

Interagency Collaboration Fact Sheet

Partners for 21st Century Learning

The U.S. Department of Education's (ED's) 21st Century Community Learning Centers (21st CCLC) program is partnering with other federal agencies to bring exciting content and experiences in science, technology, engineering and math (STEM) to students in some of the nation's highest-need communities.

- Since 2013, ED has collaborated with NASA to give student teams the opportunity to tackle real-world engineering design challenges and to interact directly with NASA scientists and engineers. In 2015, ED embarked on two additional partnerships. One, with the National Park Service (NPS), focuses on environmental monitoring and citizen science. Participating students interact directly with park rangers. The other, with the Institute of Museum and Library Services (IMLS), focuses on STEM-rich "tinkering and making." Participating students engage with science center professionals with expertise in "making." Making provides a powerful way to get young people engaged in STEM learning by sparking creativity and innovation, while supporting inquiry-based learning experiences.

These three interagency projects, which take place during out-of-school time, are currently benefiting economically disadvantaged and underserved students at more than 100 21st CCLC sites nationwide.

About ED's 21st CCLC Program

- ED's 21st CCLC program supports the creation of community learning centers that provide academic enrichment opportunities during non-school hours for children, particularly those who attend high-poverty and low-performing schools. 21st CCLCs help students meet state and local standards in core academic subjects, such as reading and math, and offer enrichment activities that complement schools' regular academic programs.
- The 21st CCLC program was created as part of the 1994 reauthorization of the Elementary and Secondary Education Act (ESEA). ESEA was signed into law in 1965 by President Lyndon Baines Johnson, who believed "full educational opportunity" should be "our first national goal."

The Need for Out-of-School STEM Programs

Considerable evidence suggests that out-of-school time provides a critical pathway for engaging and interesting all students in the STEM fields. It is a particularly effective strategy for engaging underserved and economically disadvantaged students. This is important, as the number of unfilled STEM jobs continues to grow, while females and minorities — especially Native

Americans — remain under-represented in the STEM fields. Approximately 14 percent of bachelor's degrees granted to all American students are in STEM fields, but less than 1 percent of STEM bachelor's degrees are granted to students of color. The challenges posed by lack of diversity in the STEM fields are compounded by the fact that income inequality continues to grow, yet high-skill STEM jobs are among the highest paying, and demand for STEM jobs will continue to outpace the supply, globally, for the next 20 years.

The informal learning and hands-on activities that students experience during out-of-school time are key elements for interesting them in the STEM fields. The 21st CCLC program, as the largest out-of-school program in the nation, serves more than 1.5 million students in 50 states and provides an unparalleled avenue for agencies to reach students in high-need schools who often have little or no opportunity to engage with STEM content and experiences or with STEM professionals.

The following federal collaborations help meet this need:

NASA

- The NASA collaboration provides students with the opportunity to solve challenges currently being addressed by NASA scientists and engineers. Throughout the program, 21st CCLC staff and students interact directly with NASA scientists and engineers, learning firsthand about engineering design and practices.
- In 2013, 20 21st CCLC sites across three states had the opportunity to choose from three engineering design challenges. In 2015, almost 80 21st CCLC sites across 10 states are participating, with the option of choosing from six engineering challenges.

National Park Service

- The NPS pilot program introduces environmental monitoring and citizen science programs to students in 21st CCLC programs at schools overseen by the Bureau of Indian Education (BIE) at 11 sites across six states.
- The NPS programs take advantage of participating sites' proximity to national parks. Working with "Hands on the Land," a national network of field classrooms and agency resources that connects students, teachers, families, and volunteers with public lands and waterways, the NPS is engaging park rangers and other subject matter experts to introduce students to the natural resources in their region. As "citizen scientists," students learn to observe and record environmental characteristics, augmenting observations made by the scientific community.

Institute of Museum and Library Services

- The IMLS pilot program introduces students to STEM-rich making and tinkering activities that build on the considerable enthusiasm for the "maker movement." Making provides a powerful way to get young people engaged in STEM learning by sparking creativity and innovation, while supporting inquiry-based learning experiences.



NASA STEM CHALLENGE



y4y.ed.gov/STEMChallenge/NASA

- This place-based collaboration links science-rich organizations, such as science centers, with 21st CCLC sites. The Exploratorium, a San Francisco-based science center with a history of innovation in maker education, has developed a series of making and tinkering activities and associated training for staff from these organizations, so they can serve as maker subject matter experts with youth participants.

For more information on the 21st CCLC program visit
<http://www2.ed.gov/programs/21stcclc/index.html>.