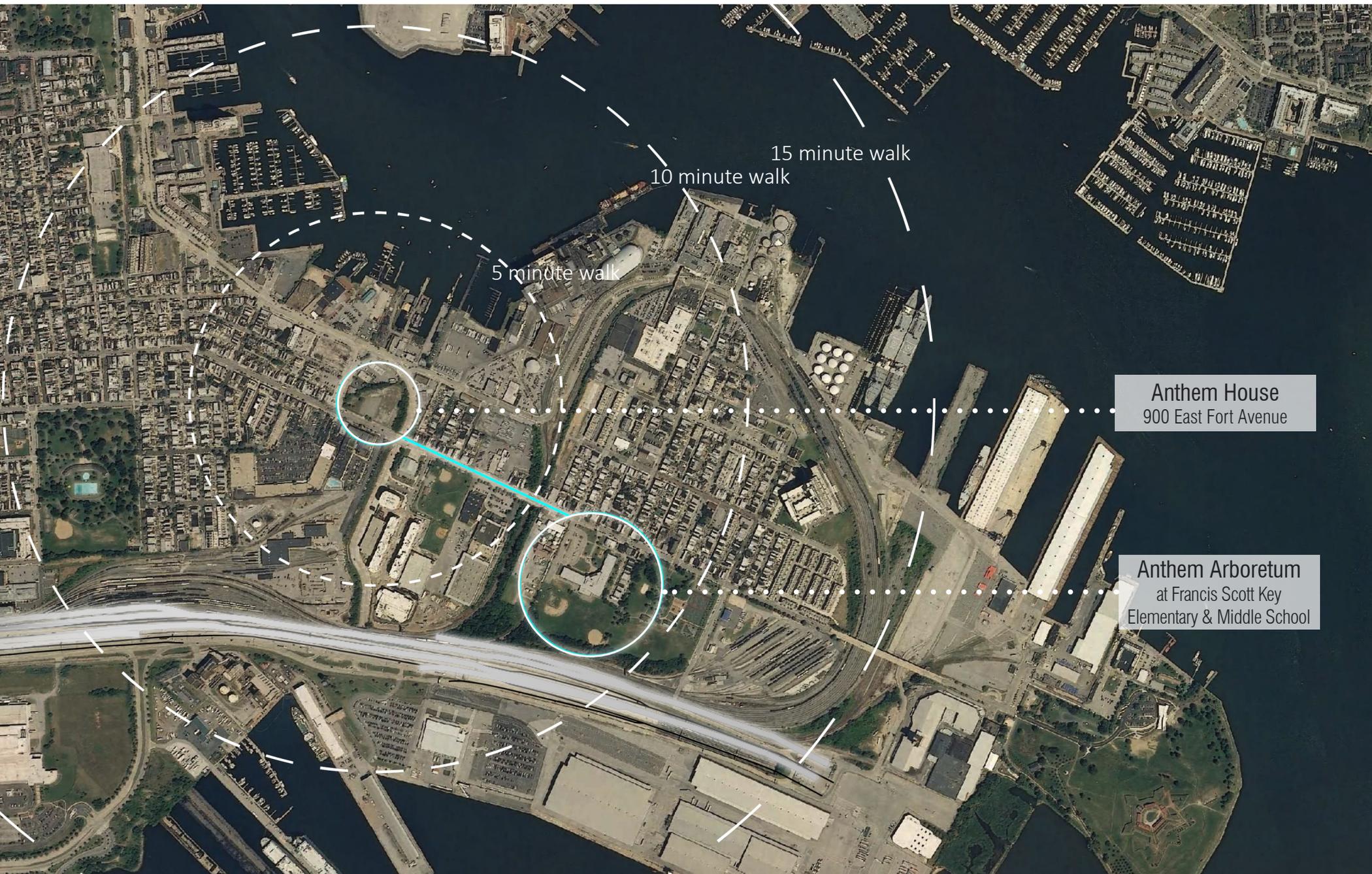




Project Birdland is fueling the next generation of **thinkers, doers, and makers** through design-based environmental education and action.

PROJECT **BIRDLAND**

BUILD YOUR CITY. SHAPE OUR FUTURE.



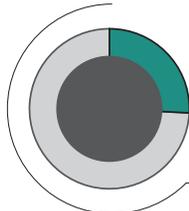
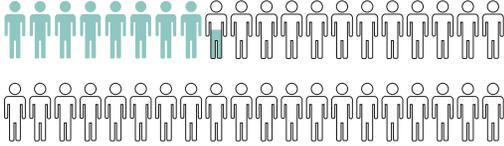
Anthem House
900 East Fort Avenue

Anthem Arboretum
at Francis Scott Key
Elementary & Middle School

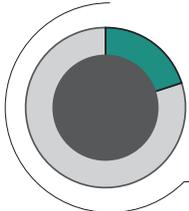
LACK OF DIVERSITY

198,105

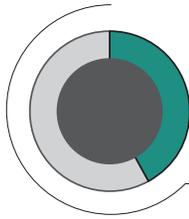
Architects in the **United States**



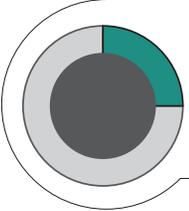
26%
minority
population



20%
minority
involvement



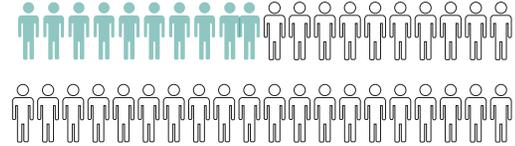
42%
minority
population



25%
minority
involvement

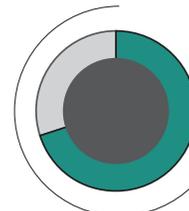
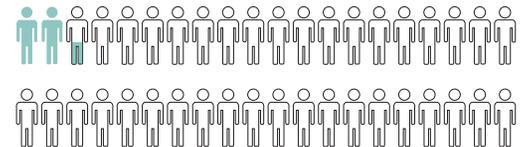
5,630

Architects in the **Maryland**

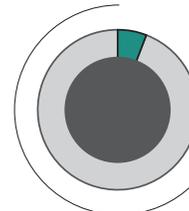


745

Architects in the **Baltimore**

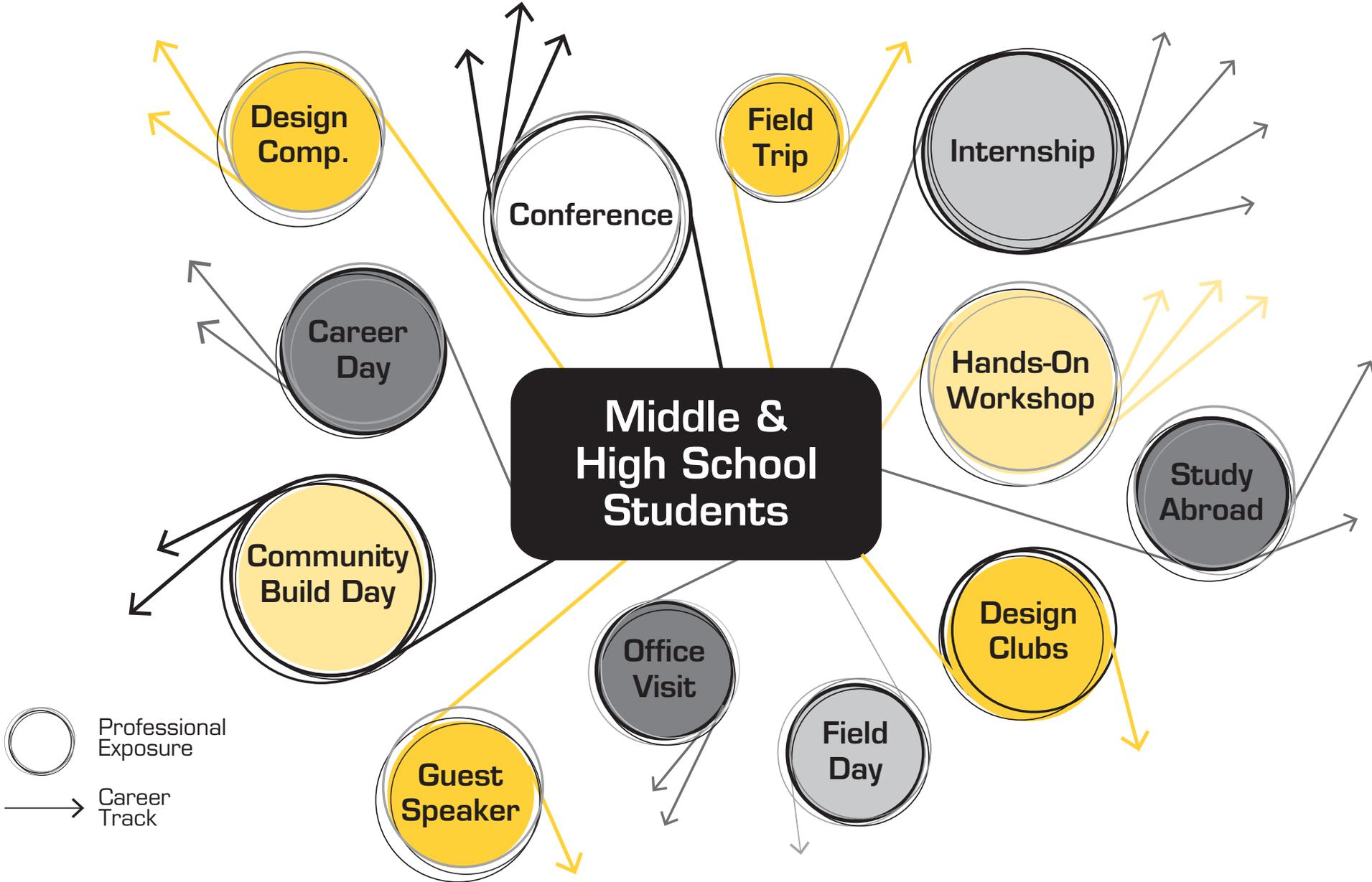


70%
minority
population



6%
minority
involvement

CAREER IMPRINTING

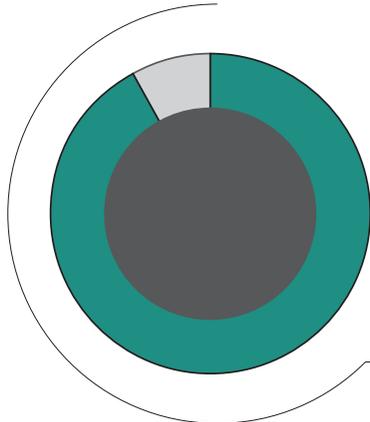


Utilizing a theory of change that draws on recognized research in career imprinting, the program focuses on teacher professional development, student experiential learning, direct mentorship, and hands-on greening to capture the imagination of Baltimore City public students in envisioning future careers in design.

SCHOOL DEMOGRAPHICS

83,666

Students in
Baltimore City (k-12)



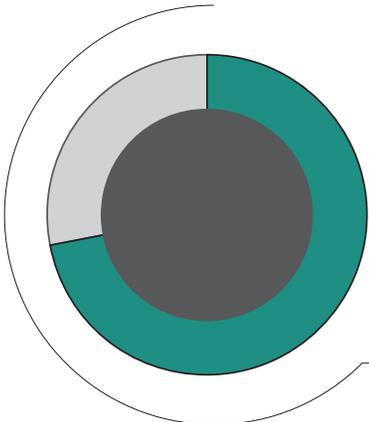
92%
minority
student body



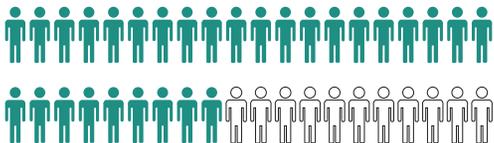
120 Average # of **Students**
per year **Impacted by 1 Teacher**

473

Students at
Francis Scott Key



72%
minority
student body



60 Approx. # of **Students**
Participating in **MRA Workshop**

Project Birdland aims to reach minority students by working within the 92% minority school system and expand its capacity to reach as many students as possible by training teachers, who on average impact approximately 120 students annually.

UNDERUTILIZED OPEN SPACE

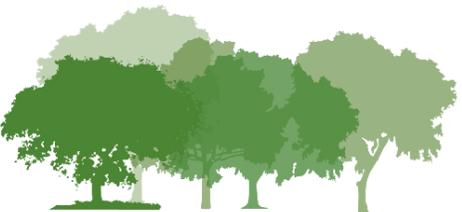


2.5 ACRES
of Underutilized
Open Space at FSK

179 SCHOOLS
in Baltimore City



447 ACRES
of Underutilized
Open Space



Potential Opportunity for
**Enhanced Urban
Nature & Ecology**

LOSS OF BIODIVERSITY



449
Documented Bird Species in MD

- 2 EXTIRPATED FROM MD
- 2 INTRODUCED SPECIES
- 2 EXTINCT
- 5

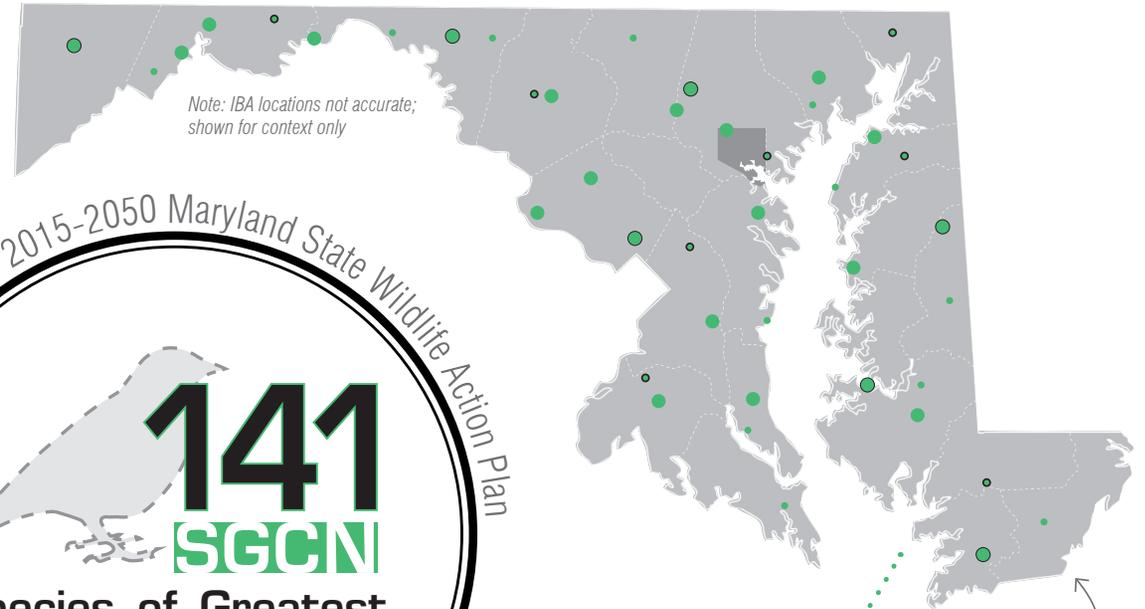
2015-2050 Maryland State Wildlife Action Plan



141
SPECIES
Species of Greatest Conservation Need

18 Threatened or Endangered

83 Of Conservation Concern in Northeastern U.S. Region



42 IBA
'IMPORTANT BIRD AREAS' IN MD
Designated by National Audubon Society, due to concentrations of high-priority birds in all 6 physiographic regions of MD



6 of MD's IBA are of Global Significance!

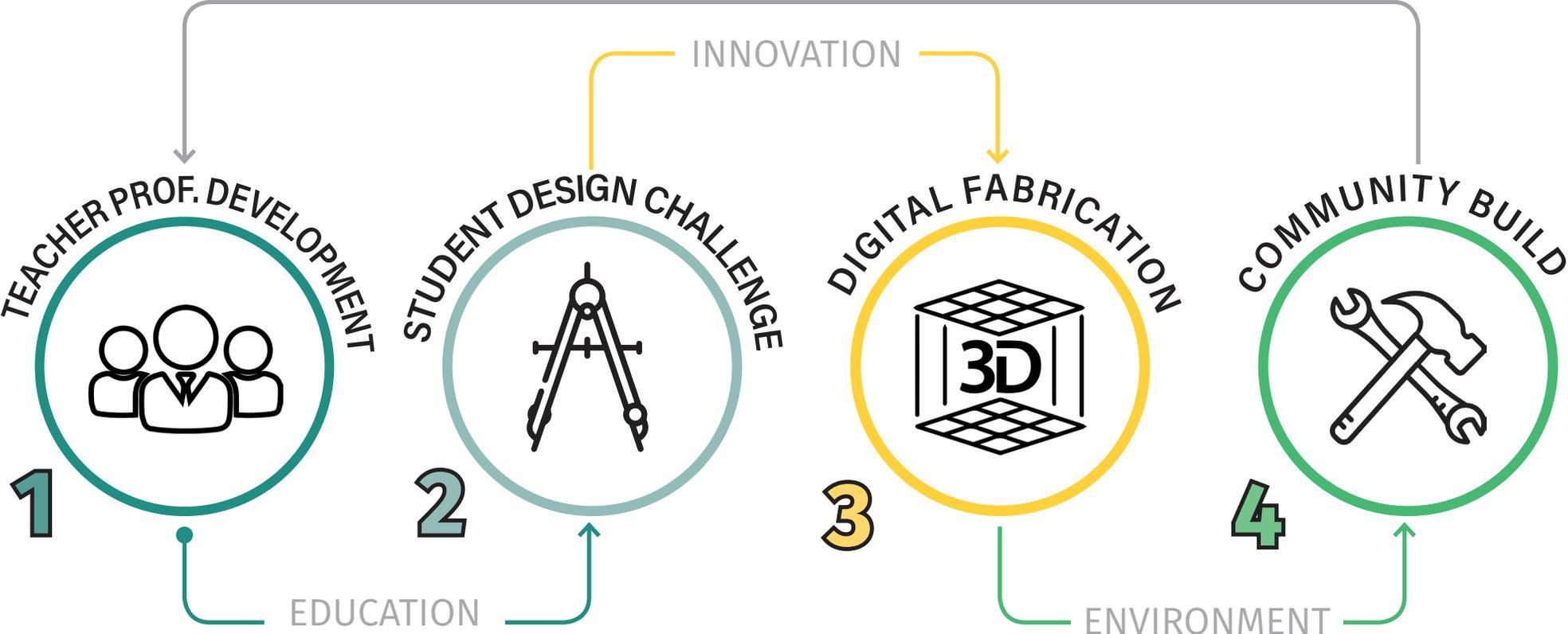
PROJECT **BIRDLAND**

 **EDUCATION**

 **INNOVATION**

 **ENVIRONMENT**

PROGRAM ELEMENTS



Key program elements of Project Birdland's pilot program at the Francis Scott Key Elementary/Middle School are teacher professional development, student experiential learning/design challenge, digital fabrications/workforce development, and hands-on community greening/building.

1: TEACHER PROFESSIONAL DEVELOPMENT



EXERCISE #1: "EAT WITH YOUR BEAK"

BACKGROUND:

SUMMARY:

TIME:

LEARNING GOALS/ACTIVES:

MATERIALS:

REFLECTIONS:

FOODS COMPARISON

FOODS	TOOL	DIFFICULTY	EFFICIENCY
Almonds	Hand	High	Low
Walnuts	Hand	High	Low
Macadamia Nuts	Hand	High	Low
Almonds	Scissors	Medium	Medium
Walnuts	Scissors	Medium	Medium
Macadamia Nuts	Scissors	Medium	Medium
Almonds	Wrench	Low	High
Walnuts	Wrench	Low	High
Macadamia Nuts	Wrench	Low	High

RED TAILED HAWK

BIRD BEAK MATCHING



Teacher professional development took place over four all-day professional development workshops, a week-long summer program, and in-classroom technical support. The Project Birdland team co-authored lessons plans with the STEM teacher at Francis Scott Key and collaborated with other educators to inform the scope and sequence of the design challenge.

2: STUDENT DESIGN CHALLENGE



PROJECT BIRDLAND : THE PENTHOUSE

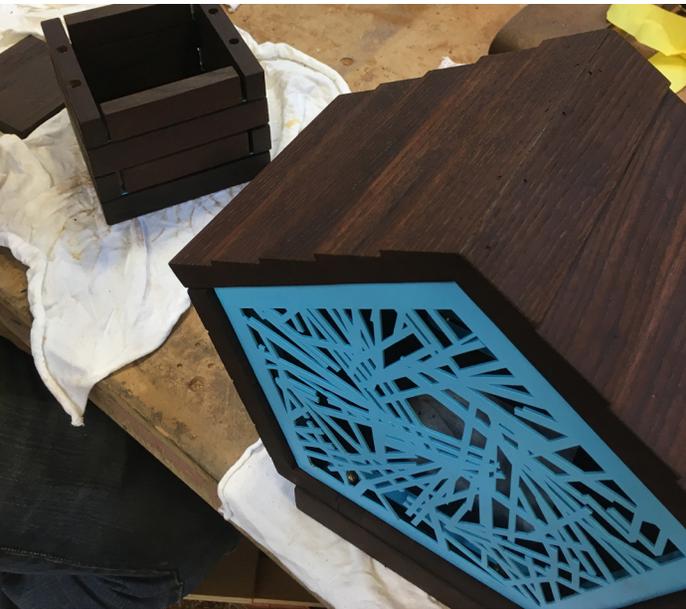


PROJECT BIRDLAND : PERCH



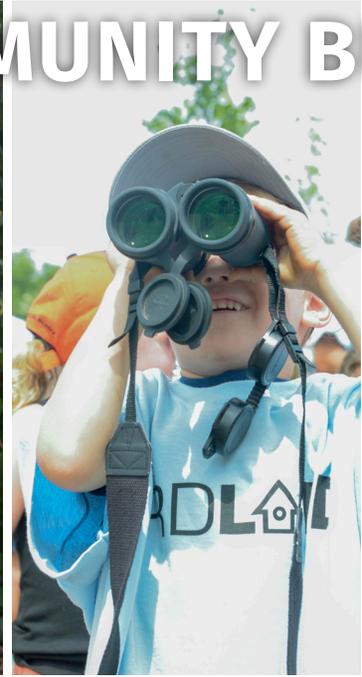
The student design challenge asked students to research three urban songbirds, the tufted titmouse, Carolina chickadee, and white-breasted nuthatch and to prototype a custom birdhouse designed to meet the bird's performance requirements. The winning designs were translated and fabricated by master craftsman into fully functional and durable birdhouses.

3: DIGITAL FABRICATION



The digital fabrication techniques used to create the birdhouses represent an in-demand skillset in the design and construction industry. Students who participated in Project Birdland may now see future career opportunities that might otherwise have gone unconsidered.

4: COMMUNITY BUILD



The community build day at the Francis Scott Key Elementary/Middle School in Baltimore, MD drew approximately 200 volunteers for a full day celebration that included planting more than 3,000 plants, bird counts, and educational demonstrations.

IMPACT MEASURE

