

**University of Georgia**

**EcoSTEM: Integration of STEM, 3-D Science and Project-based Learning**

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The proposed “EcoSTEM: Integrating of STEM Learning and 3-D Science with Project-based Learning” program would *renew a successful Teacher Quality grant* and continue emphasis on increasing teacher capacity to use the environment as a context for engaging students in science and engineering practices, core ideas, and crosscutting concepts (collectively known as 3-Dimensional Science) as a pathway for teaching the new Georgia Standards of Excellence in Science (GSES). Targeted grade levels include K-5, 7th, and High School Biology and Environmental Science.

Key elements of the program include a) integration of math, technology and engineering in science investigations (STEM learning); b) strategically deepening teacher content knowledge related to the new GSES life science standards; and c) exploring the progression of student performance expectations in vertical alignment of life science standards from elementary through middle and high school. In its 2017-18 iteration, the program will focus on the differences in content between GPS and GSES for each grade level, emphasizing new content; and will provide teachers with a scaffolded approach to authentic problem solving through project-based learning.

Teachers will participate in a residential, week-long summer workshop and sustained support for the next year, receive an ecoSTEM kit of their choice and a stipend, and then share and reflect on their experiences teaching the new Georgia Standards of Excellence in Science during follow-up days in fall and spring. The workshops and sustained support will be collaboratively designed and presented by Captain Planet Foundation, University of Georgia Odum School of Ecology, UGA College of Education, and participating school districts in high-need LEAs including Fulton and Atlanta.

**Arts & Sciences Unit of Institute of Higher Education**  
University of Georgia—Odum School of Ecology

**Unit of Institute of Higher Education that prepares teachers & principals**  
University of Georgia—College of Education

**High Need LEA(s)**  
Fulton County  
Atlanta Public Schools