

The Science and Mathematics Teaching Center is pleased to invite you to:

Educating for Conservation: A Self-Study on Developing Anchoring Phenomenon-Based Curriculum Resources for the Western Tiger Salamander Integrating Biodiversity Research

Plan B Defense

for a

Masters of Science in Natural Science Education

Concurrent Major: Environment and Natural Resources

By Salma Valeria Macias Torres

Friday, April 26, 2024, at 2:00 PM in Classroom Building 113 and via Zoom

(if interested, please contact Salma smaciast@uwyo.edu for the Zoom link)

Abstract: Researchers and educators at the Biodiversity Institute, University of Wyoming recognized a need for devising more resources to foster awareness and educate the public about certain species unique to the state of Wyoming. Those efforts include an increase of pedagogical resources about species needing more resources and attention from the general public. The institute aims to increase the number of pedagogical resources for teachers and students in Wyoming to connect them to science and math concepts using local wildlife issues. This self-study explored my approach to developing anchoring phenomenon-based curricular resources using the education theories of social constructivism, place-based education, and problem-based learning. In addition, these curriculum resources are based on the three-dimensional learning of the Next Generation Science Standards. The scenario of the local phenomenon is the migration of western tiger salamanders in LaBonte Park, Laramie, and human intervention. Data collection included 93 journal entries, analysis elicited five prominent themes: content development, final products, personal reflection, process and methodology, and support. This framework and process resulted in developing of three artifacts: the anchoring phenomenon-based curricular resources, my master's paper, and a resource development guide. My results show how these artifacts can be used to replicate my process in the future to create anchoring phenomenon curricular resources for teachers and outreach activities with species of interest.

Committee Chair: Dr. Ana Houseal

Committee Co-chair: Dr. Emil Eidin

Outside Member: Dr. Melanie Murphy

Committee Member: Dr. Brett Addis