Inspire the Next Generation of Earth Explorers

NASA’s Plan for Earth Science Education
2004 - 2008

Ocean Color Research Team Meeting
Washington, DC
April 16, 2004
Earth System Science

- Sun-Earth Connection
- Climate Variability and Change
- Carbon Cycle and Ecosystems
- Earth Surface and Interior
- Atmospheric Composition
- Weather
- Water & Energy Cycle
Earth Science Education Team

Dr. Ming Ying Wei
Dr. Diane Schweizer
Dr. Paula Coble
Observations to Knowledge

**Petabytes** $10^{15}$
- Multi-platform, multiparameter, high spatial and temporal resolution, remote & in-situ sensing

**Terabytes** $10^{12}$
- Calibration, Transformation To Characterized Geophysical Parameters

**Gigabytes** $10^{9}$
- Interaction Between Modeling/Forecasting and Observation Systems

**Megabytes** $10^{6}$
- Interactive Dissemination and Predictions

**Advanced Sensors**

**Data Processing & Analysis**

**Information Synthesis**

**Access to Knowledge**
Education Support Systems

Earth Science Enterprise Education Program Approach

Knowledge
Understanding Earth system process

Tools & Facilities
Data, technologies & models

People
Career & role models in Earth System Science & related fields

ESE Education Program Elements
- Earth Explorers Program
- GLOBE
- Earth System Science Graduate Student Fellowship Program
- New Investigator Program
- Embedded Activities

Information Infrastructure
Continuous, Engaging & Dynamic Learning of the Earth System at all Levels of Formal and Informal Education

Network of Partners

Value & Benefits to Citizens & Society
- Public Literacy about the Earth System & the Environment
- Competitive Science & Technology Workforce for Socioeconomic Benefit

Inputs
NASA

Outputs
US Formal & Informal Education Systems

Outcomes

Impacts
Earth System Science Education for the 21st Century (ESSE 21)

Small 2-year grants to engage faculty and scientists in the development of Earth System Science courses, curricula and degree programs

Call For Participation

http://esse21.usra.edu/

Proposals due April 1, 2004
Today's Image

Relative Humidity in the Upper Troposphere - more images

Breaking News

Satellite Finds Warming "Relative" to Humidity [March 15]
ANASA-funded study found some climate models might be overestimating the amount of water vapor entering the atmosphere as the Earth warms. more

New Radar System May Help Airplanes Avoid In-flight Icing [March 14]
Scientists at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, are testing a new system this month that may pinpoint water droplets in clouds that cause icing, potentially enabling pilots to avoid dangerous areas. more

Visible Earth

A new collection of earth imagery

the Blue Marble

Life in Icy Waters

earthobservatory.nasa.gov
What's new at DLESE

- DLESE 2004 Annual Meeting Call for Interest - deadline to submit is March 19, 2004

Are you new to DLESE?

Browse resources & collections
- DLESE Reviewed Collection (DRC)
- Alexandria Digital Library (ADL)
- Atmos Visualization Collection (AVC)
- Community Review System (CRS)
- Coop Pgm Op Met Edu/Training (CCMET)
- Cutting Edge
- Digital Water Ed Library (DWEL)
- Discover Our Earth
- DLESE Community Collection (DCC)
- Evaluation Toolkit
- Earth Exploration Toolbook (EET)
- Journal Earth Sys Sci Ed (JESSE)

View previously featured resources of interest. Catalog or suggest an interesting Earth system site.
ESE Education Opportunities

- ESE Graduate Fellowship Program
- New Investigator Program
- Earth Explorers Program Solicitation
  - Release June 2004
  - $2M total funding