Our Community of Practice has driven linkages between participants that work collaboratively to bring science to all members of the community. We now think of life science education at SJU as a "Community of Practice" where numerous participants (students, teachers, museum staff, parents and neighbors) interact to bring life science to all facets of the community.

Funding from ASBMB (HOPES and Outreach Seed Grants) expanded our outreach efforts into high school and the general public. Modeling GeoKids LINKS, undergraduate students implement a hands-on curriculum for high school freshmen entitled, Genes, Mutations, and Diseases. Follows receive training from SJU faculty and then bring the interactive lab exercises to a local high school. The program ends with a field trip to SJU. Surveys show that students increased their understanding of how genetic mutations lead to diseases. We have incorporated this program into our existing outreach infrastructure allowing us to sustain it beyond the ASBMB funding.

Science on the Hill is our new science café that brings scientists to a neighborhood bar/restaurant to teach science lessons at a Philadelphia elementary school adjacent to SJU.

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• Our innovative partnership brings SJU Biology faculty/students, Children’s Educators from the WFS, and classrooms teachers to deliver a hands-on, inquiry-driven, year-long science curriculum to hundreds of Philadelphia elementary students each year.
• Since 2002, 67 teachers, 44 graduate students and 18 undergraduates have participated in the program, which serves on average 350 students a year in four schools.
• A one-credit service learning course has extended this program to over 100 SJU students who teach science lessons at a Philadelphia elementary school adjacent to SJU.

Karen Snetselaar working with GeoKids teachers on analyzing storm water.

Fellow and 5th Grade students learning about photosynthesis.

Fourth-grade students simulate groundwater infiltration, an activity that began at a summer teacher workshop and evolved into an Environmental Microbiology lab.

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High School LINKS: GENES, MUTATIONS & DISEASES: UNDERSTANDING THE ORIGINS OF GENETIC DISORDERS

In this five week program, students learn the genetic basis for sickle cell anemia using commonly used molecular biology & cell biology techniques.

Outcomes of Our Outreach

• K-12 students receive high quality science instruction and interaction with SJU students/ faculty – Our outreach programs have reached thousands of students. Elementary students demonstrate an improvement in standardized test scores and students in High School LINKS improve their scores on pre/post quizzes related to content area.
• Graduate and Undergraduate Biology students become leaders who not only understand science but can communicate it to a broad range of audiences – “I really like how I am able to related the information that I learn in my biology courses and apply that information when the children ask thoughtful questions. I also like how it has helped me think about/explain certain concepts more broadly.” – Science outreach participant
• Science outreach has been transformative within the department of Biology – ASBMB funding has helped to involve more faculty in outreach efforts and overall faculty view outreach as a core value of the department.
• Opening science education to the greater community has driven new outreach initiatives – Teachers from a neighboring science magnet high school attended Science on the Hill which has helped to build a new relationship to expand our high school outreach efforts.

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