The University of Cincinnati (UC) aims to provide urban high school students with exposure to computing-related problem-solving activities and undergraduate mentors. The undergraduates will have had significant co-operative education experience and will undertake mentoring and teaching computing topics as part of their capstone design project. They will be trained to mentor youth and to introduce them to computing topics and activities. The undergraduates will also conduct research in designing, developing, and searching a repository for digital learning objects. The project will include two community partners that serve Cincinnati Public School students: the Cincinnati Youth Collaborative (CYC) and the Cincinnati Arts and Technology Center (CATC). UC students will be trained as mentors and participate in CYC’s program at area high schools; they will build relationships with youth in the program and, guided by the PI and a graduate student, they will create innovative lessons and activities about computing topics, and make their lessons available in a web-based repository. UC students will also assist in a summer digital media workshop for CATC at-risk high school students, thereby gaining training in digital art software that can be used to facilitate their lesson plan development and experiencing a successful model for UC outreach activities.

Computing Undergraduates Can:

- **mentor** in the CYC program
  - work with a group of students at a school
  - introduce fun computing-related activities
- **assist** in the CATC digital arts workshop
  - learn the software as a practice participant
  - guide students at the workshop
  - attend the gallery showing at UC
- **design/develop** the digital learning object repository and search GUI
  - senior design project
  - independent study project

An example interactive activity that uses computational thought but not a computer: a game board for navigating the challenges of college success: hitting the books, going to class, debugging a program, and making dean’s list … culminating in graduation!