Goal: Enhance STEM Learning and Water Science Engagement

Team 4 – Laura Hunter
May 2013
Teachers K12
- Curriculum by UEN and BYU
- UT Teacher Workshop by GSLC
- Toolkits by WY EPSCoR & NHMU
- Symposia – Evening Event

Students K12
- Summer Research for High Schoolers
- Toolkits by WY EPSCoR & NHMU
- Code Camps by USU and BYU
- Water/Cyber Posters by Students
- Symposia – Evening Event

Higher Ed
- CI-WATER Posters
- Hydroinformatics Course
- Presentations and Publications
- Symposia

General Public
- Symposia – Evening Event
- Social Media
- Water Professionals
- Broadcast Water Week
- STEM and CI-WATER Videos

ALL
- CI-WATER.org
Watersheds Board Game: be the first to move a quantity of water from the mountains to the valley.

Objective: understand watershed concepts and how water behaves in nature.
Forecaster Card Game: Guess card values using information data of weather conditions the previous day and then challenge opponent card values.

Objective: understand relationship between weather factors and factors that contribute to weather such as topography.
Professional Development Summer Institute

- Objectives:
  - Learn about CI-WATER
  - Learn from CI-WATER researchers
  - Develop grade 9-12 Curricula that explore the use of models to predict the impact of policy decisions on water systems
  - Stipend $450, lodging, transportation for WY, lunches, 2 UU Graduate credits

- June 24-28 at University of Utah

- 14 Teachers Confirmed (UT & WY)
Toolkits:

- water
- modeling
- scientific inquiry

Permanent at NHMU, University WY, WY Science Zone

Fall: teacher check-out

- water quality testing kits
- 3-D molecular water kits
- petri dishes
- various collection jars and vials
- a groundwater model
- a soil/sediment collector
- GPS
- a pH kit
- a thermometer
- various calorimeters for measuring nitrates and phosphates
- Hydropoly game
- role-playing equipment
- field guides and books
- Instructor’s guide
Symposia

2012
- Broadcast Water Week
- Industry partners and students
- About CI-WATER
- Keynotes: Brad Udall, Director CU-NOAA Western Water Assessment
- Dr. Chris Emdin, Professor/Author, Columbia University

2013
- 7:00 pm tonight
- Keynote: Dr. Miriah Meyer, Information Visualization
  - Assistant Professor, School of Computing, University of Utah
  - “Top Innovator” list of young innovators by Technology Review
  - #24 of the 100 Most Creative People in Business 2012 by Fast Company
  - 2013 TED Fellow
Summer Research Apprentice Program (SRAP)

- June 9-July 20
- 22 Participants
  - First Generation
  - Minority
  - Females in STEM
- Summer Stipend
- Room & Board
# Code Camps

Introduce students to education and career opportunities in engineering & applied computer programs

<table>
<thead>
<tr>
<th>BYU June 11</th>
<th>USU July 11</th>
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<tbody>
<tr>
<td>● Tour College of Engineering Labs</td>
<td>● Tour HPC facilities</td>
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<tr>
<td>● Coding workshops; solve real world problems</td>
<td>● Solve real-life code challenges</td>
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<tr>
<td>● Science and engineering games and contests</td>
<td>● Learn about and interact with CI-WATER faculty and graduate students</td>
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<tr>
<td>● Work with faculty and graduate students</td>
<td>● Work in teams, compete</td>
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<td></td>
<td>● Get more involved in CI-WATER</td>
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2013 Symposium: electronic posters from high schools and graduate students
Virtual Posters
Hydroinformatics Course

- Fall semester 2012; planned for Fall 2013
- Curriculum: information management, data modeling, collaboration
- 1st: Multi-institution course team-taught by USU, BYU, UofU, (four professors) cross-listed course
- 1st: use of interactive video conferencing, Canvas LMS
- Accepted for American Society for Engineering Education Annual Conference
Media
Social and Regular

- 42 news items (exceeded goal 1/week)
- Facebook 26 Followers; need 30 “likes” for statistics
- Twitter 103 Followers
- Two Press Releases re: May Events to Utah Press Association
- Community Calendar notices to
  - UVU Review
  - WSU Signpost
  - SL Trib features and technology writer
  - UofU Chronicle
  - Spingo
  - City Weekly
  - UofU Communications
  - BYU Universe
  - Catalyst Magazine
- 363 Visits to RSS Newsfeed Page
Broadcast Water Week

UEN-TV Water Week Programs for May 2013

Tune into UEN-TV May 5 – May 11 for Water Wise Week, a block of water-themed programs aired in conjunction with the CI-WATER water science project. Find your local UEN-TV carrier

Sunday, May 5th

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<td>P. Allen Smith’s Garden Home: The Water Show</td>
<td>Waterwise home</td>
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<td>6:00 pm</td>
<td>Wetlands: The Drain Game</td>
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<tr>
<td>6:30 pm</td>
<td>Water: The Lifeblood of Energy</td>
<td>Western region, energy</td>
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<td>7:00 pm</td>
<td>Potomac: The River Runs Through Us</td>
<td>River systems</td>
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<tr>
<td>7:30 pm</td>
<td>Hudson River Journeys</td>
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Project and Water News

**USU camp for teens who like to code on July 11**
CI-WATER invites high school students to solve real-life code challenges at the Utah State University Summer Code Camp on July 11. During this free, one-day event, participants will learn and practice computer coding, work in teams and...
[Read More...]

**Prizes, pizza and code: BYU to host camp June 11**
CI-WATER invites high school students to sign up for the 2013 BYU Engineering Code Camp. This one-day program will help students learn how computer simulations are used to solve fascinating problems, including water resource planning and...
[Read More...]
January-May 2013
2,196 people visited this site

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Strengths

- Delivering on goals in proposal
- Integrated team - example 8 articles cross-promoted on WY blog resulted in increased traffic
- Innovative solutions

Communication
- Videos
- RSS Feeds
- Website
- Social Media

Integration with iUTAH and Cyberinfrastructure EPSCoR projects
Challenges & Opportunities

- How to keep website engaging and useful?
- How to better serve minority students, women, rural?
- Is outreach-engagement balanced across institutions?
- How can we make the most use of new content?
  - CI-WATER Videos
  - K-12 Curriculum
  - Hydroinformatics Course & Student Projects
- How can we better support and tie in with iUTAH?
- Are there other opportunities we haven’t fully developed?