



The Division of Education & Youth Development

The National Urban League's evidence-based and scalable signature programs are professionally implemented by local Urban League affiliates to enhance the economic and educational status of our constituents.

Project Ready: STEAM

A SIGNATURE PROGRAM ENHANCEMENT OF THE NATIONAL URBAN LEAGUE



Our Purpose.

Launched in 2010, the National Urban League's *Project Ready: STEAM* enhancement provides middle and high school students with the academic and experiential support necessary to increase their understanding of, interest in, and the opportunities afforded through science, technology, engineering, arts/agriculture, and math. This vital enhancement offers informal and formal STEAM academic supports, project-based learning, mentoring, and engagement with role models in STEAM-related careers and academia.

Exposure to STEAM college majors and careers is especially important to communities of color as children of color are particularly found to be underrepresented in these areas. As such, *Project Ready: STEAM* is intentionally structured to administer a wide range of opportunities and supports to historically underrepresented students in order to help broaden their participation in the STEAM fields.

1,724

student participants have been served by *Project Ready: STEAM* since 2014

69%

of participants polled in 2018 are now more confident with math and science

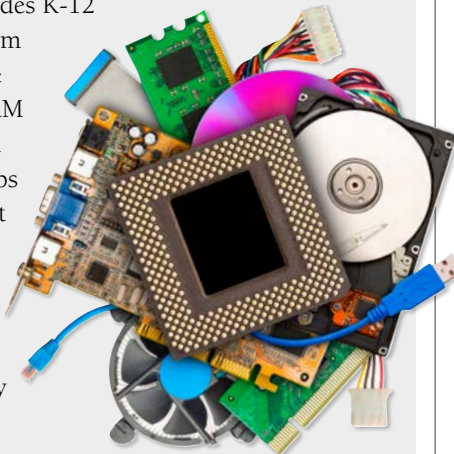
88%

of participants polled in 2018 are now more aware of science and technology career opportunities

2025 EMPOWERMENT GOAL

Every American child is ready for college, work and life.

Now, more than ever, it is crucial that students in grades K-12 engage in STEAM education programs to prepare them for STEAM opportunities and to improve their future social, educational, and economic outcomes. A STEAM education is the solution to resolving the current and future STEAM jobs demand issue. In fact, STEAM jobs continue to grow at a rate that is 3x+ higher than that of non-STEAM jobs. However, not all our nation's youth are readily positioned to take advantage of these opportunities. As a result, the National Urban League has charged the Urban League Movement with strengthening the STEAM pipeline from primary grades through postsecondary education.



HISTORICALLY UNDERREPRESENTED STUDENTS

Currently, students of color and women continue to "lag behind their white counterparts in K-12 math and science preparation, enrollment in STEAM majors in higher education, and participation in STEAM careers."¹ Even more pressing is that "nearly half of all jobs are vulnerable to machines, and that 47 percent of current jobs will disappear by 2033."² These findings conclude that if this trend is not addressed, historically underrepresented students will run the risk of missing out on the economic growth that will most certainly be created as a result of innovations made across STEAM. These students also run the risk of losing the jobs that they may currently have.

The National Urban League and its affiliates provide high-quality education programs for youth based on the following areas:

LOW SOCIOECONOMIC

STATUS (SES)—Youth negatively impacted by inequities in access to resources, privilege, and control

VULNERABLE YOUTH

—Youth who encounter systemic barriers to opportunity and well-being

COMMUNITY VIOLENCE

—Children and youth exposed to high levels of exposure to violence and trauma

LOW PERFORMING SCHOOLS

—Youth attending schools that fail to meet student achievement, access, and opportunity goals

TITLE 1 SCHOOLS

—Youth attending schools that receive supplemental funds to assist in meeting student educational goals

1. Toldson & Esters, 2012
2. Eger & Deerlin, 2015

Our Approach.

Twenty-one Urban League affiliates across the U.S. regularly collaborate with local STEAM partners and utilize the *Project Ready 2.0* and *Project Ready: STEAM* curricula, as well as other related tools, to improve access to high-quality STEAM instruction, material, and activities in their communities during out-of-school time.

Where significant strides have been made over the last decade in the attention to and investment in STEAM in our urban communities, only modest gains have been realized to-date with the number of historically underrepresented students joining and persisting in the STEAM workforce.

To address this lack of diversity in the STEAM training pipeline, the following overall practices are paramount to success:

1. *Develop challenging STEAM activities and projects that are uniquely relevant to historically underrepresented students of color and women*
2. *Motivate and guide students to acquire the skills, knowledge, attitudes, competencies, and aptitudes to move forward in STEAM*
3. *Educate students earlier about the potential college and career options that are available to them*
4. *Encourage students to make informed choices based on the knowledge of what they will need to be successful in a range of STEAM environments*
5. *Prepare students for high school graduation and STEAM careers, certificates, and degrees*
6. *Provide students with access to invested and educated mentors*



WE BELIEVE STEAM in general and technology in particular are foundational for all students, regardless of their ultimate field of study or occupation.



STEAM PROGRAM GOALS FOR PARTICIPANTS:

- **TO BE EXCITED** about learning STEAM skills and content
- **TO ACQUIRE THE SKILLS,** knowledge, attitudes, competencies, and aptitudes to move forward in STEAM
- **TO BE AWARE OF THE OPPORTUNITIES** for an education and a career in STEAM
- **TO MAKE INFORMED CHOICES** based on the knowledge of what they will need to be successful in a range of STEAM environments
- **TO GRADUATE FROM HIGH SCHOOL PREPARED** for STEAM careers, certificates, and degrees

Project Ready.

In 2006, the National Urban League created the postsecondary program *Project Ready*, to prepare African American and other historically underserved youth for college and career, utilizing a set of evidence-based standards, impactful local and national partnering, innovative content, asset-based approaches, professional development, and practical tools specifically designed for, and unique to, the Urban League Movement.

In order to grow into healthy, responsible adults, youths require a range of developmentally appropriate supports, services, and opportunities, only some of which are provided in schools. Accordingly, *Project Ready* helps 6th through 12th grade students to progress academically and intellectually, to benefit from college-culture enrichment and support opportunities, and to develop important skills, attitudes, and aptitudes that position them well for success during and after high school.

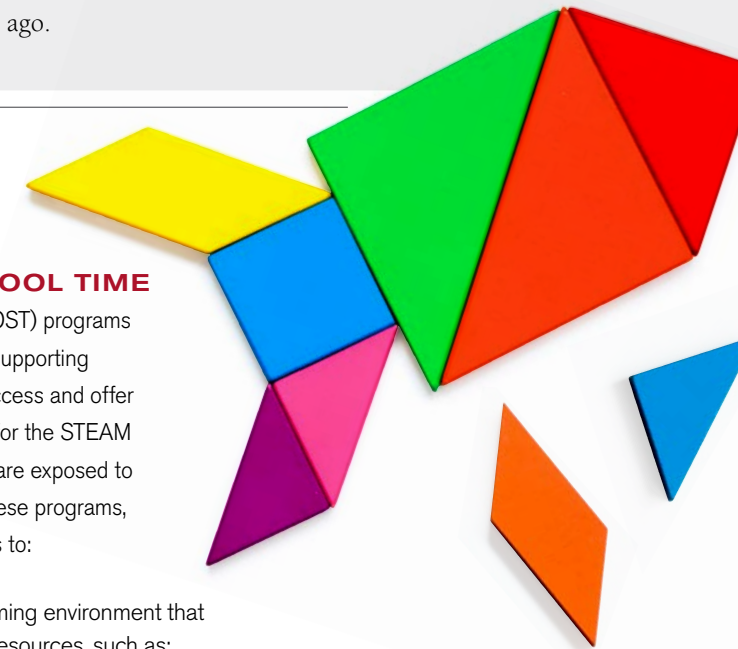
The National Urban League has trained youth development professionals across more than 50 Urban League affiliates nationwide on how to best implement this signature program for middle and high school students.

To date, over 15,000 students have been served by *Project Ready* since its launch fourteen years ago.

STEAM IN OUT-OF-SCHOOL TIME

Out-of-school time (OST) programs play a critical role in supporting students' STEAM success and offer real-life applications for the STEAM topics young people are exposed to in school. Through these programs, students have access to:

- A safe and welcoming environment that is rich in science resources, such as: artifacts and interesting objects to explore; computers and mobile devices to connect to science sites, data, books, and articles about science and by scientists; hands-on activities, math puzzles, and games; connections to scientists, researchers, and people in the world of science; access to science museums and technologies such as probes and remote sensors
- Engaging experiences that provide mastery of skills, knowledge, and attitudes necessary for success in STEAM
- Decision-making roles that put young people in charge of what they need in order to continue in STEAM and ways to make a difference using STEAM
- Continuity and support across critical junctures in the STEAM pipeline and development of an attitude of lifelong STEAM learning



21 URBAN LEAGUE AFFILIATES PARTICIPATING ACROSS THE U.S.

The following affiliates have been active in *Project Ready: STEAM* since 2014:

- BUFFALO URBAN LEAGUE
- CHICAGO URBAN LEAGUE
- FORT WAYNE URBAN LEAGUE
- HOUSTON AREA URBAN LEAGUE
- KNOXVILLE URBAN LEAGUE
- LOUISVILLE URBAN LEAGUE
- MINNEAPOLIS URBAN LEAGUE
- NEW YORK URBAN LEAGUE
- QUAD COUNTY URBAN LEAGUE (AURORA, IL)
- SPRINGFIELD URBAN LEAGUE, INC. (IL)
- URBAN LEAGUE OF GREATER CHATTANOOGA, INC.
- URBAN LEAGUE OF GREATER CLEVELAND
- URBAN LEAGUE OF GREATER OKLAHOMA CITY
- URBAN LEAGUE OF GREATER PITTSBURGH
- URBAN LEAGUE OF LOUISIANA
- URBAN LEAGUE OF METROPOLITAN SEATTLE
- URBAN LEAGUE OF PALM BEACH COUNTY, INC.
- URBAN LEAGUE OF PHILADELPHIA
- URBAN LEAGUE OF ROCHESTER
- URBAN LEAGUE OF SPRINGFIELD (MA)
- URBAN LEAGUE OF THE UPSTATE (GREENVILLE, SC)

Success Stories.

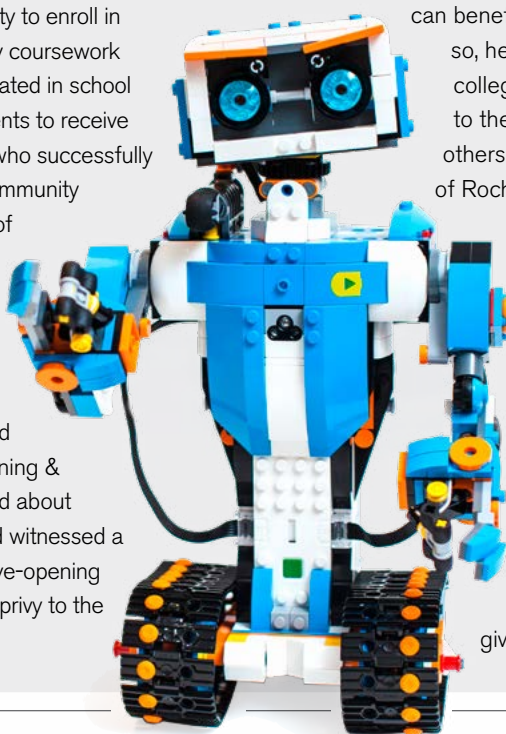
Being exposed to STEAM activities, college faculty, and the benefits of what college has to offer for STEAM careers is a part of the college preparation that the National Urban League's *Project Ready* program supports

ALEXIS REEDER, was a senior at TAF@Saghalie High School in Federal Way, WA, in the winter of 2018 when she was one of five recipients of an annual scholarship from the Urban League of Metropolitan Seattle (ULMS). As a participant in *Project Ready: STEAM* since the beginning of her junior year, Alexis not only greatly distinguished herself at the ULMS during her year and a half involvement but she also won the Best Scientific Project prize at TAF's annual STEM Expo competition, participated in a three-week Math/Science Leadership Program at the University of Washington, was one of only two seniors at her school to complete AP Calculus in her junior year, and chose to keep her math muscles sharp by taking an online AP Statistics class in preparation for college. Alexis was the first in her class to procure a college money award thanks to the \$5000 per year scholarship from the ULMS and is now using it toward her education at Howard University where she is studying physical therapy and doing great!

JOSEPH CRUZ, SORAYA MILLER, JONISE MCCALLA, and JONATHAN JONES, high school students in Springfield, MA, are youth scholars at the Urban League of Springfield's Big 3 STEM Pipeline Initiative program. All of these students were selected to participate in a STEM activity in the spring of 2018 at Smith College in Northampton, MA. The STEM activity involved building a soft robot that could lift an egg and competing with partners to test just how effective their creation was. The activity was both coordinated and facilitated by Smith College Assistant Professor Kristen Dorsey. She tested the strength of the soft robots by asking the students to have the robots pick up an egg and shake it for 25 seconds. As a part of the activity, the students were also provided with an overview of the Bio-engineering industry, lunch, and a tour of the Smith College campus.

THE URBAN LEAGUE OF LOUISIANA'S *Project Ready* program partners with Landry-Walker High School in New Orleans to provide students with exposure to various postsecondary educational options. Central to *Project Ready* is its selective Technical Career Educational dual enrollment program, which ensures that students are equipped with the skills necessary to compete for in-demand jobs with career ladders that pay both a living and a saving wage. This program offers interested, eligible high school students the opportunity to enroll in welding, electrical construction, or process technology coursework at local community colleges. It's what keeps me motivated in school and focused on finishing strong." The goal is for students to receive credentials and/or degrees in these fields. Students who successfully complete the program are able to graduate from a community college while in high school with either an Associate of Applied Science degree in Industrial Technology or a Certificate of Technical Studies in either Electrical Construction or Welding. In addition to the technical training received, students also participate in both college and *Behind the Business* tours. In 2019, over twenty *Project Ready* students participated in a *Behind the Business* tour at the Shell Robert Training & Conference Center in Robert, LA, where youth learned about opportunities in electrical and process technology and witnessed a simulated lifeboat launch. This tour proved to be an eye-opening experience for many of the students as they became privy to the varied career opportunities that exist for them.

THE URBAN LEAGUE OF ROCHESTER'S *Project Ready: STEAM* initiative "Connect Rochester," which was created to help students learn how to teach their parents, siblings, neighbors, and senior citizens that live in their community how to use the Internet, was one of 17 recipients of an inaugural Spectrum Digital Education grant in the spring of 2018. This generous \$20,000 endowment will greatly enhance how much this initiative can benefit the community at large and in doing so, help high school students transition to college. The Spectrum grant was presented to the league at an event attended by, among others, President/CEO of the Urban League of Rochester, William Clark; Deputy Mayor Cedric Alexander; and Senator Joseph Robach. A highlight of the event was a digital literacy training presentation made by three *Project Ready* youth who did a terrific job, via their PowerPoint display, focusing on topics they felt would resonate with the audience. With skills learned through *Project Ready*, as well as their personal growth, these three young woman well represented their league's program and clearly demonstrated the importance of giving back to one's community.



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THE URBAN LEAGUE
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