

- a. For my project I would like to make a rock and fossil collection for my high school science department. I would also like to add into my ecology unit information on water quality and the testing procedures used during IOWATER.
- b. The rock and fossil collection will be used to help students identify and name rocks and fossils that are present in Iowa. Students will also be able to explain the science behind the development and formation of rocks and fossils. Students will be able to analyze and understand the importance of water quality and the materials and events that impact water quality.
- c. To implement my project I will share my rock and fossil collection with my entire department. I will specifically use it in my class to explain the biological aspect in relationship to the rock and fossil formation. I will supplement my ecology unit with the IOWATER testing and focus on the nitrate levels in drinking water. I can also make the connection when discussing the protein structure of hemoglobin. An overabundance of nitrates can oxidize the hemoglobin and create the methemoglobinemia, which can be fatal for babies.
- d. Using a mixture of formative and summative assessments I will be able to determine if the students are gaining the appropriate knowledge and use this to determine the success of the project.
- e. My project will consist of a collection of Iowa rocks and fossils. These rocks and fossils will be correctly identified and placed in a movable tray for science departmental use. The history of rocks and fossils and other background information will also need to be recorded so students will have a deeper understanding. I will also supplement a preexisting unit to focus on water quality and the impact nitrates have on hemoglobin structure and the ability to carry oxygen.