CI-WATER
A Utah-Wyoming Cyberinfrastructure
Water Modeling Collaboration

Outreach and Education

Team 4 – Laura Hunter

March 2013

Main Activities

- ci-water.org
- Symposia
- Broadcast Water Week & Broadcast Promotion
- Curriculum Workshops for Teachers
- Research/Field Experience for High School
- Teacher Toolkits
- Curriculum Resources
- Hydroinformatics Course
- Code Camps
- Social Media, News, Events

External Review Sept 2012

- Great progress and lots of partnerships established that will support achievement of project goals.
- Nice and informative video clips produced.
- Good Utah and Wyoming collaboration, website and widgets for partner sites, symposium, toolkit development, water week broadcasts, high school students and diversity activities.
- Good use of web site, less engagement with social media (but they have a social media plan). Good use of TV media. We feel this work needs continuation and some expansion.
- A plan for adding fresh, dynamic content to website is needed. Teachers and others need clear indication that resources are available on the web site. Many of the products are hidden on other web sites such as hiddenwater.org. What are the plans for integrating data, models, and learning modules on the web site?

External Review

- “Additional funds need to be allocated to more effectively achieve Objective #4; specifically money to produce original content that aids in the outreach and education components. Repurposing of existing content only is inadequate.”

- = Videos to be recorded at next Symposium
- New content from BYU
- Curricula being designed this summer teacher workshops
- @ciwater Twitter

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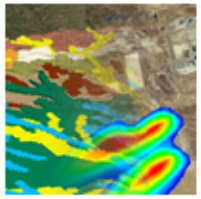
CI-WATER
An EPSCoR Project

Cyberinfrastructure



Data & Modeling Services

Watershed Modeling

Community: Learn More

STEM Careers

Reports & Results

Highlights

CI-WATER: Water Resources Modeling Professional Development Summer Institute

Summer Research Apprentice Program (SRAP)

Project and Water News

Computer science events at BYU

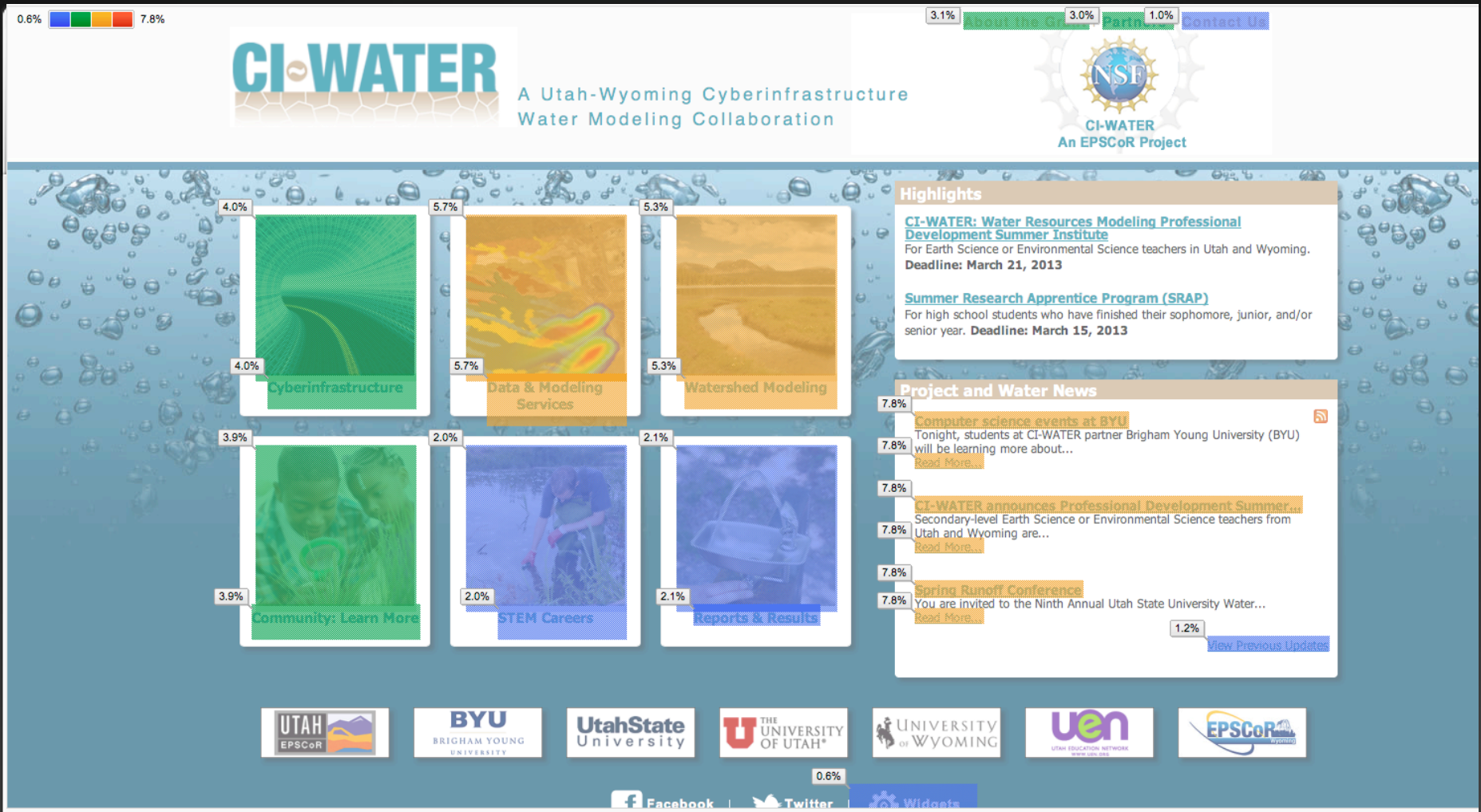
CI-WATER announces Professional Development Summer...

Spring Runoff Conference

View Previous Updates

Facebook | Twitter | Widgets

This project is funded through EPS – 1135482 and EPS – 1135483. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. Web services provided by the Utah Education Network in partnership with Utah EPSCoR and Wyoming EPSCoR.



April to December 2012

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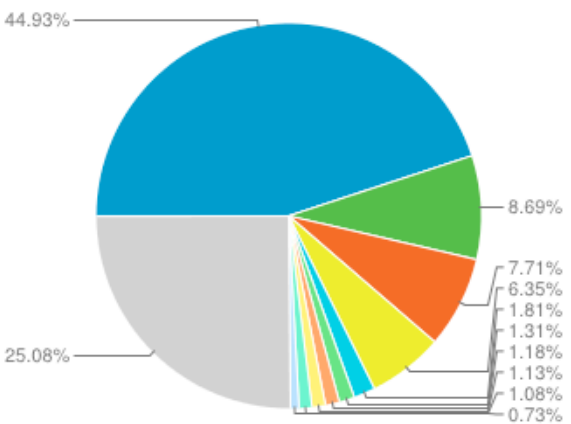
City	Visits	Visits	Contribution to total: Visits
1. Salt Lake City	1,784	44.93%	
2. Provo	345	8.69%	
3. Laramie	306	7.71%	
4. Logan	252	6.35%	
5. Denver	72	1.81%	
6. Sandy	52	1.31%	
7. Colorado Springs	47	1.18%	
8. New York	45	1.13%	
9. Midvale	43	1.08%	
10. Tallahassee	29	0.73%	



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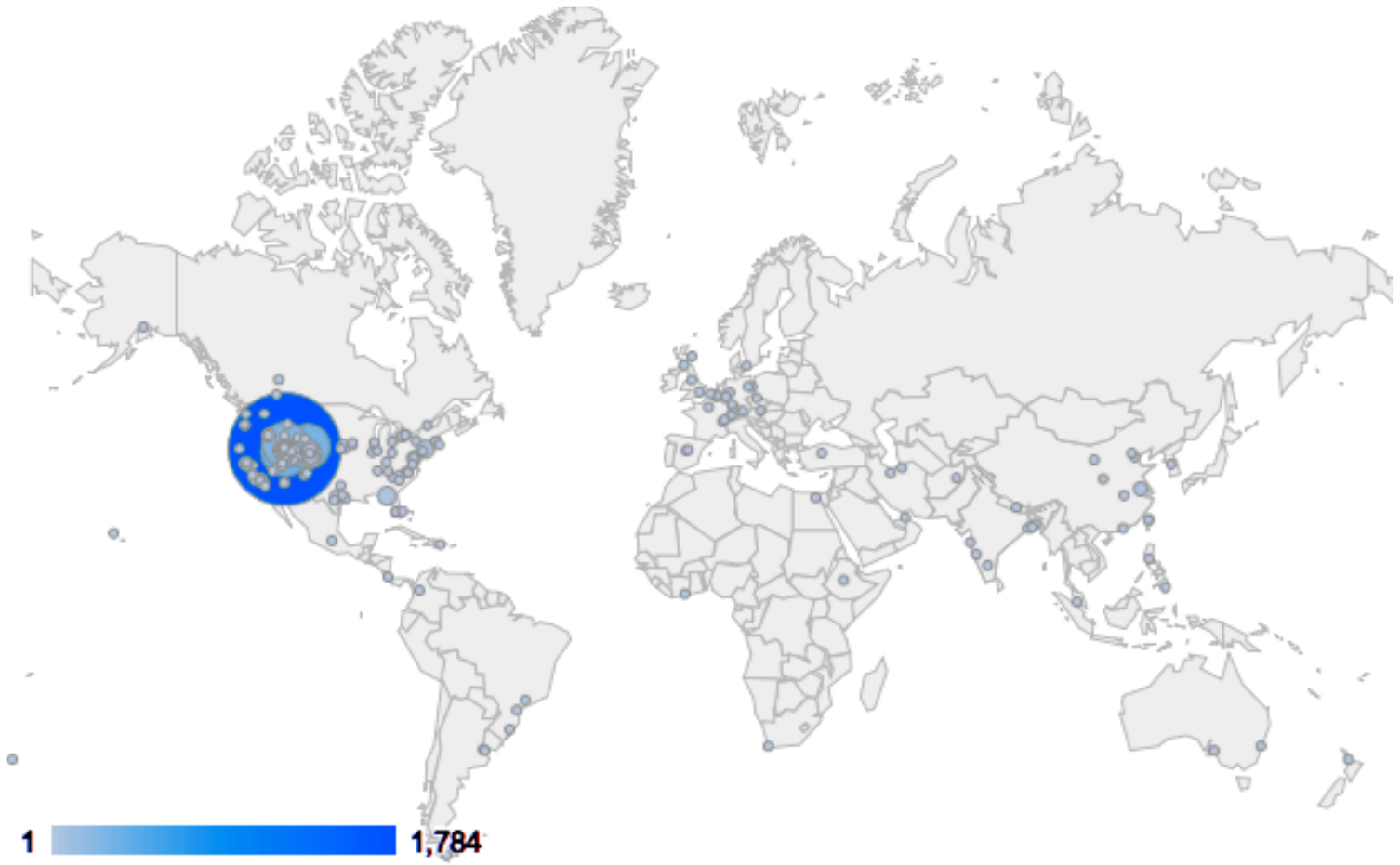

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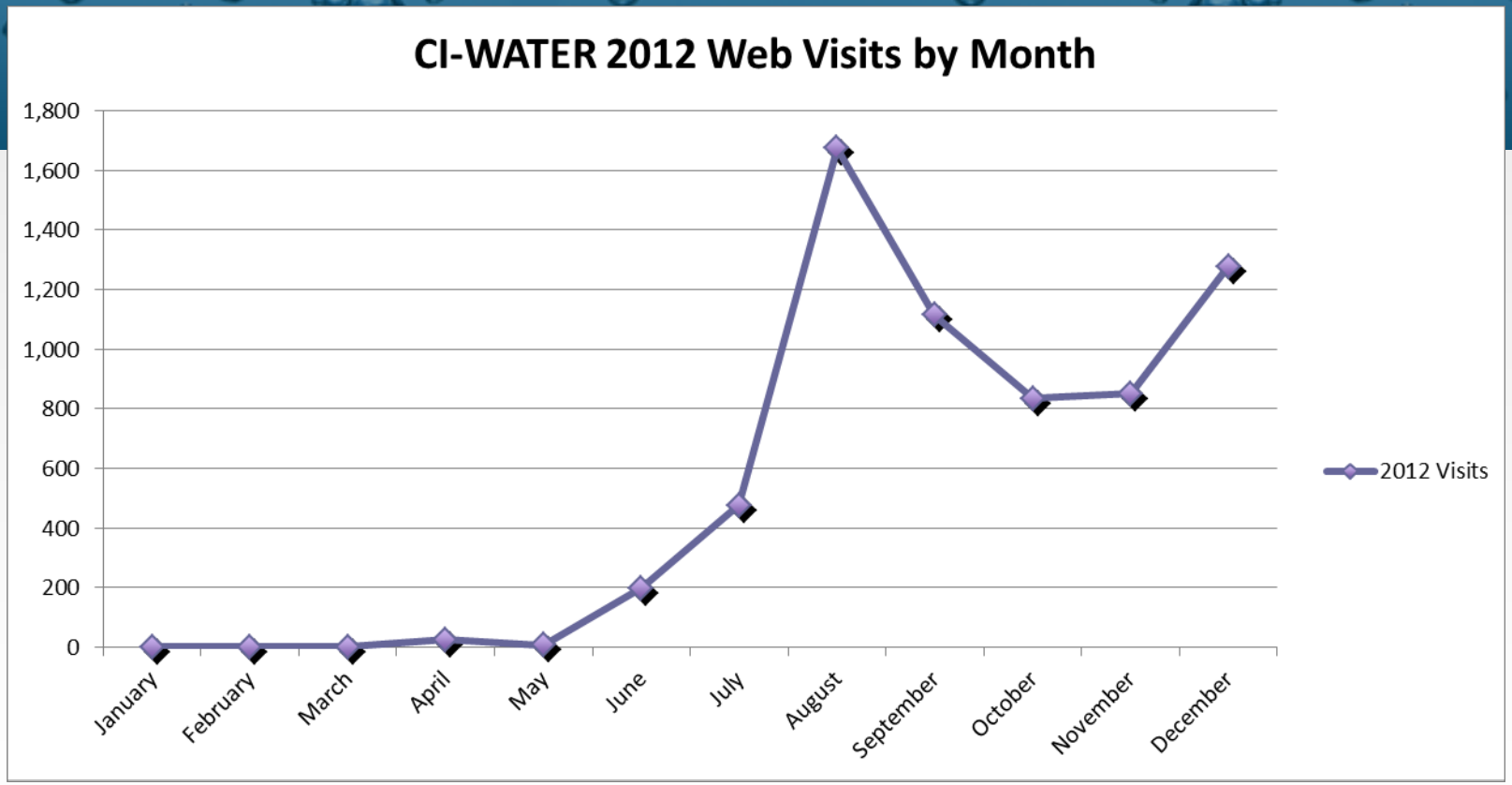
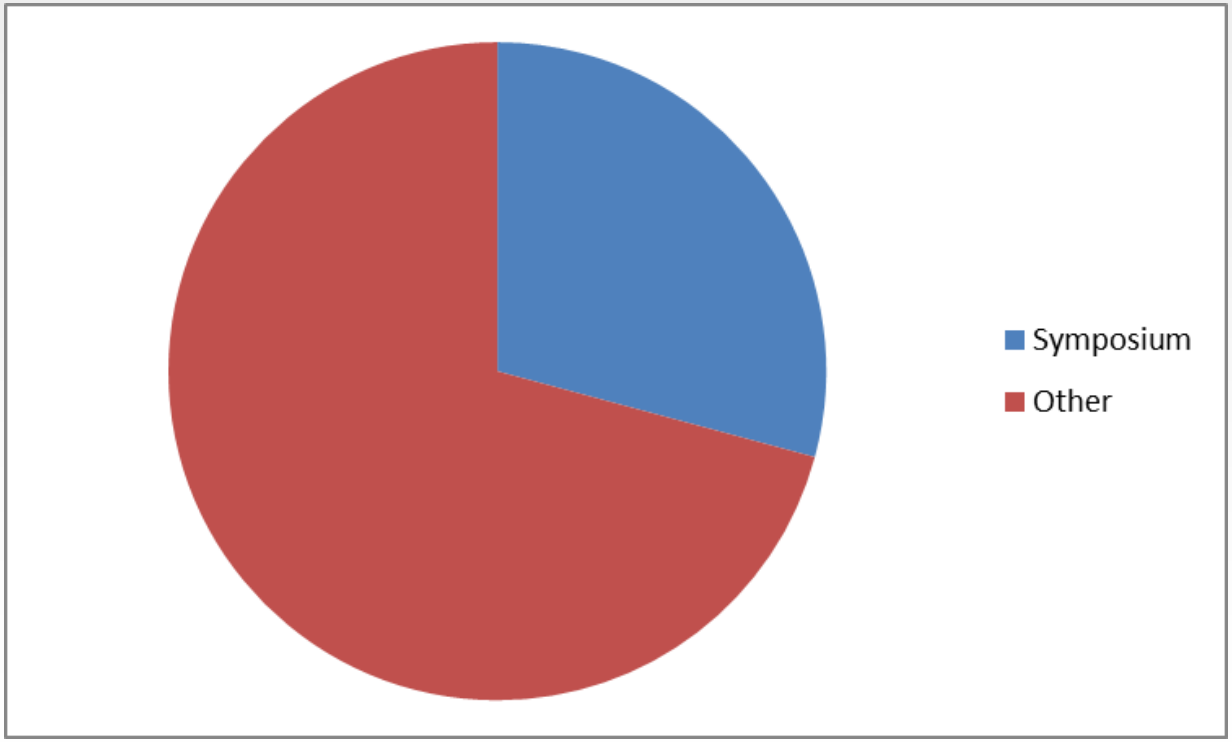


Peak Aug-12

- /symposium/education_event.html 681
- Home page 763
- /symposium/index.html 322
- /symposium/symposium_keynote.php 156

Symposium drives web traffic



Prof. relates hip-hop to science

Ainsley Young

by: Ainsley Young on September 5, 2012
inShare0

When most people think of hip-hop, they think might of music and dance styles, but Christopher Emdin sees the hip-hop culture as an innovative way to build trust and respect between students and educators.

About 30 people gathered in the Union Theatre hear Emdin, a professor of math, science and technology at Columbia University and director of Secondary School Initiatives at the Urban Science Education Center, speak about the importance of connecting with students as an educator.

"Most people associated hip-hop with deviant stuff, but Dr. Emdin makes use of hip-hop as a way to get kids interested in science," said Laura Hunter, director of instructional services for the Utah Education Network. "He draws parallels between characteristics of hip-hop and characteristics of science. For example, observation is a key part of both cultures."

Hip-hop can bridge cultural divides while providing a comfortable beginning space to spark discussions, Emdin said, by using interactions and technology to connect with an audience.
"Hip-hop is a culture … the culture of young people," he said.

Edmin said hip-hop as a way of understanding and uniting young people with old people, because of the simplicity of the language used within the music.

"By understanding [the culture of hip-hop], we create ways to communicate with students," he said.

[media-credit name="Chris Reeves" align="alignright" width="206"] Christopher Edmin, author of "Urban Science Education for the Hip-Hop Generation" and professor at Columbia University, lectures at the Union Theatre about science having a bad rap.

During his presentation, Emdin used quotes about school from popular hip-hop artists such as Kanye West, Jay-Z, Notorious B.I.G. and Jim Jones. Most of the quotes had negative connotations, which Emdin said educators must work to dispel.

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
  - May 29-30, 2013
  - 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

Curriculum Toolboxes

- K-12 schools in Utah and Wyoming
- Collaboratively built with Utah and Wyoming curriculum experts
- Distributed by Utah Museum of Natural History and Wyoming Science Zone
- Hand-on, teaching water science and concepts of modeling

Hydroinformatics Course

- Fall semester 2012
- Curriculum: information management, data modeling, collaboration
- Instruction: co-taught by USU, BYU, UofU, (four professors) cross-listed course
- Delivery: interactive video conferencing, Canvas LMS

Student comments

- “Each professor has a great skill in some specific part of the course, so students can see more diversity and depth.”
- “motivating”
- “Teaches you to think further outside the classroom”
- “We can connect and share information with anyone in the world”
- “This course has me thinking about information management from the start of a research project.”

Summer Workshops & Internships

- For Teachers: Genetic Science Learning Center at University of Utah
  - Secondary Earth Science or Environmental Science
  - June 24-28 in Salt Lake City
  - Learn about water science and collaborative draft curricula that explore water modeling for grades 9-12
  - Use of models to guide scientific decisions
- For Students: Summer research apprenticeship program in Wyoming

Do you want to spend the summer away from home, earn money for college, gaining insight into the college experience, and receive a fantastic educational experience? If yes, then you *have* to participate in the SRAP program at the University of Wyoming in Laramie!

SUMMER RESEARCH APPRENTICE PROGRAM

FOR MORE INFORMATION CONTACT:
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Laramie, WY 82071
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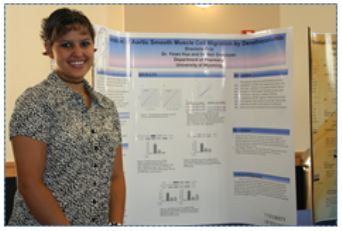
Summer Research Apprentice Program



Tel: 307-766-6059
FAX: 307-766-2061

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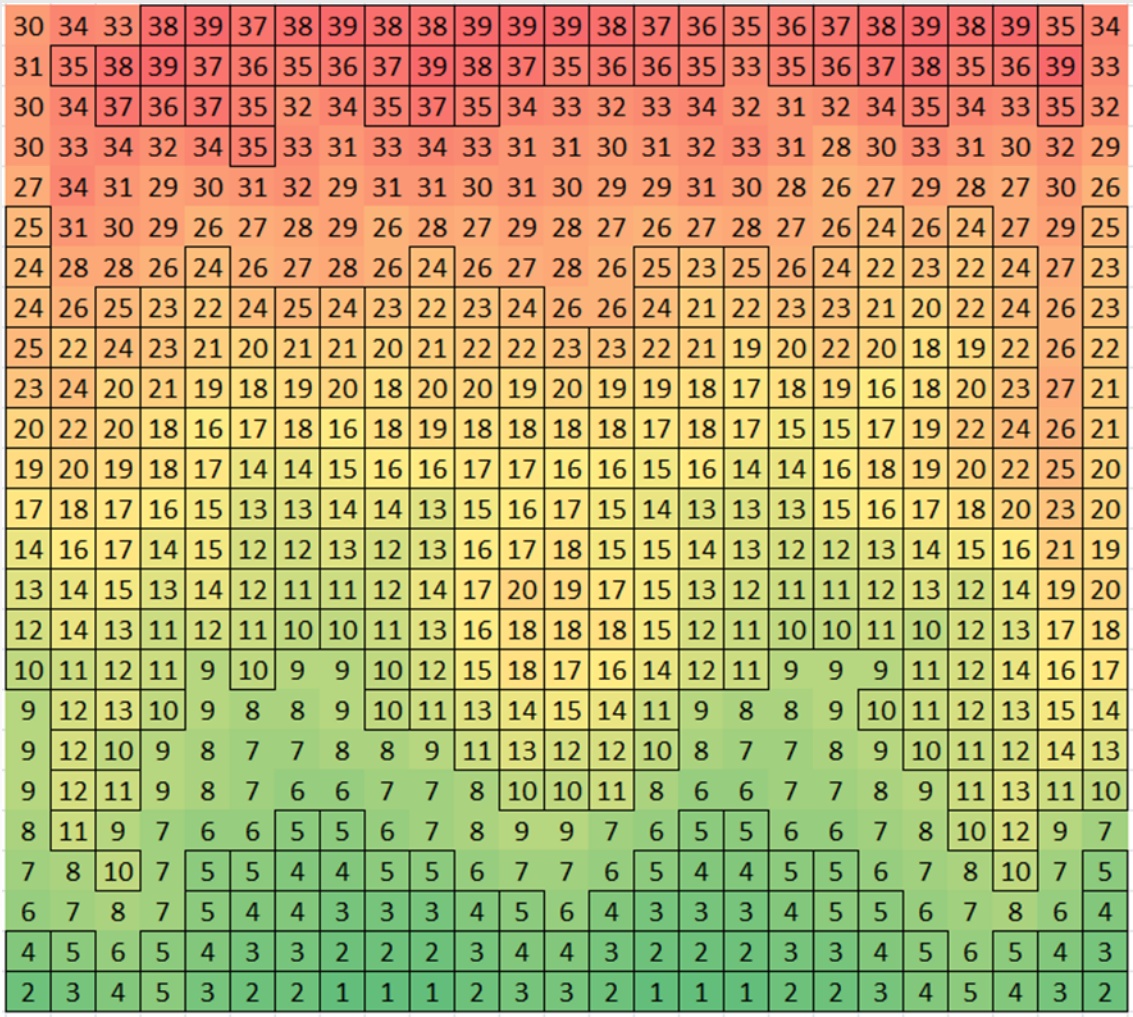
2013 Symposium: electronic posters from high schools and graduate students



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.

DATA

Season	Spring
Temperature	70
Wind direction	S
Air pressure	Low

CHALLENGE

Sky cover	6
Rain	0.8
Snow	0
Type	4-Thunder

DATA

Season	Spring
Temperature	60
Wind direction	S
Air pressure	Low

CHALLENGE

Sky cover	7
Rain	0.6
Snow	0
Type	1-Fog

DATA

Season	Fall
Temperature	65
Wind direction	E
Air pressure	Low

CHALLENGE

Sky cover	7
Rain	0.5
Snow	0
Type	1-Fog

DATA

Season	Fall
Temperature	60
Wind direction	S
Air pressure	Low

CHALLENGE

Sky cover	9
Rain	0.4
Snow	0
Type	4-Thunder

DATA

Season	Summer
Temperature	75
Wind direction	S
Air pressure	Medium

CHALLENGE

Sky cover	5
Rain	0.4
Snow	0
Type	4-Thunder

DATA

Season	Summer
Temperature	80
Wind direction	E
Air pressure	Medium

CHALLENGE

Sky cover	7
Rain	0.3
Snow	0
Type	1-Fog

DATA

Season	Fall
Temperature	55
Wind direction	W
Air pressure	Medium

CHALLENGE

Sky cover	6
Rain	0.3
Snow	0
Type	1-Fog

DATA

Season	Spring
Temperature	70
Wind direction	W
Air pressure	Medium

CHALLENGE

Sky cover	3
Rain	0.3
Snow	0
Type	4-Thunder

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.

Positives

- Delivering on goals in proposal
- Integrated team
- Innovative solutions
- Communication
  - Videos
  - RSS Feeds
  - Website
  - Social Media – Twitter @ciwater 93 followers
- Integration with iUTAH and Cyberinfrastructure EPSCoR projects

Challenges

- Launching website and project simultaneously
- Continued updates/refresh on website
- Balance during symposia events – internal communication & external informal science education
- Underserved, minorities & women
- Agile project management
- Reporting – Drupal effort with iUTAH being developed