

“Making Mathematicians:

Learning to Think and Apply”

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#### ABSTRACT

This grant is designed to build a solid foundation in using mathematics as a tool for scientific inquiry in grades kindergarten through six. Students who learn how to apply mathematics in an inquiry setting are going to be better prepared to solve real world problems.

Common Core State Standards promote using mathematics to model real world situations across all disciplines. Through the use of models, students can represent and solve problems. Environmental education is one such discipline in which math tools and science inquiry are integrated. TO be 21<sup>st</sup> century learners, students need to be able to formulate questions about their environment, design investigations and collaborate with other to reach a solution. As an educational partner, the Missouri Department of Conservation Nature Center provides the outdoor classroom for teachers to experience firsthand the natural math and science connection. The Globe Program ([www.globc.gov](http://www.globc.gov)) along with the Common Core State Standards – Mathematics provides the foundation of the three years of learning through the Scientific Inquiry Process.

Mathematics requires gathering, organizing, analyzing, and clarifying thoughts by identifying what you know and do not understand. Literacy skills strengthen science learning by providing students the means to focus and clarify their ideas, conclusions, inferences, and procedures. Using writing (informational, journaling and reflective) to convey thoughts and findings will further support student learning of the content.

Today’s world requires students to be critical thinkers and problem solvers. By providing multiple opportunities to apply the mathematics they are learning to the inquiry Process, students will be better prepared to make informed, responsible decisions. By focusing on building a strong base of Inquiry Learning in classrooms, students will be ready to transition into middle school mathematics. With his deeper understanding, students can put on the “hat of a mathematician and scientist” and solve problems with confidence.