EMPACTS Workshop June 2012
“Mini-Project” for Faculty Participants

Team members:
Eric Frey, NWACC Tech Corps Student Facilitator
Allan Lemmon, PTC
Alex Stratigakis, NWACC
Wendi J.W. Williams, NWACC

Our team consists of faculty members from both NorthWest Arkansas Community College (NWACC) and Pulaski Technical College (PTC), representing faculty with little to moderate experience in using EMPACTS with students. Therefore, we chose to focus our project on a tutorial presentation for our Friday event.

The purpose of our project is to create a tool kit which contains the structure and basic content utilizing the EMPACTS principles for team project creation and supervision. The tool kit contains evaluation templates and rubrics, student project examples, student report/document templates, and one example of an instructor’s term paper guidelines.

We propose that the EMPACTS group ultimately produce a CD or other offline format to supplement the information available at https://www.nwacc.edu/web/empacts/index and elsewhere.

29 June 2012
The main link to the EMPACTS site is housed on the NWACC Division of Math and Science homepage located at http://www.nwacc.edu/web/academics_scimath/index.php.

You can find a link online to faculty form examples...
EMPACTS Initial Project Proposal and Presentation:

C. Dianne Phillips, EMPACTS Facilitator, Science and Math Faculty
Melody Thomas, EMPACTS, Science and Math Faculty
NorthWest Arkansas Community College, Bentonville, AR

I. Title Page  — Name of project, course, instructor and team members
II. Introduction — Introductory paragraph with clear thesis statement
III. Project Overview - Statement of project objective(s) in broad terms.
IV. Project Objectives or Goals:

Discuss how the project will meet the EAST/EMPACTS objectives.

A. Community: Service to the community?

   • Explain how the community will be served through the project.
   • List community contacts and collaborators that you have either contracted or intend to collaborate with in the project. List names, businesses and other information.

B. Curriculum: Course Objectives?

   • Present the course objectives or goals that you intend to achieve through the experience of doing the project.
   • Discuss how the project meets the course content objectives of the instructor.

C. Technology: Resources and Technology to be used.

   • Introduce the technology that you intend to use in your project and any training you may need.
   • Provide the name of software and hardware, etc. to be used.
   • Provide examples of how the technologies have been used in previous projects.

D. Skills you intend to develop as a team and as individuals

   • Team
   • Individual – Personal and Professional
   • Technology
   • Communication
   • Organizational

V. Methodology: How will you do it?

   • The process you intend to use to complete the project
   • Time Line – when you will perform each task in the process
   • Personnel and Division of Labor – who did what?

VI. Expected Outcome: What products do you expect to generate?

   • Product – website, brochures, maps, scholarships, videos, etc.

VII. References: websites used, web resources used, personal communications, etc.
Example of a Student Presentation Matching Form:

**Environmental Geology**

D. Phillips
Natalie Walker, Liss Parrish, Haley Herbert & Mitchell Cooper

**Waste Water Treatment Plant**

**Intro to Waste Water**

Why is a waste treatment plant important? A wastewater treatment plant is important because it purifies the water and makes it safe for animals and fish. It is also important because it removes the solids from the liquids and makes them into a rich compost. If the solids are not taken out the streams would backup and become clogged, not to mention killing many fish and wildlife.

**Community**

- Field trip guide was developed for future classes
- Contacts were made that will lead to future field trips.
- Waste water treatment plant cleans all of the waste water that currently flows Bentonville.
- Turn solid waste into biomass which is used for fuel.

**Curriculum**

**Learned...**

- How waste water treatment plants operate.
- About the design capacity and the average daily flow.
- Bentonville has an Activated Sludge – Extended Aeration plant.
- Security issues surrounding water treatment plants.

**Technology**

- We used power point, Microsoft word, and Google Earth.
- Cameras.
- Internet to research.
- GPS acquisition.

**Methodology - How**

- contacted
- researched
- coordinated
- collaborated
- experienced

- Contacted water treatment officials
- Researched water treatment plant operations
- Created field guide

**Skills**

- We have learned to work with others despite our differences.
- Communication skills were developed.
- Speaking in front of a group.
- Organization.
- How to complete a project that includes many individuals.

**Project Results**

- We made an outline for future field trips for environmental geology students.
- We made power points for future students to understand wastewater treatment plants.
- The importance of a waste water treatment plant.

**Future Project Ideas**

- Future students could get a hands on experience on testing the quality of the water at the inflow and outflow.
- Test the environmental impacts of the treated water at the outflow.
- Find and discuss Aerobic Digestion.
- Visit a water treatment plant for drinking water.

**Acknowledgements**

- Dianne Phillips, EMPACTS Facilitator, Science and Math Faculty
- Leon Leonard, Wastewater Operations Foreman, Biochemical aspects of wastewater treatment
- Chris Earl, Wastewater Maintenance Foreman, Mechanical aspects of wastewater treatment

**Works Cited**

- Google Earth
- City of Bentonville Tour Handout
Student Release Form

Dear Parent/Guardian:

We are participating in a project requiring pictures of lessons taught in your child’s classroom for our Math Structures II class at Northwest Arkansas Community College. Although the pictures involve both the teachers and various students, the primary focus is on the teacher’s instruction, not on the student in the class. In the course of taking pictures, your child may appear in a photograph. No student’s name will appear on any materials that are submitted and all materials will be kept confidential. The form below will be used to document your permission concerning taking photographs of your child in a classroom environment.

Thank You,

________________________________________________________

Permission Slip

Student Name: __________________________________________

Teacher/Grade: __________________________________________

I am the parent/legal guardian of the child named above. I have received and read the letter regarding possible photographs of my child.

☐ I DO give permission to you to include my child’s picture as he or she participates in a class conducted at ____________ by ____________ and ____________, students of NWACC.

☐ I DO NOT give permission to you to include my child’s picture.

Signature _________________________ Date ________________

(Parent/Guardian)

_________________________

Melissa Curiel, EAST/EMPACTS Project, Math Structures II, Northwest Arkansas Community College, Bentonville, AR
EMPACTS PROJECT UPDATE

Melody Thomas, EMPACTS, Science and Math Faculty
C. Dianne Phillips, EMPACTS Facilitator, Science and Math Faculty
NorthWest Arkansas Community College

PROJECT UPDATE: (25 points)

I. Project Title and Members

II. Project Description

III. What you have accomplished so far?

IV. Contacts made

V. Technology used

VI. Course Content developed

VII. Problems

VIII. Changes or modifications

IX. What’s the next step?

X. Assessment of group and individual performance
I. In writing, try to express the problem your team is having. Try to avoid blaming specific people. For example…. Communication, organization, time management, …..etc.

II. What would you consider a solution to the problems your team is experiencing?

III. What is your role in solving this problem?

IV. From your perspective, what is your role in the team?

V. What exactly are you doing for the team?
You need to evaluate the performance of your group and yourself. Please use the following rubric for evaluation.

Your Name: ____________________

I. What score would you give yourself on the following:

<table>
<thead>
<tr>
<th>Participation in group work</th>
<th>Did you work with the group in preparing the project?</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual contribution to project content</td>
<td>Did you have an equal share in the group’s work?</td>
<td>25</td>
</tr>
<tr>
<td>Overall score?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>____________________</td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

III. How would you score the performance of other members of your group?

<table>
<thead>
<tr>
<th>Group member</th>
<th>Participation in group work</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Group member</td>
<td>____________________________</td>
<td></td>
</tr>
<tr>
<td></td>
<td>____________________________</td>
<td>25</td>
</tr>
<tr>
<td>2. Group member</td>
<td>____________________________</td>
<td></td>
</tr>
<tr>
<td></td>
<td>____________________________</td>
<td>25</td>
</tr>
<tr>
<td>3. Group member</td>
<td>____________________________</td>
<td></td>
</tr>
<tr>
<td></td>
<td>____________________________</td>
<td>50</td>
</tr>
</tbody>
</table>

Do this for each of your group members and average all of member scores together.

Take your individual score and add to the average of their scores. What did you get? 😊

Now rate the overall performance. What grade do you think you deserve for this project based on your self evaluation?

VI. Score ____________________

100
SELF EVALUATION FORM
Melody Thomas, EMPACTS, Science and Math Faculty
NorthWest Arkansas Community College

Project Title: ___________________________________________ Name_____________________________

Group Members: __________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Please respond briefly to the following questions concerning your project progress.

**Part I: EAST/EMPACTS Objectives**
1. How did you contribute to team development? How did you collaborate and communicate?

2. How did you use technology? What resources in the East lab were utilized?

3. Did you contact anyone in the community?

**Part II: Project Tasks**
1. What tasks did you work on/complete?

2. What research did you do?

**Part III: Evaluation**
1. Evaluate each member of your team’s contribution. Give a score from 1 to 5 with 5 being the highest.

2. Evaluate your contribution. Give a score from 1 to 5 with 5 being the highest.

**Part IV: Journal**
Please write your thoughts on your project.
# PEER EVALUATION FORM

Melody Thomas, EMPACTS, Science and Math Faculty  
NorthWest Arkansas Community College

<table>
<thead>
<tr>
<th>Evaluator:</th>
<th></th>
<th></th>
<th>(15 points)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Name:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. **Purpose:** Was the purpose of the project clearly defined? ________ (1-4 points)

B. **Outcome:** Was the project outcome clearly presented? ________ (1-4 points)

C. **Content:** Were the following project components clearly presented?

1. **Physics content:** What principles/laws of physics were utilized? ________ (1-4 points)

2. **Technology incorporated:** What type of technology was used in developing the project? ________ (1-4 points)

3. **Community aspect:** What group fills the role of community that would benefit from the outcome of this project? ________ (1-3 points)

D. **Power Point Presentation:** Assess the following aspects of the presentation.

1. Was/were the speaker(s) easily heard? Did they conduct themselves in a professional manner? ________ (1-4 points)

2. Were the slides (or other technology) clear and easy to follow? ________ (1-4 points)

3. Was there an appropriate use of sound and/or animation? ________ (1-4 points)

4. Was the presentation of an appropriate length? (15-20 minutes) ________ (1-4 points)

E. **Additional Comments:** What did you like/not like about the project/presentation?

**Total:** ________ (35 possible)
EMPACTS Final Project Report and Presentation: (100 points)

C. Dianne Phillips, EMPACTS Facilitator, Science and Math Faculty

Melody Thomas, EMPACTS, Science and Math Faculty

NorthWest Arkansas Community College, Bentonville, AR

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- Explain how the community was served through the project.
- List community contacts and collaborators

B. Curriculum: Course Objectives?

- Present the course objectives or goals that you achieved through the experience of doing the project.
- Discuss how the project met the course content objectives of the instructor.

C. Technology: Resources and Technology you used.

- Introduce the technology that you used in your project and any training you may have received.
- Provide the name of software, hardware, etc.

D. Skills you developed as a team and as individuals ie....

- Team
- Individual – Personal and Professional
- Technology
- Communication
- Organizational
V. **Methodology:** How did you do it?

- The process used to complete the project
- Personnel and Division of Labor – who did what?

VI. **Project Results:** What did you do as a team? What did you experience? What did you gain?

- Product – website, brochures, maps, scholarships, videos, etc.
- Process - experience – share your personal stories

VII. **Future Project Ideas:** How could a future group expand on the project that you started?

VIII. **Acknowledgements:** Acknowledge all resources, personal communications...anyone who helped you in any way.

IX. **Appendices:** Attachments

- Maps, brochures, images, flyers, websites, videos, etc....
- Power Point Slides – 6 to a page.

**Written Report** (25 points)

Expanded outline form from outline provided in rubric.

**Power Point Slides** (25 points)

You should also put together power point slides in order to start your project presentation. The slides should follow the same outline given in the rubric.

**Attachments:** maps, images, brochures, flyers, ......(50 points)
<table>
<thead>
<tr>
<th>EMPACTS Final Presentation</th>
<th>GEOL 1134</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title Page</strong> name of project, course, instructor, team members</td>
<td>Comments</td>
<td>Pts. Poss.</td>
</tr>
<tr>
<td><strong>Introduction</strong> Introductory paragraph w/clear thesis statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Overview</strong> statement of objectives in broad terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Community</strong> how community was served; list contacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Curriculum</strong> discuss how project met course content objectives; present goals achieved thru experience of project</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technology</strong> that you used; training received; name of software</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Skills Developed</strong> team &amp; individual; technology, communication, organizational</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Methodology</strong> process used to complete project; who did what; timeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Results</strong> what you did as a team, what did you experience/gain, personal stories, products</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acknowledgements</strong> all resources and personal communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appendices</strong> maps/brochures/images/websites/videos/etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other important non-proposal information:

Your project will result in up to three items by two deadlines. You will need to complete your paper and presentation and have those files uploaded EMPACTS Coordinator Ms. C. Dianne Phillips before 8 May. Then your team will make a 20 minute presentation during your scheduled final exam day/timeslot in the Finals week (8 May 6:30 – 8:30 PM).

What you need to submit to the link provided in the Assignment Tool by the announced deadline:

1) a single term paper submitted by the whole team.
   - cover page with project title, GEOL 1114 with Dr. Wendi J. W. Williams, and each team members first and last names indicated. Also put the date.
   - 4 to 5 text pages (one inch margins, double-spaced, 12 pt font Arial or Times New Roman, use APA style (not MLA) )
   - reference page using APA style
   - page(s) with tables, figures, and/or images that are referenced in the text

   Please note that you will need to submit the electronic version online through the link that has been set up in the Assignment tool. Only one person from your team needs to submit this; I will credit each member when assigning earned scores. (Note: I would like you to provide a single hardcopy printout to me before you start your presentation on our final exam timeslot.)

2) Once you write your paper, then you will develop the presentation that all team members will share in building and presenting. Many folks use PowerPoint, for example…however, other projected displays may be used such as narrated movie, using Moviemaker or Prezi (see http://prezi.com/ …or propose another technology to use. Your presentation should provide essential content, include images and some written information (bulleted sentence, but not long paragraphs), and can use imbedded movie clips you develop or acquire during the research phase of your work. You will have ~20 minutes to share your project. The majority of that time needs to be your work…narration and/or live presentation, with minimal reliance on others' recorded work (such as *just* standing there while some YouTube video runs).

3) Depending upon what you propose (see following Proposal Guide), I would like you to develop a two-page brochure that could be printed as a double-sided, tri-fold brochure. You will save it as a .pdf.

All of your project products will be uploaded to the NWACC EMPACTS site for this semester. These are available to the public, and your names will be indicated. So…do very good work. Your efforts will be potentially visible to the “world” with your names and NWACC indicated on that potentially downloadable work.

Example of a student project for NWACC General Geology GEOL 1114 course that incorporates several products: http://faculty.nwacc.edu/EAST_original/Fall%202011/Geology%20Williams/David%20S/Tanyard%202.htm
Thank you to the NWACC workshop facilitators:

Marv Galloway
Dianne Phillips
Regina Thomason*