Infusing Technology into Community College Courses
Project Partners

Community College Pathways to Improved Teacher Preparation through Technology

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Overview

- Adapts a proven set of K-12 training & curricula materials for use in community colleges
- Focus on real-world applications in science, math, educational technology, & language arts
- Savvy Cyber Professor: 26-hour, 8 session hybrid professional development program
- Library of Real World Learning Objects (RWLOs)
- 3 year program involving faculty from 33 community colleges
CIESE Background

- Established in 1988
- Pioneer (1993) in Internet in education
- Over $20 million in grants and contracts
- Programs in AZ, OH, FL, NJ, NY & Latin America
- Over 18,000 educators trained
The Human Genetics Project

- Curved Thumb
- White Forelock
- Attached Earlobes
- Bent Pinky
The Human Genetics Project

- free vs. attached earlobes
- straight vs. curved thumbs
- straight vs. bent pinkies
- with vs. without white forelock
In a given population, is the dominant trait the most frequently occurring?
The Human Genetics Project

Was your hypothesis correct?

How can you find more data to support/refute your hypothesis?
CIESE Essential Question:

How are educators using the Internet as an educational tool?
Internet-based Applications

- Publishing Student Lab Reports online
- Finding Lesson Plans
- e-Pal Exchanges, Telecollaborative projects
- Publishing Student Stories to the Web
- WebQuests
- Simulations
- Virtual Labs (Interactive Frog Dissection)
- Historical Diaries
- Weather Satellite images
- Using Online Quizzes
- Online Textbook
- Real-time data

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Internet-based Applications

21st Century Workforce Skills

- Basic
  - Online Quizzes
  - Lesson Plans
  - Online Textbook
- Advanced
  - Simulations
  - Virtual Labs
  - Web Quests
  - Historical Diary
  - Student Web Page
  - E-Pal / Telecollaborative
  - Real-time Data

Skill Level

- Partially Proficient
- Proficient
- Advanced Proficient

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Unique & Compelling Applications

Internet applications can provide a revolutionary new instructional tool that can create opportunities for students to engage in more authentic learning.

**Unique**
Cannot be done without Internet technology

**Compelling**
Provides students with real world learning experiences
Real World Learning Objects (RWLOs)

- Concise core instructional activities focused on discrete topics in higher ed
- Science, math, ed tech and lang. arts
- Incorporate Internet-based “unique & compelling” activities
- Easily used in similar courses at other institutions
Unique & Compelling Applications

Use the Internet as a…
Communication Tool
to connect with experts & other students from around the world:

- Ask-an-Expert
- Telementoring
- Telecollaborative Projects
Unique & Compelling Applications

Use the Internet to…

Access Real Time Data
to problem-solve and think critically:

• Weather Satellite Images
• Remote Sensing Data
• Scientific & Government Databases
A plane is flying due west at 125 km/h. There is a wind blowing from the south at 35 km/h. What is the plane's resultant velocity?
Unique & Compelling Applications

Use the Internet to…

Access Primary Source Materials

Students now have access to digitally archived historical documents from government archives and libraries of higher education institutions

- Diaries, Letters, Manuscripts
- Historical Photographs
- Patents, Scientific Documents
- Good for Multidisciplinary Lessons
Today’s classroom

Create and submit a poem for instructor to review. Based on feedback and editorial criticism from instructor, revise poem.

Tomorrow’s classroom

Understanding the Writing Process

Review how Walt Whitman revised and refined his ideas and poems by viewing his original notebooks.
Unique & Compelling Applications

Use the Internet to…
Publish Student Work

Students can engage real audiences about what they are learning and doing.
Savvy Cyber Professor Goals

- Learn & incorporate new strategies for teaching
- Use and create RWLOs for use in CC courses
- Ultimately: Model new teaching strategies to pre-service teachers
Session Overview

- **Session 1**: Leveraging the Internet for Learning
- **Session 2**: Introduction to eDesk and Community Tools (online)
- **Session 3**: Using Learning Objects for Meaningful Instruction (online)
- **Session 4**: Course Integration (online)
Session Overview

- **Session 5**: Implementation: Challenges & Solutions (online)
- **Session 6**: Assembling Instructional Content & Creating RWLOs (online)
- **Session 7**: Completion of RWLOs
- **Session 8**: Showcase of RWLOs
How to Get Involved

- 30 CC’s selected by competitive RFP (4 faculty per CC)
- RFP to be issued March 2005
- 12 CC – Fall 2005
- 18 CC – Spring 2006
- Cost: $100/participant
For More Information

Pathways Project Web Site

http://www.k12science.org/pathways/

Mercedes McKay
Associate Director
Center for Innovation in Engineering and Science Education
mmckay@stevens.edu