Rain, Runoff, and Rivers: Understanding Watersheds

The Iowa floods of 2008 called our attention to a major environmental problem in a dramatic way. Many people were directly involved, many more indirectly. In presenting different ideas about dealing with the problem, they formulated issues and sub-issues. In part, differing ideas were formed as a result of a lack of knowledge of watersheds and the effects of rain, runoff, and rivers. The different beliefs and values of people were also responsible for the diversity among ideas on how to resolve the issues.

The purpose of this program is to help educators and their students understand watersheds, the differing beliefs about rain, runoff, and rivers, to make responsible decisions, and to take appropriate action to mitigate future flooding.

**ISSUE:** Should action be taken to change the runoff in our own watershed?

The ei model utilizes:
- Iowa Core Curriculum Essential Skills
- Rigor & Relevance
- Differentiated Instruction
- Inquiry Based Learning
- Learning Cycles

**Thematic Integration of:**
- M A T H
- H I M W
- RAIN
- S S E T
- S O C I A L S T U D I E S
- C C A O I R
- I N R A S
- G Y H
- U E
- C A R T D S
- E R
- A RUNOFF T
- RIVERS

**COURSE:**
Studies in Environmental Issues: Rain, Runoff, and Rivers: Understanding Watersheds
820186g Faculty of Science Education

**Two hours of graduate credit from UNI**

**COURSE EXPECTATIONS:**
- attend two weekend sessions:
- 1-modeling of instructional levels
- 2-sharing the teaching experience
- develop and teach unit between sessions
- give evidence of student action, e.g. (rain garden development)
- administer student assessment (pre-post)
- prepare brief written report of experience

**INSTRUCTIONAL MODEL**
- I - Issue Analysis
- II - Ecological Foundations
- III - Watershed Issues
- IV - Action Skill Development

**INSTRUCTIONAL SUPPORT:**
- resource materials for integrating disciplines
- staff visits, group meetings, phone contacts
- provide consultation and materials for action projects
- www.uni.edu/ceee/eii
- e-mail

**WORKSHOPS LOCATIONS:**

**Pleasant Hill, Iowa**
November 12-14, 2010 & April 15-16, 2011

**Mount Vernon, Iowa**
REFLECTIONS by Past Participants

“When I saw the requirements for the Core Curriculum last year … the eii workshops were ahead of their time … WAY TO GO! eii!”
Judy Smithson – Hiklin, Burlington Alternative High School

“By the way - the course was a perfect fit for my Life Science classes, and I have incorporated the issues based instruction into my curriculum and benchmarks. It is truly what the Iowa Core Curriculum is all about.”
Karen Hixson, Storm Lake Middle School

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INSTRUCTIONAL STAFF
Dr. Carl W. Bolwinkel eii director
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Barbara A. Bonnett eii Assoc. Director
Burlington, IA (elementary) UNI-CEEE

Rosalie J. Cochran eii Assoc. Director
Keota, IA (middle school) UNI-CEEE

Julie Delaney, St. Paul the Apostle
Davenport, Iowa (K-8)

Barb Ehlers, Upper Iowa University (Assistant Professor of Education)

Jeff Monteith, New Hampton Middle School
New Hampton, Iowa (teacher/leader)

Presenters
Steve Holland
Roadside Coordinator, DOT, Ames, IA

Mark Masteller
Roadside Design, DOT, Ames, IA

David Osterberg, Assoc. Prof. (clinical)
Occupational & Environmental Health
Environmental Consultant, U of IA.

Mark Pingenot
Field Coordinator, Trees Forever, Vinton, IA

Gerald F. Schepf
Executive Director, Keep Iowa Beautiful

Dr. S. Elwynn Taylor
Professor & Extension Agricultural Climatologist
Department of Agronomy, ISU

Connie Mutel
IIHR - Hydroscience and Engineering, U of IA.

Consultants
Tallgrass Prairie Center eii UNI
Daryl Smith, Director
Kirk Hendlerst, IRVM Mgr.
Greg Houseal, Iowa Ecosystem Project Mgr.

WORKSHOP SCHEDULE:

FRIDAY EVENING
5:00 Check-in, Registration, Activities, Dinner
6:45 Class until 9:00

SATURDAY
8:00 a.m. Class and activities
Lunch
Class and activities
Dinner
Class and activities (until 9:00 p.m.)

SUNDAY
8:00 a.m. Work Time
9:00 Class and activities
Lunch
Class and wrap-up by 3:00 p.m.

UPDATE SCHEDULE:

FRIDAY EVENING
6:00 Dinner
6:45 Update reports until 9:00 p.m.

SATURDAY
8:00 Breakfast
Class and activities
Lunch
Class and wrap-up by 3:00 p.m.

INSTITUTIONAL SUPPORT:
REAP-CEP (Resource Enhancement and Protection Conservation Education Program Grant)

LRTF (Living Roadway Trust Fund of Iowa)

Keep Iowa Beautiful
The University of Northern Iowa Center for Energy & Environmental Education (CEEE)

Iowa State University Extension Education
University of Iowa, Occupational and Environmental Health

INSTITUTIONAL SUPPORT:

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WORKSHOP SITE/DATES: check one
Sleep Inn, Pleasant Hill, Iowa
NOV. 12-14, 2010 & APR. 15-16, 2011
Sleep Inn, Mount Vernon, Iowa

YOUR NAME _______________________________________

HOME ADDRESS ____________________________________

CITY/STATE/ZIP ____________________________________

HOME PHONE W/AREA CODE __________________________

OFFICE PHONE W/AREA CODE _________________________

E-MAIL ____________________________________________

COURSE/GRAD/EDU TAUGHT __________________________

SCHOOL __________________________________________

SCHOOL ADDRESS __________________________________

CITY, STATE, ZIP __________________________________

COUNTY

FEES/PAYMENT OPTIONS:
Registration fee $198. Grants (and registration fee) cover all costs including: TWO HOURS OF UNI GRADUATE CREDIT, materials, resource binder, meals, snacks, meeting facilities and motel lodging. (Audits & other types of credit are not available.)

Payment options include: (check one)

____ $98 deposit check.
Check payable to UNI. $100 balance due at workshop.
Deposit refund made if a replacement is available.

____ $198 invoice to school ____________________________

PREFERENCES: Please answer all questions.

May we include your name, address, phone and e-mail address on a campus list? YES NO

Vegetarian meals desired? YES NO

Do you have other dietary needs? Please list ________________________________

Do you need lodging? YES NO: female male
Do you prefer a single room? (extra charge) YES NO

Roommate request? (Lodging will be reserved as a block.) YES NO

Fill out form completely, detach and mail to:
DR. CARL W. BOLLWINKEL
CENTER FOR ENERGY AND ENVIRONMENTAL ED. (CEE)
UNIVERSITY OF NORTHERN IOWA
CEDAR FALLS, IA 50614-6293

Environmental Issues Instruction
- a process
- experiential teaching/learning
- a model of thematic instruction
- teaching ecological concepts by integrating disciplines
- development of teacher/leaders
- analysis of issues
- responsible environmental action
- www.uni.edu/ceee/eii

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