Place-Based Environmental Education on the Northern Cheyenne Reservation
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Introduction
The Northern Cheyenne Tribe, located on a reservation in southeastern Montana, are a culturally rich and historically significant people. Today they are confronted with problems in education, unemployment, health, and loss of culture, including native language. Half of the 10,000 members reside on the reservation and 63% of the population is below the age of 18. Incorporating place-based education—the unique history, environment, culture, economy, literature, and art—of their own “place” could encourage student achievements, community life, and ecological integrity.

Hypothesis
I therefore tested the hypothesis if childhood education of Northern Cheyenne includes place-based education of areas of polluted land within the reservation then there will be measurable impacts in their understanding and appreciation of the surrounding natural resources.

Materials and Methods
- Place based learning exercise with Northern Cheyenne children at Saint Labre Academy in Ashland, MT
- Interview with educators at Saint Labre Academy
- Research of peer-referred literature in ERIC and other databases

Table 1. Peer-Refereed Search for Information

<table>
<thead>
<tr>
<th>Database</th>
<th>Keyword or Phrases</th>
<th>Number of hits per keyword combination</th>
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<tbody>
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<td>Native American, education, pollution</td>
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<td>Education, children, and pollution</td>
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<td>ERIC</td>
<td>Place based learning, environment</td>
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</tbody>
</table>

Results and Discussion
Peer-referred research indicates students engaged in place-based learning gain an understanding and appreciation for their local communities as well as an understanding of self. Discussions with St. Labre 4th graders indicates interest of students in local resource degradation. Definitions of pollution from the children often pointed to world issues, not localized issues. Further research or implementation of place-based education is recommended for the Northern Cheyenne Tribe.

Recommendations
- Integrate place-based learning into Northern Cheyenne educational curriculum.
- Engage students on local resource function and management.

Literature Cited
- Chief Dull Knife College. 2008. We the Northern Cheyenne people.
- Semken, Steven, and Carol Butler Freeman. 2008 "Sense Of Place In The Practice And Assessment Of Place-Based Science Teaching." Science Education 92.6: 1042-1057.
- Zandvliet, David B. 2012 "Development And Validation Of The Place-Based Learning And Constructivist Environment Survey (PLACES)." Learning Environments Research 15.2: 125-140.

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