Nita M. Lowey 21st Century Community Learning Centers

Program Purpose

The goal of the 21st CCLC program is to raise student academic achievement through the creation and expansion of community learning centers that provide students with academic enrichment opportunities as well as additional activities designed to complement their regular academic program. Families of 21st CCLC youth participants also have access to educational development opportunities through the program. Centers can be located in elementary, middle or secondary schools or similarly accessible facilities. They provide a range of high quality services to support student learning and development, including tutoring and mentoring, homework help, academic enrichment (e.g., hands-on science or technology programs), and community service opportunities, as well as music, arts, sports and cultural activities.

Authorized under Title IV B, of the Elementary and Secondary Education Act (ESEA) as amended by the Every Student Succeeds Act (ESSA), the specific purposes of the law are to:

- Provide opportunities for academic enrichment, including tutorial services to help students, particularly those who attend low-performing schools, meet state and local student performance standards in core academic subjects like reading and mathematics.
- Offer students a broad array of additional services, programs, and activities designed to reinforce and complement the regular academic program of participating students.
- Offer families of students served by community learning centers, opportunities for literacy education and related educational development.

The need in our community:

The Spring PSSA data for the Greater Johnstown student's grade 3 through 8 indicate significantly low academic proficiency score in ELA, math and science.

Key findings highlighted in the 2021 PSSA Spring data for Greater Johnstown students:

- LESS than 1% of 8th grade students scored advances/proficient in Math
- 5 of the 28 areas were less than 20% advanced/proficient
- 5th grade math scores were below 5%
- Only 4th grade science scored above 30%
- Overall Greater Johnstown School District is a poorly academic performing school district

The need for coding education is critically important to workforce competitiveness for the Johnstown area and beyond. According to code.org, there are currently 517,393 open computing jobs nationwide and more than 17,000 in Pennsylvania alone. Last year, only 42,969 computer science students graduated into the workforce.
The Department of Labor predicts that 1.3 million new computer science related jobs will be created by 2022, positions that today are earning average salaries of $83,233 per year.

FCYFA 21st Century Learning Center
CODE 4 STEM Academy

Program Difference

Differentiating the Flood City Youth CODE 4 STEM Academy (CODE 4 STEM Academy) from our current FCYFA Safe Haven afterschool program, CODE 4 STEM Academy will have attendance requirements of 2.5 hours per day at 5 days per week for each student and agreed upon by each parent. The minimum attendance of 4 days per week to meet the 10 hours a week 21st CCLC requirements. The CODE 4 STEM Academy will offer STEM programming to each student integrating reading and math enrichment utilizing computer and robotic coding, science experiments, challenge-based learning and other hands-on activities and projects

Program Design

The goal of the Flood City Youth CODE 4 STEM Academy is to create a community learning centers that provide academic enrichment opportunities during non-school hours for students enrolled in the Greater Johnstown School District. With a focus on computer coding, the CODE 4 STEM Academy curriculum is designed to enhance digital literacy for students in grades K-8.

CODE 4 STEM Academy is designed to reinforce and complement the regular academic programs of the Greater Johnstown School District and help meet state and local student standards in core subjects.

This will be achieved through providing integrated math and reading enrichment via STEM activities such as computer coding, robotics, computer science, electronic simulators, 3-D Printing and complex LEGO designs.

The structured CODE 4 STEM Academy will require a consistent program attendance which will result in improved student attendance for regular school as well.

The CODE 4 STEM model features an innovative learning approach that builds on the power of computational thinking as a problem-solving methodology. Developed by the University of Pittsburgh at Johnstown's Outreach Program, it is designed to work in collaboration with schools, parents and community partners to build a CODE-Smart community where every child can learn the basics of coding for improved engagement and outcomes in STEM learning.

Student Outcomes

With the deliberate practice of computational-learning outcomes, GJSD students will be able to:

Master core knowledge, Use a computational and design thinking mindset to solve problems, Use technology to learn, Innovate solutions for opportunities

Work collaboratively, Think critically & solve complex problems, and Communicate effectively.

The reporting of data for evaluation will be based on the 5 GPRA measures (Grant Performance and Results Act) required by the federal government. (GRPA Measures outlined in the Multi-Year Program Design and Performance Form

GPPRA Measure 1 is Academic Achievement and will be measured by PSSA Scores where the scores are categorized as Below Basis, Basic, Proficient and Advanced. Grades will be used, and test analysis will

be performed to determine if there was significant movement. The Teacher Surveys, Parent Surveys, and Student Surveys contain information that can describe positive and negative academic movement.

GPRA Measure 2 is Grade Point Average, and it will be measured by GPA over the academic year. Growth will be determined by comparing performance from one academic quarter to the next. The Teacher Surveys and Parent Surveys will provide narratives of what they observed.

GPRA Measure 3 is School Day Attendance and, it will be reported by the school day teacher in the report card. Other measures looking at attendance will come from Teacher Surveys and Parent Surveys.

GPRA Measure 4 is Behavior and, it will be reported by Teacher Surveys, Parent Surveys, and Student Surveys. Growth will be seen in reports of improvement on the surveys.

GPRA Measure 5 is Student Engagement in Learning and, it will be reported by Teacher Surveys, Parent Surveys, and Student Surveys. Growth will be seen in reports of improvement on the surveys.

The following charts highlight the Federal/State, Local Program and Family Measures our program will monitor. This chart includes data sources for each measure.

FEDERAL /STATE REQUIRED MEASURES / Tools for Measurement	PSSA Scores	Grades	Teacher Surveys	Parent Surveys	Student Surve	GPA	Report Card Attendance Record
Academic Achievement	X	X	X	X	X		
Grade Point Average			X	X		X	
School Day Attendance			X	X			X
Behavior			X	X	X		X
Student Engagement and Learning			X	X	X		

LOCAL PROGRAM MEASURES / Tools for Measurement	Staff Surveys	Parent Surveys	Student Surveys	Community Surveys	Student Informal Skill Assessments	Core Values Assessment
Increased class participation					X	
Improved motivation to learn					X	
Improved behavior in class						
Increase confidence about moving onto the next stage in					X	
Improve child's attitude toward school.	X	X	X		X	
Decrease in their disciplinary incidents	X	X				
Improved connections with families and communities		X		X		
Increase student personal skills		X	X		X	
Increase student social skills		X	X			X

FAMILY Measurements	Parent Surveys	Community Surveys
Help working families and encourage parental participation by 85 % annually	x	
Help keep children healthy increased by 25% as measured by child health indicators.	x	
Increased parental involvement as measured by 75% of parents annually	x	
Improved feeling of safety by 85% annually	x	x
Improve families' access to adult education services by 25% annually	x	x
Improve the community's likelihood of attaining economic stability and prosperity by 25% as measured by communtiy economic, crime, and health indicators annually.	x	x

Description of Strategies and Activities

Flood City Youth CODE 4 STEM Academy will use evidence-informed STEM learning opportunities to create a structured, academically aligned program with activities to engage participants and increase academic achievement in math science and reading.

The program is designed to bring digital literacy to the community, to promote widespread interest in computer science in K-8 and to support entities who advance coding literacy as a necessity, a right and a freely accessible good for all K-8 children in our region. The primary community partners engaged in the development of the proposed project are the Greater Johnstown School District and University of Pittsburgh-Johnstown (UPJ).

UPJ has provided the framework for the CODE 4 STEM ACADEMY which features and innovative learning approach that builds on the power of computational thinking as a problem-solving methodology.

Project Activities

UPJ will assist with the implementation and facilitation of the Flood City Youth CODE 4 STEM Academy. Each monthly theme and related activities are designed to promote STEM awareness, exploration and learning.

Flood City Youth CODE 4 Stem Academy / Elementary School Tract will serve 100 Grades K-4 each annually. The Flood City Youth CODE 4 Stem Academy / Elementary School Tract 4 groups with 25 students per group. Each student will be assigned to a group for the month.

Flood City Youth CODE 4 Stem Academy / Middle School tract will serve 50 students in the GJSD middle school Grades 5-8 annually. The program will be comprised of 2 groups with 25 students per group.

The methodology for the program will provide challenge based learning, developing teamwork and connecting to student interest and community priorities. Monthly themes for the middle school track will model the monthly theme of the Elementary track.

For example if the theme for month 1, October is "Food", the groups may be named: G1 – Apple, G2 – Pizza, G3 – Cake, G4 – Candy. The STEM activities can be based of the theme and group name for each month.

The weekly schedule will be divided into (4) stations per lesson. It will take 2 days for student groups to rotate through the activities for a lesson.

An example of groups are listed as follows:

- (SR) Mystery Science/Reading - Apple Taste Test
- (TM) Team Building/Math – Make a Recipe (Smelling Jars)
- (C) Coding – Invent Your Own Recipe
- (E) Engineering - Kitchen Gadgets

The curriculum will based on the Pitt-Johnstown CODE 4 STEM Academy Explore Course Framework. Each monthly theme and related activities are designed to promote STEM awareness, exploration and learning as students will practice using and making new technology and innovating solutions to problems that are presented to them.

Flood City Youth CODE 4 Stem Academy Summer tract will serve 50 students in the GJSD Grades K-8. Structured stem programming will be provided for 16 hours per week for 4 weeks at 4 hours per day and 4 days per week with Fridays off. The students will be divided into 6 pods differentiated by grade and project complexity. The projects may include drones, robots, electronics, computer coding and complex Lego structures.

Transportation

Transportation is included for Flood City Youth CODE 4 STEM Academy student from GJSD Schools to our program and to their home at the end of the program day.