Recent surveys of our state’s 21st Century Community Learning Centers, Community Education, and Dependent Care programs – all of which provide Afterschool and/or Summer School opportunities – have given us significant initial insight into programmatic STEM engagement.

The following information provides a somewhat limited, but informative statistical snapshot of Out-of-School Time (OST). Service providers have numerous locations across Alabama that provide services to students in Afterschool. OST programs are provided in a variety of locations—Schools, Community and faith-based organizations and numerous non-profit agencies. Based on our survey results, the program distribution is as follows:

**Site Locations Used by Out-of-School Time Programs**
- 94% are School-Based
- 5% are Community-Based
- 0% are Faith-Based
- 1% are Combination

The size distribution of programs is as follows:

**Size of Programs**
- 1% serve 1 to 25 Students
- 18% serve 26 to 50 Students
- 26% serve 51 to 75 Students
- 14% serve 76 to 100 Students
- 41% serve More than 100 Students

Summer OST is essential to student success during the academic school year. According to the Afterschool Alliance, children experience learning loss and score lower on exams if they do not engage in summer learning opportunities. Out-of-School Time programs across that state offer programs with a variety of schedules to give students multiple opportunities to participate. In terms of schedules and duration utilized by Alabama’s OST providers, the distribution is as follows:

**Schedules Offered by OST Programs**
- 1% are Before School
- 88% are After School
- 11% are Both Before and After School

**Program Duration of OST Programs**
- 23% School Year only
- 77% Full Year (School & Summer)

Out-of-School Time (OST) programs in Alabama serve all grades and ages and offer multiple activities. The number of K-12 site locations implementing STEM is as follows:

![Graph showing grade levels serviced by OST]  

**PROGRAMMING OFFERED**

Quality Out-of-School Time (OST) programs impact the lives of students through engagement in a wide variety of areas that are critical to their development. Many programs pursue an all-inclusive approach through a variety of activities that range from educational to character development. OST programs surveyed identified which of the following activities are included and offered through their program/location:

- 100% offer Tutoring & Homework
- 90% offer Academic Enrichment
- 87% offer Sports & Recreation
- **87% offer Science, Technology, Engineering, and Math (STEM)**
- 78% offer Literacy/Reading
- 76% offer Family & Parent Activities
- 71% offer Health & Wellness
- 65% offer Character Education
- 54% offer Visual & Performing Arts
- 36% offer Civic Engagement & Community Service
- 33% offer Mentoring
- 29% offer Career & Job Exploration
- 28% offer 'Other' activities
- 21% offer Programming Supporting Special Needs
- 18% offer College Readiness
- 5% offer Financial Literacy

The Engineering Design Process (EDP) is a critical component of STEM education that is often not addressed. The EDP is a “series of steps that engineers follow to come up with a solution to a problem.” [1] These steps included defining a problem, planning solutions, making and testing a model, reflecting and redesigning. In the real world, scientists do not just do science, and mathematicians do not just do math. [2] In the real world, they work across many disciplines. Incorporating engineering allows students to experience real-world projects that mirror STEM professionals and increase college and career readiness. Although many educators in Alabama are familiar with the Engineering Design Process, they do not understand how to apply it. It is also important to note that the Engineering Design Process is approached differently in elementary and secondary levels. When asked how familiar educators were with the EDP, they stated the following:

**CHALLENGES FACING OST PROGRAMS**

Improving STEM education is critical for students in the U.S. Nearly 80% of future careers will require awareness of STEM principles, according to the Afterschool Alliance. However, many schools in Alabama face challenges with implementing STEM education in OST. Challenges that Alabama OST faculty stated are as follows:

- **60% Knowledge, Confidence or Ability to Employ STEM Activities**
- 45% Training and Professional Development
- 41% Community Partners
- 40% Program Development and Implementation
- 39% Funding
- 23% Staff Hiring and Retention
- 13% Student retention and enrollment

**Challenges OST Programs face in Alabama**

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[1] Sciencebuddies.org  

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[1] Sciencebuddies.org  