

Burroughs Wellcome Fund Summer Workshop
“Learning Earth Science the Fun Way: Identifying Problems and Posing Solutions”

Center of Excellence in Remote Sensing and Education Research
Elizabeth City State University - July 31 – August 11, 2006

Department of Geological, Environmental and Marine Sciences (GEMS)
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AGENDA

Monday, July 31, 2006

- 7:00 am – 8:30 am** **Breakfast (Bedell Cafeteria)**
- 8:30 am – 9:00 am** **Networking (CERSER Lab)**
- 9:00 am – 9:10 am** Greetings – CERSER
Dr. William Porter, Project Director
- 9:10 am – 9:30 am** Introductions of Project Participants
Project Staff
School Teacher Mentors and Students
- 9:30 am – 9:45 am** Workshop Overview
Dr. Porter
- 9:45 am – 10:15 am** Pre-workshop Survey, Tour of Facilities
- 10:15 am – 10:30 am** **BREAK**
- 10:30 am – 12:00 pm** Introduction to Problem-Based Learning (PBL)
Dr. Jim Botti, Instructional Specialist
- 12:00 pm – 1:30 pm** **LUNCH (Bedell Cafeteria)**

Monday, July 31, 2006 (Continued)

- 1:30 pm – 3:00 pm** PBL Exercises
Dr. Botti
- 3:00 pm – 3:15 pm** **BREAK**
- 3:15 pm – 3:45 pm** **OPEN**
- 3:45 pm 4:15 pm** Directives for Group Projects:
Mr. Ernest Hughes and Ms. Jacklyn James
- 4:15 pm – 4:30 pm** Scientific Journals
Dr. Porter

Tuesday, August 1, 2006

- 7:00 am – 8:30 am** **Breakfast (Bedell Cafeteria)**
- 8:30 am - 9:00 am** **Networking (CERSER Lab)**
- 9:00 am – 10:15 am** PBL Exercises Hands-on
Dr. Botti
- 10:15 am – 10:30 am** **BREAK**
- 10:30 am – 12:00 pm** Completion of PBL Exercises

- 12:00 pm – 1:30 pm** **LUNCH (Bedell Cafeteria)**
1:30 pm – 2:00 pm Earth Science Content and the Scientific Method
Dr. Thomas Rossbach
- 2:00 pm – 3:00 pm** Earth Science Exercises
Dr. Rossbach
- 3:00 pm – 3:15 pm** **BREAK**
3:15 pm – 3:45 pm Earth Science Topics
Dr. Rossbach
- 3:45 pm – 4:15 pm** Discussion on Group Project (for presentation via Power Pt.)
Mr. Hughes and Ms. James
- 4:15 pm – 4:30 pm** **Mentor/Student discussions on selecting an earth science topic**

Wednesday, August 2, 2006

- 7:00 am – 8:30 am** **Breakfast (Bedell Cafeteria)**
8:30 am – 9:00 am **Networking (CERSER Lab)**
9:00 am – 10:15 am Learning Earth Science with GIS:
Landsat and/or aerial photography of Dismal Swamp
Mrs. Julie Stamper, Pasquotank County GIS Coordinator
- 10:15 am – 10:30 am** **BREAK**
10:30 am – 12:00 pm GIS Exercises:
BasinPro ArcGIS activity – wetland and hydrology layers
Mrs. Stamper
- 12:00 pm – 1:30 pm** **LUNCH (Bedell Cafeteria)**
1:30 pm – 2:00 pm Mapping Coastal Habitats with GPS technology & Applications
Mrs. Elizabeth Noble GIS Instructor, GEMS Department
- 2:00 pm – 3:00 pm** Hands-on GPS Mapping on ECSU Campus
Mrs. Noble
- 3:00 pm – 3:15 pm** **BREAK**
3:15 pm – 3:30 pm Identification of Group Projects
Dr. Porter
- 3:30 pm – 4:15 pm** Review of Individual Group Projects
Mr. Hughes and Ms. James
- 4:15 pm – 4:30 pm** Logistics of Dismal Swamp Field Trip
Mrs. Noble

Thursday, August 3, 2006

- 7:00 am – 8:30 am** **Breakfast (Bedell Cafeteria)**
8:30 am – 9:00 am **Networking (CERSER Lab)**
9:00 am – 12:00 pm Dismal Swamp Field Trip: Plant, Soil, and Micro-
Organism collections
Mrs. Noble and Staff
- 12:00 pm – 1:00 pm** **BAG LUNCH**
1:00 pm – 2:30 pm Dismal Swamp Field Trip: GPS Mapping – trail,
Boardwalk, interesting point data (wetland plants)
Mrs. Noble and Staff
- 2:30 pm – 3:00 pm** Travel to CERSER Lab

- 3:00 pm – 3:15 pm **BREAK**
 3:15 pm – 4:00 pm Initial Analysis of Swamp Data
 4:00 pm – 4:30 pm **Work on Group Projects**

Friday, August 4, 2006

- 7:00 am – 8:30 am **Breakfast (Bedell Cafeteria)**
 8:30 am – 9:00 am **Networking (CERSER Lab)**
 9:00 am – 12:00 pm Dismal Swamp Data Organization and Summaries & web-page additions:
 - Plant identification and soil analyses
 - GPS mapping data input to GIS database
 - GIS map production
 Mrs. Noble and Staff
 12:00 pm – 1:30 pm **LUNCH (Bedell Cafeteria)**
 1:30 pm – 2:30 pm Currituck Sound SAV Living Resources Lecture and GIS Exercises
 - Aerial Photography Interpretation with ArcGIS
 - USFWS Mackey Island, Back Bay Wildlife Refuge Internet Fact Finding
 Mrs. Noble and Staff
 2:30 pm – 3:00 pm SAV ID with ECSU Herbarium Samples and SAV ID Books/Webpages
 3:00 pm – 3:15 pm **BREAK**
 3:15 pm – 4:00 pm Work on Group Projects
 4:00 pm – 4:30 pm Logistics of Currituck Sound Tour
 Mrs. Noble

Monday, August 7, 2006

- 7:00 am – 8:30 am **Breakfast (Bedell Cafeteria)**
 8:30 am – 9:00 am **Networking (CERSER Lab)**
 9:00 am – 12:00 pm Travel to Currituck Sound:
 - Ferry to Mackey Island Wildlife Refuge Office on Knotts Island
 Mrs. Noble
 12:00 pm – 1:00 pm **BAG LUNCH**
 1:00 pm – 3:00 pm Data Gathering at Currituck Sound:
 - GPS mapping – SAV polygons, wetland plant (Phragmites a.) SAV point data
 Staff, Student Participants, and Teacher Mentors
 3:00 pm – 4:15 pm Return to CERSER Lab
 4:15 pm – 4:30 pm **OPEN**

Tuesday, August 8, 2006

- 7:00 am – 8:30 am **Breakfast (Bedell Cafeteria)**
 8:30 am – 9:00 am **Networking (CERSER Lab)**
 9:00 am – 10:15 am Currituck Sound Data Organization and Summaries, Webpage/Additions:

- SAV ID and mount, soil sample analyses
Water column data graphs

Staff, Student Participants, and Teacher Mentors

10:15 am – 10:30 am BREAK

10:30 am – 12:00 pm - GPS mapping data input to GIS database

- Poster production

Staff, Student Participants, and Teacher Mentors

12:00 pm – 1:30 pm LUNCH (Bedell Cafeteria)

1:30 pm – 3:00 pm Review of Group Projects

Staff, Student Participants, and Teacher Mentors

3:00 pm – 3:15 pm BREAK

3:15 pm – 4:15 pm Work on Group Project Presentations

Staff, Student Participants, and Teacher Mentors

4:15 pm – 4:30 pm Logistics of Downtown Tours: Pasquotank GIS Office,
Museum of the Albemarle and Port Discovery

Dr. Porter

Wednesday, August 9, 2006

7:00 am – 8:30 am Breakfast (Bedell Cafeteria)

8:30 am – 9:00 am Networking (CERSER Lab)

9:00 am – 9:10 am Review of Today's Activities

Dr. Porter

9:10 am – 10:15 am Group Project Presentation Activities

Mr. Hughes and Ms. James

10:15 am – 10:30 am BREAK

10:30 am – 10:45 am Travel to GIS Office

Mrs. Noble, Coordinator

10:45 am – 12:00 am Review of GIS facilities, Data, Maps, and Applications

Mrs. Stamper

12:00 pm – 1:30 pm LUNCH (Local Restaurant)

1:30 pm – 1:45 pm Travel to Albemarle Museum

Dr. Porter, Coordinator

1:45 pm – 2:15 pm Tour of Albemarle Museum

Ms. Charlotte Patterson, Educator

2:15 pm – 2:30 pm Travel to Port Discovery

Dr. Porter, Coordinator

2:30 pm – 3:00 pm Port Discovery Discussion

Mrs. LuAnne Pendergraft

3:00 pm – 3:30 pm Return to CERSER Lab

3:30 pm – 4:30 pm OPEN

Thursday, August 10, 2006

7:00 am – 8:30 am Breakfast (Bedell Cafeteria)

8:30 am – 9:00 am Networking (CERSER Lab)

9:00 am – 10:15 am Planetarium Visit

Ms. Jennifer Thoms, Planetarium Assistant

10:15 am – 10:30 am **BREAK**
10:30 am – 11:30 am Physics and Chemistry in Earth Science
Dr. Leon Pringle, Instructor in GEMS Department
11:30 am – 12:00 pm **OPEN**
12:00 pm – 1:30 pm **LUNCH (Bedell Cafateria)**
1:30 pm – 3:00 pm Work on Group Project Presentations
Student Participants
3:00 pm – 3:15 pm **BREAK**
3:15 pm – 4:15 pm Individual Sessions on Group Project Presentations
Student Participants, Teacher Mentors, Staff
4:15 pm – 4:30 pm Directives for Group Project Presentations
Dr. Porter, Staff

Friday, August 11, 2006

7:00 am – 8:30 am **Breakfast (Bedell Cafeteria)**
8:30 am – 9:00 am **Networking (CERSER Lab)**
9:00 am – 10:15 am Group Project Presentations
10:15 am – 10:30 am **BREAK**
10:30 am – 12:00 pm Group Project Presentations
12:00 pm – 1:30 pm **LUNCH (Blue Room)**
1:30 pm – 3:00 pm Group Project Presentations
3:00 pm - 3:15 pm **BREAK**
3:15 pm – 4:00 pm SEP Student Feedback Survey/Post-Workshop Survey
4:00 pm – 4:15 pm Review of Academic Year Program
4:15 pm – 4:30 pm Travel to Bedell Cafeteria
4:30 pm – 5:30 pm **Dinner (Bedell Cafeteria)**
Award Certificates and Stipends