History and Development of the SEEing Science in Appalachia Program

SEEing Science in Appalachia began in the Eastern Kentucky University (EKU) Honors Program in 2012 with a 2012 “Transforming Undergraduate Education in Science” (TUES) Grant from the National Science Foundation (grant #000645591).

The original SEEing Science in Appalachia program included two team-taught, interdisciplinary science seminars offered within the EKU Honors Program. The first, titled “The Tates Creek Project,” is a comprehensive study of a creek that runs along the edge of the EKU community of Richmond, KY. It is taught jointly by two EKU faculty – one each from the EKU Geology and Biology departments. The second, titled “The Bee Sustainability Project,” is team-taught by an EKU biologist and chemist. Making use of the bee yards in EKU’s Taylor Fork Nature Preserve, students enrolled in this course engage in hands-on research concerning the recent crisis in honeybee populations across our region and nation.

In both versions of the course, EKU Honors students work directly with sixth- and seventh-grade students from nearby Madison Middle School and Model Laboratory Middle School. Each EKU Honors student serves as project mentor to groups of five or six middle school students, engaging them in hands-on field research and laboratory projects pertaining to the theme of the course. Our middle school science faculty partners work to ensure that the materials from this collaboration are explicitly linked to the core content standards required in their classrooms. The results of these collaborative projects are presented each semester via research posters displayed at a “SEEing Science Showcase” hosted on the EKU campus and open to parents and the entire community.

Following a Summer 2014 NSF-funded workshop that brought middle school science teachers from across our region to our campus to learn about the SEEing Science program, a third version of this course was introduced in the fall 2014 semester in Corbin, KY (eighty miles south of the main EKU campus in Richmond). Pre-service education students and student teachers enrolled in education degree programs at the EKU Corbin regional campus serve as project mentors to seventh-grade students at Corbin Middle School in this version of the course. The subject material for this collaboration is a comprehensive watershed study of a stream that runs through the heart of downtown Corbin, and the course title is “The Mysteries of Moore’s Branch.”

Our university and middle school teacher-collaborators in Corbin, KY then served as instructors in a second NSF-funded workshop in Summer 2015 for middle school science educators from across southeastern and south central Kentucky. EKU looks forward to the development of similar collaborations across our region in the coming years.