HEART GK-12 fellows and their faculty advisors in conjunction with the SIUC Center for Ecology (http://www.ecology.siu.edu/) will be partnered with area high school teachers and engage in a rich array of scientific experiences through exploration of the highly diverse ecological habitats at SIUC Touch of Nature Environmental Center (TONEC; http://www.ton.siu.edu/). In consultation with faculty the fellow-teacher teams will design an original research project, participate in workshops designed to familiarize them with science standards, and provide training in research-based pedagogy. Fellow-teacher teams will plan exercises, develop action plans, and design Action research that together integrate and refine inquiry-based teaching in the classroom. Our program is designed to bridge the gap between the university and local schools by involving graduate students directly with the development of ecological and environmental science curricula as well as mentoring high school teachers in the scientific research process. Ultimately this program provides an opportunity for graduate students to impact the lives of high school teachers and students in southern Illinois and beyond.