easy-to-use utilities for analyzing results (plotting, mapping, etc) are included. Finally, the software allows teachers to produce instructional materials (text, charts, images) and export research reports to the web.

EdGCM permits teachers and students to explore the fundamentals of climate science utilizing tools identical to those used in major climate research programs. Many simple climate experiments are possible (How does the sun warm the planet?). It is also possible to conduct in-depth investigations of current events in near real-time, as they are being studied by climate scientists. EdGCM comes with some pre-prepared scenarios for investigating a variety of interesting climate issues (global warming, ice ages), but teachers can easily construct their own to satisfy curricular requirements.

Providing a Framework for Displaying Local Geology through Publication in Dynamic Digital Maps
CHRISTOPHER CONDIT

Geologic maps can provide an essential framework for teaching and interpreting the local geology and present a framework in which to embed field trips for classes or professional meetings. Dynamic Digital Maps (DDMs) contribute one way to produce and use these maps in an easily accessible digital format that compliments such uses. High quality color maps in a digital format, digital images, movies, analytical data and explanatory text, including field guides, can be integrated in a cross-platform web enabled format that is intuitive to use, easily and quickly searchable, and requires no additional proprietary software to operate. Maps and photos (saved as jpeg files) and movies are stored outside the program, which acts as an organizational framework and index to present these data. Field trip guides and image captions can be stored at three different levels of sophistication, and viewed by the user at the level of their choice, thus a single DDM may reach a wide audience. A DDM-Template into which one can insert their data, and an accompanying "Cookbook" on how to do this are available at http://ddm.geo.umass.edu, along with several DDMs that demonstrate this potential. Making a DDM from the Template requires the use of the English-language programming environment *Revolution* (www.runrev.com) which has a low learning curve. Once your data have been added to the DDM-Template, and stored in related specified directories, a single short step allows you create stand-alone programs for numerous Unix, and all Windows and Macintosh operating systems. The correct program for a given user's operating system can be downloaded from http protocol sites. The DDM program can then access its associated data directly from that site with no browser needed, or the entire package can be distributed and used from CD or DVD.

DLESE Teaching Boxes for the Classroom
LYNNE DAVIS, HOLLY DEVAUL, LISA ERNST

A group of San Francisco Bay area science teachers is collaborating with DLESE, the U.S. Geological Survey, the Berkeley Seismological Laboratory, San Francisco State University, and the University of California Museum of Paleontology (UCMP) to create a collection of exemplary, contextualized resources for teaching Earth system science topics at the middle and high school levels.

Funded by the National Science Foundation, the project combines the creativity, energy, and experience of the Bay area teachers with the subject matter expertise, inquiry-based educational design, and technological know-how of the other project partners to produce virtual teaching boxes. These teaching boxes will aggregate a wide variety of supporting information about specific Earth system science topics: student activities, teaching tips, assessment information, reviews, place-based resource discovery, standards and benchmarks information, etc. The teachers plan to report on the project at the California Science Education Conference in San Jose in the fall. The program is intended as a model for DLESE outreach activities with teachers in other states and regions. We will share a poster of what a virtual teaching box looks like, talk to meeting attendees about how it might work for them, and find others who might be interested in taking this project to the next level.

Event-Based Learning Environments
SEBASTIAN DE LA CHICA

Teachers have traditionally introduced current and historical events in the classroom to leverage news topics relevant to the curriculum. This University of Colorado research project investigates areas relevant to online event-based learning environments from educational and technological perspectives. Our initial efforts have focused on the information modeling of events and related educational resources and on task-centered user-interface design activities. Our initial demonstrator explores two presentation themes based on conceptual and chronological relationships. We are in the process of evaluating the effectiveness of our initial presentation components and using such feedback to guide the next phase of our research efforts.

Exploring Multi-Faceted Search in DLESE Specialized Collections
SEAN FOX

The Science Education Resource Center builds specialized collections of DLESE resources to underpin web sites aimed at motivating change in faculty classroom practice. We have developed a multi-faceted search tool which allows exploration of these collections along multiple conceptual axes (e.g., Earth system topic, level of inquiry, ease of use, resource type). The tool integrates text search with browsing and supports specialized vocabularies tuned to specific collections as well as facilitating search and browse across multiple collections. We will demonstrate several implementations of this tool and solicit community input on the development and refinement of both the vocabularies and the tool itself.

ESIP Federation Data and Educational Products
RITA FREUDER
http://www.esipfed.org/education_center

Members of the Federation of Earth Science Information Partners (ESIP Federation) collaborate on the development of educational products and encourage the use of Earth system data in classrooms and informal educational settings. Many of these products are described online in the ESIP Federation Education Center (http://www.esipfed.org/education_center/), where educators and students can search for educational products by grade level, classroom subject, or theme. Federation members will describe educational activities of the ESIP Federation and demonstrate educational Earth System products.

Quantitative Learning Tool Integrated into Classroom Pedagogy
CATHERINE GAUTIER

It has been shown that technology is most effectively integrated into instruction when it is used as a tool to increase learning opportunities and when technology applications are consistent with the instructors' own teaching practice and pedagogy (e.g., Zhao et al., 2002). This poster presents results from an experiment run in an Earth system science classroom, in which undergraduate students have used model-centered inquiry to quantitatively learn core concepts in Climate Change.

The tool, SBDART-EDU, available to download from the Internet, is based on an up-to-date, accurate radiative transfer model used by the research community (SBDART, Ricchiazzi et al., 1998), around which an easy to use graphical user interface has been developed. This tool has been fully integrated into a constructivist pedagogy, whereby students develop their own knowledge about the core climate change concept of radiative forcing (a change in the net radiative energy available to the global Earth-atmosphere system that gives rise to climate change), by developing a series of weekly experiments with the model that address topics such as the effects of clouds, greenhouse, aerosols, ozone and land-use changes on

climate. The scientific inquiry process, built upon a high quality instructional tool, is the central vehicle for students to acquire understanding. This inquiry process is integrated into an encompassing and supportive pedagogy in which feedback by instructors is continuous. This integrated approach provides an effective pathway to achieving complex subject matter understanding by helping students to seek and structure their own knowledge. The tool SBDART-EDU, the course pedagogical structure, and the various learning activities developed and tested in a class-room setting will be presented, and a preliminary description of the learning achieved will be provided.

DLESE Community Services Center
EDWARD GEARY, BRYAN AIVAZIAN
http://www.csmate.colostate.edu/dwel/

There are millions of digital science and education resources on the Internet. A few of these resources are excellent, many more are at best average, and some are simply terrible. For educators, students, and parents with little time and diverse needs, finding the high quality resources they need when they need them is often a difficult and daunting task. As national digital education library efforts evolve, there is an urgent need to build collections of digital resources that complement existing collection efforts, add value to existing text, laboratory and kit-based materials, and specifically address the needs of K-12 and informal education users.

The Digital Water Education Library (DWEL) is the first major thematic collection building effort to bring high quality, K-12 and informal education resources into the Digital Library for Earth System Education (DLESE). Efforts are currently underway to provide teachers, students and informal educators with easy, searchable access to over 500 exemplary digital resources related to the science, policy, and economics of water by the end of 2004. The DLESE discovery system allows users to search the library catalogue by content area, grade level, resource type, and the National Science Education Standards (NSES) to obtain the resources they desire. A series of concept webs allow users to examine the connections and relationships between water concepts and issues. In addition to high quality curricula, lesson plans, experiments, models, simulations, and activities, the DWEL collection will link to exemplary online professional development programs, assessment item pools, and useful data and image sets.

Collection Builders Toolkit
KATY GINGER, SHELLEY OLDS, JOHN WEATHERLEY

This poster session will provide information on the processes and policies that guide collection development and accessioning in DLESE. Demonstrations of tool support for cataloging and sharing collections will be available, including the Open Archives Initiative (OAI) (supporting digital interoperability) and a look at the developing new cataloging system. Information on metadata frameworks and mechanisms for generating records from databases will be covered, as will quality assurance and accessioning processes. Packets containing all relevant documents and information necessary for contributing a collection to DLESE will be available as take home materials.

The session will also include demonstrations of web services available at DLESE, including the RSS (Really Simple Syndication (aka Rich/RDF Site) news feeds that are offered, and provide an example of using the web services to construct a custom discovery search interface in a web page. These web services and protocols allow web site and application designers to access DLESE resources over the Internet and provide their user audience with a customized, contextualized view of the resources. For example, the *IdeaKeeper* project at the University of Michigan is using DLESE web services to search for and display DLESE resources in a Windows and Mac based desktop application used in the classroom, and the Florida Center for Ocean Sciences Education Excellence (FCOSEE) has incorporated an ocean sciences DLESE search and discovery interface into their web portal (http://floridacosee.net/).

Center to Improve Diversity in Earth Systems Science (CIDESS)
Frank Hall, Vivian Williamson

A recent study by the American Institute for Physics shows that the Geosciences have the worst record of inclusion of any other professional field of study. The global nature of Earth systems science, the aging of STEM professionals, and the changing demographics of the United States suggest that if we are not proactive in improving diversity, Earth systems science professions will suffer dramatic workforce shortages in the relatively near future and have a negative effect on our country's competitive edge.

The Center to Improve Diversity in Earth Systems Science (CIDESS) is a program designed to improve diversity within the Earth systems science professions through the encouragement and establishment of cooperative programs across the United States. It will serve as a clearinghouse for information relevant to diversity, and will be a resource for persons and organizations interested in working on this important issue. We will assess the impact(s) that diversity programs have on our community, and be a bridge between the science, science education, and social science communities. Our overarching goals are twofold: 1) Improve the diversity of participants in Earth systems science professions so that the population of professionals reflects that of society as a whole, and 2) Make the Earth systems science community the leader in STEM participation.

DLESE serves as a model for developing a national clearinghouse. CIDESS intends to work with DLESE to ensure that the community at-large is involved and informed.

What Do You Want from Your DLESE?
MICHELLE HALL, ANNETTE DECHARON, DON ELTHON

In May 2004 at the request of the DLESE Steering Committee, the National Science Foundation (NSF) funded a team (Annette deCharon, Don Elthon and Michelle Hall) to assess the effectiveness of the current quality assurance policies within the DLESE, and to convene a small workshop to develop a plan for a more comprehensive, integrated approach to quality assurance of the library's resources and services. The workshop will be held September 19-21 in Santa Fe, New Mexico.

In examining the extensive work that has been done in this regard over the past 5 years, we concluded that assessing and assuring the high quality of DLESE resources and services will impact nearly every component of the library. Thus, we have taken a broad approach to the problem with the goal of helping the DLESE community achieve its mission of becoming the premier digital library to advance teaching and understanding of Earth system science (ESS).

To focus our thinking, we have outlined the critical issues in the form of questions that we believe must be addressed to achieve high quality across the library. We have also crafted a description of the "ideal DLESE" starting with the community vision for the library developed at the first DLESE workshop in 1999 and incorporating community input from subsequent annual meetings. These documents will be distributed to all Annual Meeting participants. We wish to work closely with the community to take this initial framework of critical issues and the "ideal DLESE" and turn it into the comprehensive implementation plan by September.

At this share fair, we invite you to visit our poster to share your views about the critical issues and how to address them. We will also have a poster board for you to modify the "ideal DLESE" description in ways that reflect your plans for using the DLESE.

The Community Review System - A Pathway to the DLESE Reviewed Collection
KIM KASTENS, BOB ARKO

The Community Review System is aimed at selecting the “best” resources from the DLESE Broad Collection for inclusion in the DLESE Reviewed Collection. The criteria for admission to the Reviewed Collection are: scientific accuracy, pedagogical effectiveness, ease of use for teacher and learner, quality of documentation, importance or significance of content, ability to motivate or inspire learners, and robustness as a digital resource.

The Community Review System assesses resources based upon teaching tips and reviews. Teaching tips about a resource can be submitted by the community either via a link embedded in a button displayed on the resource or via a link that appears on all resources returned through the DLESE Discovery System.

The Community Review System combines two types of reviews: (a) reviews delivered via a Web-based recommendation engine from educators in the DLESE community who have taught with the resource or learners who have learned from the resource, and (b) specialist reviews mediated by an Editorial Review Board. The test bed for the Community Review System is at: http://crs.dlese.org. At the Share Fair, participants will be able to walk through the process of reviewing a resource through the Community Review System, and to view examples of the kinds of reports that the CRS provides to the resource creator, to the Reviewed Collection editors, and to the public. The developers are actively seeking feedback on the usability of the web-based recommendation engine, the kinds of information provided to the resource creator and the public, and the ways in which the DLESE Discovery System interacts with the Community Review System.

Background Science Pages for a National Coastal Erosion Knowledge Bank
DENNIS KROHN, MITAL SHAH

The National Research Council issued a "Grand Challenge" to the US Geological Survey's Coastal and Marine Program (CMGP) to devise a Knowledge Bank for the Nation's coastal and marine resources. Four years later, the USGS’ CMGP program has come up with a trial effort that should be available in the autumn of 2004. Early on in the deliberative process, it became apparent that there was a need to provide a context for users coming from different skill levels. This effort was informally termed "Background Science Pages." Coastal Erosion was chosen as the first topic, both because of the USGS’ strengths in the field and because of the previous involvement of USGS coastal scientists with DLESE. Critical to the development of background pages are a glossary and links to additional resources on the web. A working version of the Background Science Pages will be available to the DLESE community as a means to get feedback about the effort and to gather input on the larger role of a Coastal and Marine Knowledge Bank in the Earth Science community.

Earth Exploration Toolbook - Facilitate Using Earth Science Data in Education
TAMARA LEDLEY, CARLA MCAULIFFE
http://serc.carleton.edu/eet/

The Earth Exploration Toolbook (EET) provides step-by-step instructions for using Earth science datasets and software tools in educational settings. Each chapter features a specific Earth science dataset and data analysis tool and walks users through an example—a case study—to explore issues or concepts in Earth system science, and gives the user enough knowledge to modify the activity to be effective in his/her own situation. In addition, each chapter provides the teacher information on what the outcome of the activity should look like, the appropriate grade levels, the standards that the activity addresses, the learning goals, the time required to complete the activity, and ideas for further exploration using the featured dataset and data analysis tools.

The Earth Exploration Toolbook has a mechanism, the EET chapter template, which allows for the development of consistent additional EET chapters by those outside the project who would like to facilitate the use of their Earth science datasets and analysis tools in educational settings.

In order to facilitate the effective use of EET chapters in the classroom, we conduct 2-hour teleconference/online workshops about once a month. Each workshop walks the teacher through a specific chapter. By the end of the workshop the teacher has the software and required data correctly downloaded and installed on their own computer and has successfully done the analysis. The teacher is then in a better position to adapt the chapter for use with their students.

During the Share Fair we will demonstrate the features of the EET and the EET template, and help the participants explore the EET chapters.

Just for Faculty: Online Resources Supporting Improved Geoscience Instruction
CATHRYN MANDUCA; REBECCA TEED

The Science Education Resource Center (SERC) is developing a number of web sites for faculty to help them address particularly challenging aspects of geoscience instruction. Contributing to and building upon the DLESE broad collection, each site adds information designed specifically to help faculty use DLESE materials effectively. Topics include: Teaching Entry Level Geoscience; Using Data in the Classroom; Teaching Quantitative Skills in the Geosciences; Bringing Research on Learning to the Geosciences; Preparing Future Teachers to Teach Earth Science; Designing On-line Learning Resources and Teaching with Visualizations. This poster/demonstration will provide an opportunity to learn more about the depth of resources available to faculty to enhance their use of DLESE collections.

Evaluating How Faculty Use the Web in Undergraduate Geoscience Education
CATHRYN MANDUCA; ELLEN ROSCOE IVERSON

Evaluating DLESE resources and sites lies at the heart of creating a digital library that serves the DLESE community well. The Science Education Resource Center (SERC) is engaged in research on how faculty uses the web in preparing for class. This poster highlights our initial results and provides an opportunity for meeting attendees to participate in our study. Preliminary findings distinguish the types of web content and characteristics that form a “trusted source” for faculty. This research serves as a basis for development and formative evaluation of SERC sites. Poster attendees will also have an opportunity to test specific SERC web resources and provide formative feedback.

The Electronic Encyclopedia of Earthquakes
JOHN MARQUIS

The Electronic Encyclopedia of Earthquakes (E3) is a collaborative project involving the Southern California Earthquake Center (SCEC), the Consortium of Universities for Research in Earthquake Engineering (CUREE), and the Incorporated Research Institutions for Seismology (IRIS), and supported with multi-year funding from the NSF’s National Science Digital Library (NSDL) initiative. Information and resources in this collection are organized into and associated with over 300 Earth science and engineering entries pertaining to the causes, effects, study, and societal impact of earthquakes (another 300+ entries are planned). These entries are similar to articles in a traditional encyclopedia, but thoroughly cross-linked using hypertext and, by means of a relational database system, connected to resources in our collection. A discovery system allows users to search the collection for resources, independent of entry topic. The Encyclopedia supports high-quality K-12 and undergraduate education by providing educators and students with tools and resources for instruction and research, and connections to curricular materials useful for teaching Earth science, engineering, physics, and mathematics. Faculty-student teams at universities across the nation perform our content collection and organization. All

content is then incorporated into the E3 databases (and reviewed) by means of a web-accessible interface developed specifically to meet the needs of this project. Our Share Fair exhibit will allow you to explore the Encyclopedia, interact with our collection and content development system, and learn about your opportunities for contribution and collaboration!

Developing Effective On-Line Learning Resources in the Geosciences
JOHN MCDARIS
http://serc.carleton.edu/NAGTWorkshops/webdesign/index.html

Creating high-quality learning resources provides a new opportunity for geoscience faculty to utilize technology and the web in their classes and to share their teaching resources with other faculty. The *On the Cutting Edge* web site "Developing Effective On-Line Learning Resources in the Geosciences" uses research from experts in the fields of educational design, web site construction and resource reusability to address many of the critical issues in designing new online resources or adapting traditional materials to use on the web. This poster demonstration will provide faculty the opportunity to explore resources on educational aspects of designing on-line learning resources, technical aspects of usability, accessibility and web-site design, and information on assessment and reusability.

National Aeolian Detritus Project (NADP)
DAN MURRAY; JIM SAMMONS

The essence of the National Aeolian Detritus Project (NADP) is disarmingly simple—what falls out of the sky and what does it mean? Middle school through college students are collecting airborne particulate on a 23 square meter sheet of coated nylon draped in a plastic wading pool. They remove particulate from the collector with forensic evidence tape and concentrate it on filters for examination. The NADP center is assisting collecting sites through our web site by providing an on-line catalog of particulate images, arranging advanced identifying identification techniques and developing scientifically valid lines of inquiry tailored to the circumstances of each site. The purpose of the Share Fair presentation will be to provide an overview of the project, show how it fits into the DLESE, and to encourage attendees to join the project.

Around the World in 185 Days - GIS and Upper Elementary
ROGER PALMER; ANITA PALMER

Come preview an exciting interdisciplinary lab manual that uses GIS as a tool and has been developed and geared toward the upper elementary grades. Some of the modules include titles such as *Physical Geography, the Secret's in the Crust!*, *River of Dreams*, *The Great Egyptian Mystery*, and *Changes in Latitude, Look at Biomes*. These lessons can be easily integrated into the upper elementary curricula and don't require any prior exposure to GIS by the teacher or students.

NASA Earth System Science Education
DIANE SCHWEIZER

NASA's Earth Science Enterprise (ESE) uses the compelling context of Earth system science to engage students in the process of scientific inquiry, helping them to achieve in science, technology, engineering, and mathematics (STEM) while developing a deeper understanding of the complexities of the Earth system. The ESE Education Program offers a diverse array of programs and resources for formal classroom instruction (elementary-college), informal education, and professional and workforce development. This Share Fair will present NASA ESE national networks/resources of interest to the DLESE community, including:

NASA Earth Explorers Series
http://earth.nasa.gov/education/explorers
NASA Earth Explorers are all ages, with a variety of backgrounds and interests, sharing a curiosity about how the Earth works and the impact Earth system processes have on sustaining life on Earth for current and future generations. This monthly series introduces the diverse individuals who are NASA Earth Explorers—from Hampton, VA 5th grade students who are collecting aerosol measurements for the GLOBE program, to NASA scientists, such as Claire Parkinson, who goes on expeditions to the North Pole to study polar ice.

ESE Education Update Newsletter
http://earth.nasa.gov/education/edreports/index.html
Subscribe to the ESE Education Update, a free monthly email newsletter, to keep informed of the latest news, programs, events, funding opportunities, and resources related to NASA's ESE education program.

ESE Education Products Review
http://earth.nasa.gov/education/esereview
This independent peer review includes panels of educators and scientists, who assess NASA Earth system science learning resources based on their scientific accuracy and educational value The purpose of the reviews is to help ensure that education materials distributed by NASA are of high quality and meet rigorous education standards Learn about the ESE review process and how you can participate

ESE Education Catalog
http://earth.nasa.gov/education
This catalog provides information on NASA Earth system science education programs and resources for K-12, higher education, and informal education. Programs include experiences and opportunities such as workshops, courses, fellowships, research opportunities at NASA Centers, and Earth system science resource and curriculum development. Resources include a wide range of products including WWW sites, educators' and students' guides, CD-ROMs, posters, videos, etc.

The Products & Resources section of the catalog is available as a reviewed collection within DLESE, as well as a separate collection accessible from the NASA ESE WWW site.

Earth System Science Education Alliance (ESSEA)
THERESA SCHWERIN
http://www.cet.edu/essea/

Colleges and universities across the US are offering exceptional online, Earth system science courses for K-12 teachers through NASA's ESSEA program. The three available courses—for teachers of grades K-4, 5-8, and 9-12—are delivered completely over the Internet and feature student-centered, knowledge-building virtual communities. The courses were developed for NASA within the Center for Educational Technologies (CET) at Wheeling Jesuit University; ESSEA is managed by the Institute for Global Environmental Strategies (IGES) and CET, through funding from NASA's Earth Science Enterprise.

ESSEA is leading the way in teacher professional development During 2000-2003, over 1,000 teachers from 41 states—impacting 50,000+ students annually—have completed at least one of the 16-week ESSEA courses through 20 participating colleges and universities. These diverse colleges and universities include three Historically Black Colleges and Universities (HBCUs) and one primarily Hispanic-serving university. Many ESSEA universities also serve rural and disadvantaged (e.g., high poverty and urban) communities.

ESSEA uses an instructional model that has proven effective and successful for K-12 science teacher education. This model addresses content and process, i.e., knowledge of Earth system science and the appropriate inquiry-based methods to teach it. This addresses the lack of professional development of ESS teachers, especially those in grades K-8.

Understanding Evolution
JUDY SCOTCHMOOR
http://evolution.berkeley.edu

The University of California Museum of Paleontology, in partnership with the National Center for Science Education, announces *Understanding Evolution*: a new comprehensive web site on evolution developed especially for teachers. Its purpose is to provide content and resources for teachers at all grade and experience levels in order to facilitate the teaching of evolution. The site was funded by the National Science Foundation and the Howard Hughes Medical Institute, and was developed by a team of scientists, graduate students, and teachers working together to respond to the needs of K-12 teachers.

The first part of the site, *Exploring Evolution*, focuses on enriching or upgrading content knowledge for all teachers. Learning is self-paced and includes an engaging form of self-assessment—facing a classroom of children, hands raised, questions ready. *Teaching Evolution* focuses on resources for the classroom, using a searchable database to access lessons by grade level and topic. All lessons are aligned to specific concepts that are articulated as strands throughout grades K-12. In addition, we offer teaching strategies for teachers facing resistance or potential "roadblocks" to their teaching.

DISCOVER OUR EARTH
DOGAN SEBER, CINDY SANTINI

At Discover Our Earth web site, there is wide range of information and activities related to the Earth sciences. The goal of the web site is to allow students to access and interact with the same data sets as researchers and to utilize the data with easy-to-use interactive tools. Discovery topics on the web site include earthquakes, volcanoes, plate tectonics, sea level and topography.

Real data sets are used as students play with Discover Our Earth's interactive mapping tools. Tools such as QUEST or GEOID allow students to interact and learn from the data sets. Students can also conduct virtual experiments such as recreating Pangea, or playing with viscosity levels using applications made in Macromedia's Flash.

Included in the web site are a series of reference pages designed to accompany learning tools. The Teachers section provides teachers with background information about selected Earth science topics, and suggests a number of student activities and exercises that can be employed in classroom settings. Curriculum guides accompany exercises with even more specific information about the use of the tools in the classroom. Teachers should view the exercises provided as suggestions. We encourage that educators adopt, adapt, and modify exercises to suit specific needs or situations. The Students section provides background information for the data sets and includes a series of activities that we hope will help to discover interesting things about the Earth. Students should be able to experiment and test their own ideas and hypotheses related to the covered topics. With the tools and information provided, students will be actively engaged in the process of discovery, and by critically evaluating the data and the found results, can learn about the dynamic Earth system.

Starting Point - Teaching with an Earth History Approach
REBECCA TEED

Teaching with an Earth History Approach is a *Starting Point* module built to assist people developing and teaching historical geology courses, or units within other science courses that deal with changes in the Earth System over time. An Earth history approach is essential for teaching three of the big ideas of science: evolution, plate tectonics, and climate change. There are a lot of different ways to organize Earth history material: the geologic timescale itself, the history of science (which can be a great way to illustrate how the scientific method and scientific controversies work), using regional stratigraphy, or by highlighting

a particularly interesting time period, such as the age of dinosaurs or the Precambrian. The module contains other resources, such as bibliographies, course information, and annotated links lists.

Teaching Earth Science using the SAGUARO Project Curriculum Materials
WALKER, SCOTT C.

Over the past five years The SAGUARO Project has developed a series of GIS-based curriculum materials that cover topics in the Earth and environmental sciences. These materials emphasize the use of GIS as a tool for teaching science and geography concepts and minimize instruction in GIS techniques and theory, making the materials user-friendly and approachable for both students and teachers. The SAGUARO Project materials integrate modern geospatial datasets and supporting multimedia and web resources to create an authentic and active learning experience. Topics covered by The SAGUARO Project curriculum materials include oceanography, plate tectonics and geologic hazards, water resources and tropical cyclones. The printed and computer-based materials will be available for demonstration and hands-on exploration at the DLESE Share Fair.

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Wuebbles, Donald	University of Illinois	
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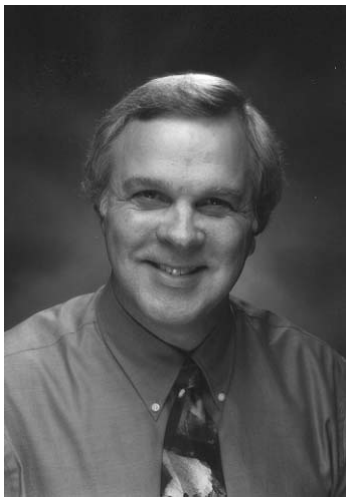
2004 Steering Committee Nominee

Timothy D. McCollum
Charleston Middle School



Tim McCollum has been a science teacher at Charleston Middle School in Charleston, Illinois for 31 years. For the past three years he has served as an educational materials developer, reviewer, and workshop presenter for the Atmospheric Visualization Collection, a collection of DLESE and the National Science Digital Library (NSDL).

He has been a leader in national and state science initiatives such as *Passport to Knowledge*, *Near and Far Science Initiative*, and *the NSTA Building a Presence in Science* program. Tim is a 2003 Illinois recipient of the NSF Presidential Awards for Excellence in Science and Mathematics Teaching. More information about Tim can be found at his Cyberscience 2004 web site: http://www.ux1.eiu.edu/~cxtdm/biosketch.html

Statement of Interest:

As a middle school science teacher I always strive to expose my students to new resources and technologies which will enhance their learning opportunities. By serving as a member of the DLESE Steering Committee, I would provide the viewpoint of a veteran teacher who makes regular use of digital sources of information in the classroom.

2004 Steering Committee Nominee

George I. Matsumoto
Monterey Bay Aquarium Research Institute

George Matsumoto is the Senior Education and Research Specialist at the Monterey Bay Aquarium Research Institute. For the past six years, he has been involved in informal education outreach in conjunction with MBARI's sister institution, the Monterey Bay Aquarium.

He has a Ph.D. from UCLA with an emphasis on marine biology. He spent three years in South Australia as an Assistant Professor before taking up his current position at MBARI. He also holds an adjunct faculty position at Monterey Peninsula College. George has extensive experience linking research and education and, most recently, has been working on facilitating the *use of near-real-time data (from observatories) by educators and students*. More information about George and his background can be found at http://www.mbari.org/staff/mage.

2004 Steering Committee Nominee

Gregory E. van der Vink
Earthscope

Gregory van der Vink is a distinguished scientist of international reputation. He is currently the director of EarthScope, one of the largest earth science projects supported by the National Science Foundation, and was previously associated with the Incorporated Research Institutes for Seismology (IRIS). More information about EarthScope is available at http://www.earthscope.org/. In 2000, Princeton University named van der Vink the 250th Anniversary Visiting Professor for Distinguished Teaching.

Statement of Interest:

I am enthusiastic about DLESE. Serving on the DLESE Steering Committee will help me develop and expand synergies with the EarthScope data portal and educational efforts. EarthScope is an NSF project that is bringing together data from many diverse disciplines for exploring the structure and evolution of the North American continent.

Local Contact Information

Medical Emergency:
On Campus: Dial 911 or 9-911
Off Campus: Dial 911

University of Wisconsin Police:
Emergency: 911
Non-Emergency: 26*2-2957

On Campus Information:

University Hospital:
General Information: 26*3-6400
Emergency: 26*2-2398

Witte Residence Hall Front Desk:
(24-hour emergency contact number) 26*2-7850
Address: 615 W. Johnson Street
Madison, WI 53706
Internet Problems 26*2-8703

Fluno Center:
Phone: 1-877-77-FLUNO

Grainger Hall:
Phone: 26*2-8679

Site Coordinator: Maria Vasys Phone: 213-6474

Off Campus Information:

Meriter Hospital:
General Information: 267-6000
24-hour Emergency Care: 267-6206

Inn on the Park:
22 S. Carroll
Phone: 257-8811

City Bus Service:
Madison Metro: 26*6-4466

Cab Service:
Badger Cab: 256-5566
Madison Taxi: 255-8294
Union Cab: 242-2000

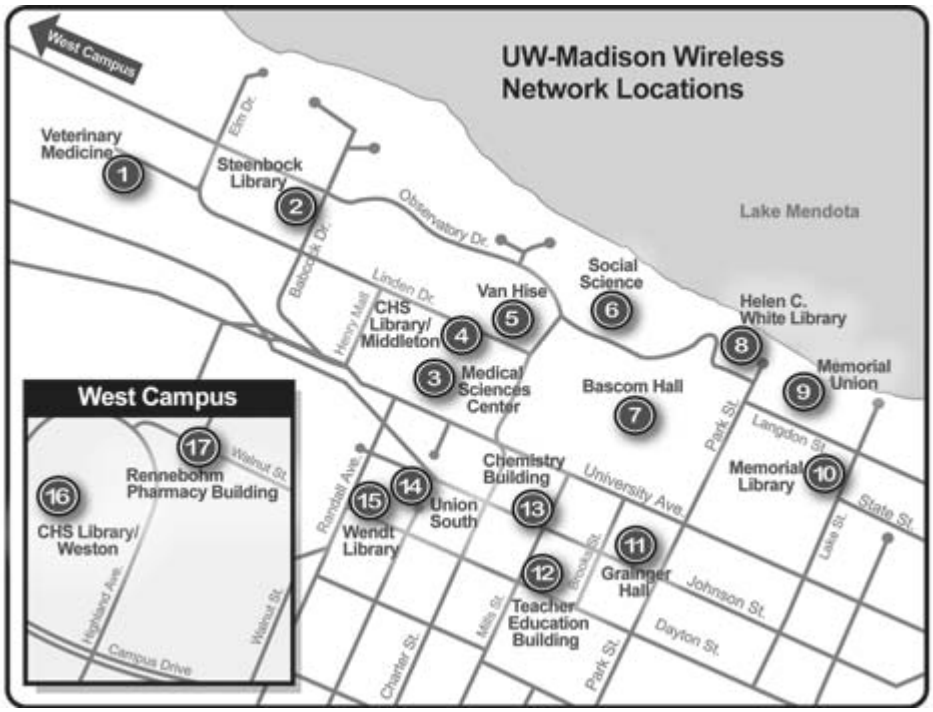
All phone numbers are in the 608 area code.

*When using a campus phone, dial only the last five digits of phone number.

Dial 9 for local calls off campus.

Wireless Computing

For wireless computing in most UW campus locations, users need a WiscWorld account in order to authenticate. You can enter your username and password at https://wireless.wisc.edu. Any standard 802.11b wireless card, either internal or external will do. Wireless campus locations are denoted on the map below.



Wired accounts can also be accessed using a WiscWorld account. This can be done using any standard Ethernet port, either internal or external. The laptop must be configured to get an IP address using DHCP. Some locations may allow unsecured access if allowed by the local administrator.

Telephone, Cable Television, and Internet Services Guide for University Housing Conference Guests
Division of University Housing - 2004

Telephone Service

Each residence hall room is equipped with telephone service that is available for use by conference guests. Residence hall phones are part of the State of Wisconsin Centrex telephone system. The following dialing instructions apply only to 264 prefix phones in residence hall rooms.

Emergency Calls (911#)

- In case of emergency, dial 911# to reach Police and Security. Pressing the # sign after dialing 911 quickly clears your call through the campus phone system.

Local Calls

- Local calls can be made free of charge.
- To call another number on the Centrex system on campus, dial the last five digits of the number. For example: to call 264-5555, dial 4-5555.
- To call non-Centrex local numbers, dial 9 plus the 7-digit number. For example: 9-271-5555

Long Distance Calls

To place a long distance call you must use a calling card from your phone company, a pre-paid calling card, or a 10-10 alternate long distance carrier. For your convenience, domestic and international pre-paid calling cards are available for purchase at your residence hall desk.

- Pre-Paid Calling Card: Dial 8+1+the 800 number on the calling card.
- Alternate Long Distance/Credit Card Calls: Dial 8+10+10+access code+0+ ten digit number. Be prepared to provide your credit card to pay for this service.
- Collect Calls: Dial 8+1+800+COLLECT
- Toll Free Calls: Dial 8+1+800+seven digit number

Troubleshooting & Contact Info

If your phone is not working, try plugging it into the other phone jack in the room (see *Figure 3* on page 2). If this doesn't work, go to your residence hall desk to receive a replacement phone and cord. If you still have problems, please use the hall desk phone or an alternate phone to call the ResNet help line at **(608) 262-8703** and **press #2**. Please be sure to provide the following information:

-Name
-Room number
-Residence hall
-Times that you are available
-Phone number where you can be reached

Cable Television Service

Expanded basic cable television (TV) is available in each residence hall. Premium channels and pay-per-view are not currently offered. A current programming guide can be found on channel 2.

What You'll Need:

- Cable-ready TV: If your TV is not cable ready, you will need to purchase a cable converter, available at most electronics stores.
- Coaxial Video Cable: You will need a coaxial video cable to connect your TV to the video jack in your room. Coaxial cables are available for purchase at your residence hall desk.

Connecting

- Attach one end of your coaxial cable to the video jack on the ResNet wall plate (Figure 3, end of this page). Attach the other end to the IN or ANTENNA jack on your television.
- Your TV tuner should be set to STD, CABLE or CATV. This may be an actual switch on the TV or will more likely be something you program through a menu on your TV screen. You may want to run the Auto program feature in order for your TV to search for and memorize the cable channels. We recommend that you bring the manual and any remote controls that came with your TV, as the programming menus on many TV's can only be accessed via the remote control.

Troubleshooting & Contact Info

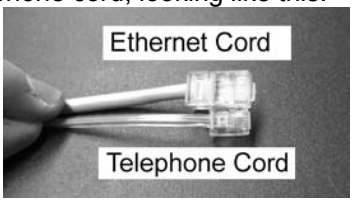
If you are having trouble getting your TV connected, please call the ResNet help line at **(608) 262-8703** and **press #3**. A technician will contact you to schedule a house call to troubleshoot your connection. Please be sure to provide the following information:

- Name
- Room number
- Residence hall
- Times that you are available
- Phone number where you can be reached

Internet Service

You will need two items in order to connect to ResNet Internet service:

- A computer with a network card
- A Cat5 data cable
- If you do not have a Cat5 data cable, you can purchase one from your residence hall desk. Remember, although it resembles a phone cord, a data cable has a wider plug and is thicker than a phone cord, looking like this:



- Plug the data cable into the Ethernet port on your computer. See Figures 1 & 2 below for examples on connecting a laptop.

Figure 1

Figure 2

- Plug the other end of the cable into the RED data jack in your room, shown in Figure 3:

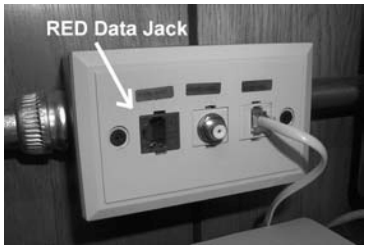


Figure 3

- If your computer is already configured correctly, you should be connected now. Test it by opening your web browser and connecting to a web page. If everything is working, congratulations, you're done!
- If your Internet connection is not working, please proceed to the "Basic Troubleshooting" section.
- **IMPORTANT!** Once you're connected, please be sure to read the appropriate use policy on the ResNet webpage: http://www.housing.wisc.edu/resnet/ appropriateUsePolicy.html

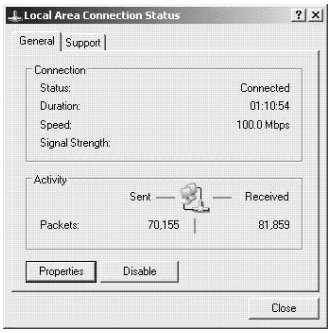
Basic Troubleshooting

- Make sure the data cable is plugged in securely on both ends.
- Check for flashing green and yellow lights on the network port on the computer. A green light on, yellow light flashing usually means the connection is working. If this is not the case, either the network card is not configured correctly, or the **RED** data jack that you are plugged into is not working.
- Try plugging the cable into the other **RED** data jack in the room . It is unlikely that both data jacks in the room are not functioning.
- If you are still having problems please proceed to the "Verifying Settings" section.

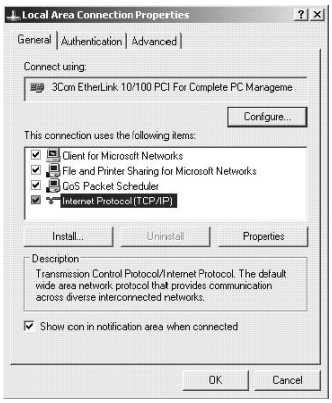
Verifying Settings

- For **Windows XP/2000/NT**, right click the *My Network Places* icon on the desktop and click on *Properties*. (You can also click on the *Start Menu*, go into *Control Panel* and find *Network Connections*).
- You should now see a screen like this:
- Double click on *Local Area Connection (LAN)*. You should then see this screen:

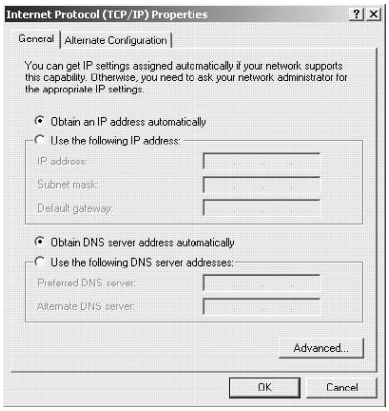
Click on the *Properties* button. A window should show up which looks like this:
Make sure that the "*Show icon in notification area when connected"* box is checked.



In the "*This connection uses the following items"* list box do you see a check mark next to *Internet Protocol (TCP/ IP)*?



- If you do not, please proceed to the "Setting Up a Support Case" section at the end of this page.
- If you do, click on it once, and then click on the *Properties* button. In the *General* tab, set both to obtain automatically instead of specifying an address, giving you this screen:
- Click *OK*, and then *Close*.
- Restart your computer and try to connect to the Internet again.
- If you still cannot connect , proceed to the "Release/Renew IP Address" section.



Release/Renew IP Address

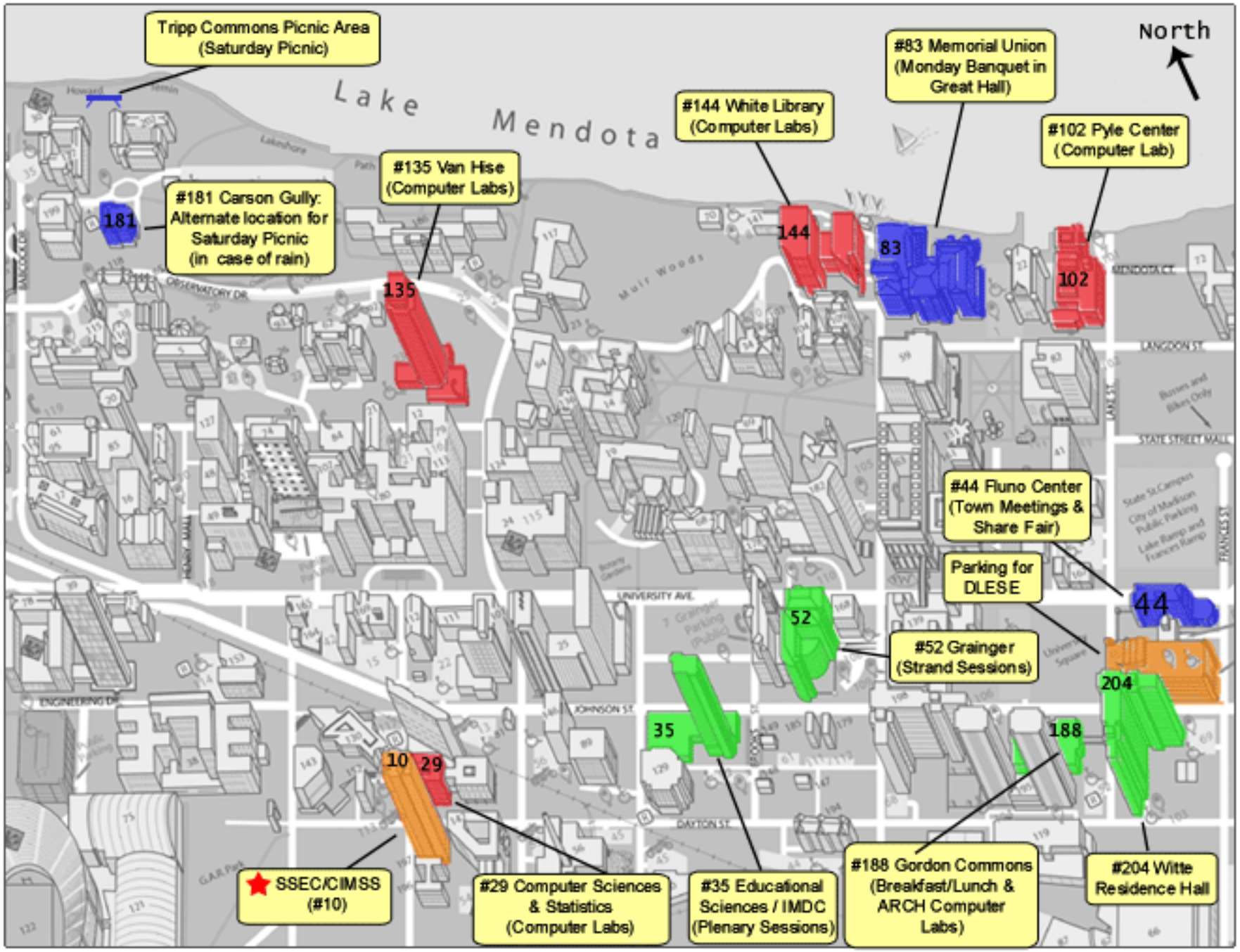
- For **Windows XP/2000/NT**, click on the *Start* menu and then click on *Run*. You should see a box like this:
- Type in **cmd** and click on the *OK* button.

- A black command prompt window with a flashing cursor will now appear.
- At the cursor, type in:
  ipconfig /release
- You should see a screen that lists the *IP Address* and *Subnet Mask* both as
- Now type in: 0.0.0.0
  ipconfig /renew
- You should now see a screen that lists an IP Address of 146.151.X.X, where X is a number from 0 to 255. If you see this, you should be connected. Try opening up a web page now.
- If your IP Address is a number other than 146.151.X.X, then you are still not connected. Please proceed to the "Setting Up a Support Case" section.

Setting Up a Support Case

To set up a case, please call **(608) 2628703** (or **2-8703** from your room phone), and **press #1**.

- Help Desk staff will create a case for you and try to resolve your issue over the phone.
- If your problem cannot be resolved, your case will be forwarded to a Housing IT Technician who will schedule a house call to help get your computer connected.
- If you need to schedule a house call, please be sure to provide the following information:
  -Name
  -Room number
  -Residence hall
  -Times that you are available
  -Phone number where you can be reached


Tripp Commons Picnic Area (Saturday Picnic)
Lake Mendota
North
#83 Memorial Union (Monday Banquet in Great Hall)
#144 White Library (Computer Labs)
#102 Pyle Center (Computer Lab)
#135 Van Hise (Computer Labs)
#181 Carson Gully: Alternate location for Saturday Picnic (in case of rain)
181
135
144
83
102
#44 Fluno Center (Town Meetings & Share Fair)
Parking for DLESE
44
52
#52 Grainger (Strand Sessions)
204
35
188
10
29
SSEC/CIMSS (#10)
#29 Computer Sciences & Statistics (Computer Labs)
#35 Educational Sciences / IMDC (Plenary Sessions)
#188 Gordon Commons (Breakfast/Lunch & ARCH Computer Labs)
#204 Witte Residence Hall