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**Using NASA Technologies to Bring the Universe into Your Classroom  
from Macro- to Micro-Scopic**  
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March 10-11, 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

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### Regional Educator Resource Center

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