2013

Formal and Informal Environmental Education in the Northern Gulf of Mexico

Brown S

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With funding from the Gulf of Mexico Program-Environmental Education Partnership and in partnership with the Grand Bay National Estuarine Research Reserve, the Center for Science and Mathematics Education at The University of Southern Mississippi provides environmental education for under-represented and underserved K-12 students in Alabama, Louisiana and Mississippi, and the general public of the Gulf Region through teacher workshops, school visits, Coastal Ecology Camps and community evening programs. All 10 participating schools have minority enrollment greater than 50 percent and include Alexandria Middle Magnet School, Alexandria, La.; Sherwood Middle Magnet School, Baton Rouge, La.; Gulfport Central Middle School, Gulfport, Miss.; N.R. Burger Middle School, Hattiesburg, Miss.; West Marion Elementary School, Foxworth, Miss.; Katherine H. Hankins Middle School, Theodore, Ala.; Donnie Bickman Middle School, Shreveport, La.; Ferriday Junior High School, Ferriday, La.; T.H. Harris Middle School, Metairie, La.; and Tupelo Middle School, Tupelo, Miss.

During subsequent school-year visits to schools, project staff lead students in conducting water quality and land cover GLOBE protocols or bring Touch Tank for student engagement. All 10 participating schools have a minority enrollment greater than 50 percent.

**Representative Teacher Comments:**

*T.H. Harris Middle School, Metairie, La.*

“I had great fun in learning all of the information. I can even watch a few things on my laptop at home!”

“I have learned a lot more from this workshop than in any course I have taken at school. I want to learn more on the field experience in the very helpful and easy to use material that the course was.”

“I thought the experience was outstanding. Thank you!”

“My Coast” events (on topics such as salt marshes, estuaries, bats, owls, flounders, etc.) with a total of 853 people in attendance. Funding has also provided 11 community evening experiences at the Grand Bay NERR, Ship Island or the Pascagoula River. Post-test scores of both teachers and students show significant gains in content knowledge, and surveys used to collect qualitative data show enhanced appreciation for the environment. Teacher workshops are provided each summer June 8-12, 2009 in Ocean Springs, Miss.

**Table 1:** Parent/Post Test Results for the Coastal Science Mini-Camps

<table>
<thead>
<tr>
<th>School Site Visit</th>
<th>Date</th>
<th>Pretest Mean</th>
<th>Post-test Mean</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherwood Middle Academy Magnet School</td>
<td>April 21, 2011</td>
<td>4.94</td>
<td>11.07</td>
<td>p &lt; 0.01</td>
</tr>
<tr>
<td>Tupelo Middle School</td>
<td>November 19, 2010</td>
<td>11.75</td>
<td>17.94</td>
<td>p &lt; 0.01</td>
</tr>
<tr>
<td>Gulfport Central Middle School</td>
<td>October 6, 2010</td>
<td>2.86</td>
<td>4.53</td>
<td>p &lt; 0.01</td>
</tr>
</tbody>
</table>

**School Partners**

- T.H. Harris Middle School, Metairie, La.
- Donnie Bickman Middle School, Shreveport, La.
- Tupelo Middle School, Tupelo, Miss.
- Alexandria Middle School, Alexandria, La.
- Sherwood Middle Academy Magnet, Baton Rouge, La.
- Gulfport Central Middle School, Gulfport, Miss.
- West Marion Junior High School, Foxworth, Miss.
- N.R. Burger Middle School, Hattiesburg, Miss.
- Katherine Hankins Middle School, Theodore, Ala.
- Coastal Science Mini-Camp
  - Date: October 23, 2010
  - School: West Marion Elementary School
  - Location: Gulfport, Miss.
  - Topics: Coastal Science

**Representative Teacher Comments:**

*West Marion Elementary School, Gulfport, Miss.*

“I have learned a lot of information from a small area such as the types of organisms, trees, and the amount of pollution. I thought it was fun because we get to measure new things, and it was very interesting. It really helped us understand our study area with flags. I liked using the spectrophotometer (to measure the amount of pollution) and other measurement tools. I liked looking for the wildlife in the stream in order to measure its overall health… And the little minnows.”

**Representative Teacher Comments from Students:**

*Donnie Bickman Middle School, Shreveport, La.*

“Thank you for the fun and interesting lessons! You gave us the chance, and they take the opportunity! Thank you again for a wonderful experience for us all!”

**Table 2:** Perceived Frequency of Teaching Concepts

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<th>Pretest Mean</th>
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<th>Significance</th>
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<tbody>
<tr>
<td>Pre-test Mean</td>
<td>16.6</td>
<td>23.4</td>
<td>p &lt; 0.01</td>
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**My Coast Public Outreach Events**

- **January 25, 2011**: Make Your Home More GREEN
  - News Article of Tupelo Middle School Site Visit
    - Date: September 19, 2011
  - Tupelo Middle School

**Representative Teacher Comments:**

*Sherwood Middle Academy Magnet School*

“I had great fun in learning all of the information. I can even watch a few things on my laptop at home!”

“I have learned a lot more from this workshop than in any course I have taken at school. I want to learn more on the field experience in the very helpful and easy to use material that the course was.”

“My Coast” events (on topics such as salt marshes, estuaries, bats, owls, flounders, etc.) with a total of 853 people in attendance. Funding has also provided 11 community evening experiences at the Grand Bay NERR, Ship Island or the Pascagoula River. Post-test scores of both teachers and students show significant gains in content knowledge, and surveys used to collect qualitative data show enhanced appreciation for the environment. Teacher workshops are provided each summer June 8-12, 2009 in Ocean Springs, Miss.

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