

Greg Pitzer
Aerospace Education Services Program
Office: 650-604-3292
Fax: 650-604-3445
greg.pitzer@aesp.nasa.okstate.edu

Using NASA Technologies to Bring the Universe into Your Classroom from Macro- to Micro-Scopic

UCET Conference – Murray, UT
March 2-3, 2006

Objective: To become familiar with several technologies developed by NASA that can be used for a multitude of education purposes. We will focus on the Virtual Scanning Electron Microscope and Celestia, a model of our universe.

Agenda:

1. Introduction
2. NASA Explorer School Program
 - a. Program overview
 - b. Application procedure
3. NASA Digital Learning Network
 - a. Program overview
 - b. Education content provided
 - c. Resources, how to sign up
4. Virtual Lab: Scanning Electron Microscope
 - a. Program overview
 - b. SEM training
 - c. Samples: house fly, beetle, computer chip, red blood cells
 - d. Live webcast of SEM in use
5. Celestia
 - a. Program overview
 - b. Tour of the solar system and galaxies
 - c. Time warp travel
 - d. Educational curriculum
6. What's the Difference
 - a. Program overview
 - b. Creating a sample database
 - c. Education uses
7. Worldwind Update
 - a. Program overview
 - b. Education related resources
 - c. Program update including the Moon!
8. Other NASA technology websites
 - a. Math Trax – Learning Technologies
 - b. Quest
 - c. Aerodynamics- related websites

Software Resources

Virtual Lab: Scanning Electron Microscope

Program: <http://learn.arc.nasa.gov/vlab/index.html>

Specimen files: <http://virtual.itg.uiuc.edu/training/>

Education resources: <http://education.ksc.nasa.gov/edtech/vl.htm>

Live Webcast use of SEM: <http://bugscope.beckman.uiuc.edu/>

Celestia:

Program: <http://learn.arc.nasa.gov/planets/index.html>

Education resources: <http://www.celestiamotherlode.net/catalog/educational.php>

What's the Difference: <http://learn.arc.nasa.gov/wtd/index.html>

Worldwind:

Program: <http://worldwind.arc.nasa.gov/index.html>

Resources: <http://www.geocities.com/woodse2/index.htm>

Websites

NASA Homepage: <http://www.nasa.gov>

NASA Digital Learning Network: <http://nasadln.nmsu.edu/dln>

NASA Explorer Schools: <http://explorerschools.nasa.gov>

NASA Learning Technologies: <http://learn.arc.nasa.gov/>

NASA Quest Website: <http://quest.arc.nasa.gov/>

NASA Online guides to Aerodynamics: <http://www.grc.nasa.gov/WWW/K-12/airplane/bga.html>

<http://www.grc.nasa.gov/WWW/K-12/airplane/benson.html>

NASA Education Resource Center

Ames Educator Resource Center
NASA Ames Research Center
MS 253-2
Moffett Field, CA 94035
Tel #: 650-604-3574
erc@arc.nasa.gov

Regional Educator Resource Center

Utah State University
YETC
2845 Old Main Hill - 170 EDUC
Logan, Utah 84322-2845
Voice: (435) 797-3377
Fax: (435) 797-3939
Contact: Nathan Smith
(Nathan.Smith@usu.edu)
Website: <http://teacherlink.ed.usu.edu/>