

SCIENCES

Supporting a Community's Informal Education Needs: Confidence and Empowerment in STEM

PROJECT GOALS

- Create a STEM ecosystem in Fuller Park, a chronically, severely under-resourced urban community in Chicago
- Support Fuller Park Community environmental science literacy
 - » cognitive, affective, behavioral, skill-building, engagement, interest, identity
- Broaden access to and participation in environmental conservation and science learning opportunities
- Strengthen partnerships in support of sustainable capacity to support science literacy
- Research ecosystemic SCIENCES project model

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ABOUT EDEN PLACE NATURE CENTER

Eden Place Nature Center is an urban oasis in Chicago's south side Fuller Park neighborhood, encompassing an area of one city block. Eden Place was founded by a local family in 2003 following the discovery that the neighborhood had the highest lead level in Chicago. The nature center was created through community action, clearing an illegal dump site and establishing a public natural habitat.

ABOUT THE FULLER PARK NEIGHBORHOOD

Fuller Park is a less than one square mile residential and industrial region bounded by two rail lines and an expressway. 90% of Fuller Park's 2,500 residents are African American, 50% are below poverty; 30% are unemployed, and over 25% of adults do not have a high school diploma. Fuller Park has long been one of Chicago's severely geographically isolated, under-resourced neighborhoods. At the same time, there appears to be a disconnect between residents and the very few existing resources. Fuller Park neighborhood resources such as businesses, the school, churches, and community-based organizations are not necessarily utilized by local residents.

EDUCATION PROGRAM AUDIENCES AND OFFERINGS

SCIENCES, a four year project (2013-2017), includes one planning year, two program implementation years, and one synthesis year. SCIENCES offers programs for pre-K to gr6y audiences.

Professional audiences

- Teacher, early childhood educator, and informal science educator professional development
 - » Attendance at 9 programs was approximately 100¹

Public audiences

- Family programs, camp, youth programs, workshops, festivals, and community conservation action events
 - » Attendance at 33 programs was approximately 1,600¹

Student audiences

- School group classes, field trips, science fair, and teen volunteer program
 - » Attendance at 19 programs was approximately 600¹

¹Includes repeat participants

Each program year is united by an environmental science theme:

- Pollinators and Native Gardens (First program year)
- Fuller Park Water – A shared resource for healthy people, plants, and animals (Second program year)



THEORETICAL FRAMEWORK

- Informal science learning
- Conservation psychology
- Urban science education

SCIENCES NATIONAL AMPLIFICATION NETWORK

The SCIENCES project team seeks to network with other institutions and urban centers with related goals. The project team hosted a SCIENCES symposium in 2016. SCIENCES presentations have been made at professional conferences including

- Association of Zoos and Aquariums (AZA)
- Chicago Wilderness
- National Association for Research in Science Teaching (NARST)
- Visitor Studies Association (VSA)

CHALLENGES AND OPPORTUNITIES

- SCIENCES project staffing transitions have occurred
- SCIENCES project partner staff members are working together in new ways within and across organizations
- Neighborhood resident participation in SCIENCES programs can be increased
- SCIENCES project staff must identify and connect with shifting neighborhood resources
- Chicago violence has increased, and public trust has diminished
- State of Illinois, City of Chicago, and Chicago Public Schools have devastating budget deficits

RESEARCH

Using case study methodology, research conducted by University of Illinois at Chicago and Chicago Zoological Society explores how a large informal science learning institution works with a community-based organization to support environmental science literacy and agency.

EVALUATION

- Evaluation conducted by ExposeYourMuseum, LLC includes a team of Community Ambassadors, independent contractors with connections to the Fuller Park community.
- Formative program evaluation results¹ indicate the majority of surveyed participants:
 - » Perceived events to be good ways to connect with the community
 - » Felt safe and smart
 - » Reported increased connection to their environment
 - » Reported increased comfort with science

¹small sample size, not conclusive

PROJECT PARTNERS



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