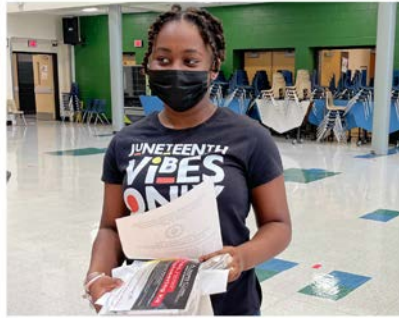
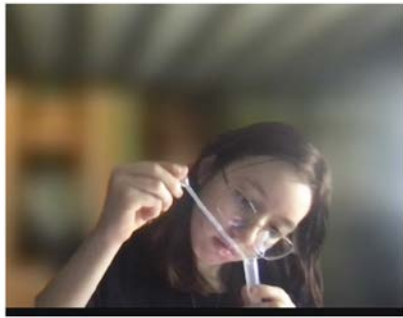


2021



PGCPS SCIENCE & TECHNOLOGY PROGRAM FIRST STEPS TO SUCCESS SUMMER BRIDGE



[Summer Bridge Competition Video Clip](#)

Introduction

The First Steps to Success Program is a summer bridge program for newly registered Aerospace Engineering & Aviation Technology and Science & Technology students. It is a by - invitation only program designed to assist incoming Aerospace Engineering & Aviation Technology and Science & Technology students with the transition into their respective specialty programs. Students will participate in science, math, technology, and study skills sessions. This virtual program will provide students with an opportunity to work with future classmates and teachers and prepare for the rigor and pace of high school.

Student Testimonials

The Summer Bridge program is designed to provide opportunities for students to develop the students' analytical and critical thinking skills that will provide them with the foundation to master the concepts in all of the core and advanced STEM courses during their academic school year.

Here are the testimonials of students who participated in this extraordinary program which is intended to bridge the learning experiences between the student's eighth and ninth grade year. As our district emphasized the importance for SEL and CRT in teaching and learning, the student narratives are both powerful and humbling.

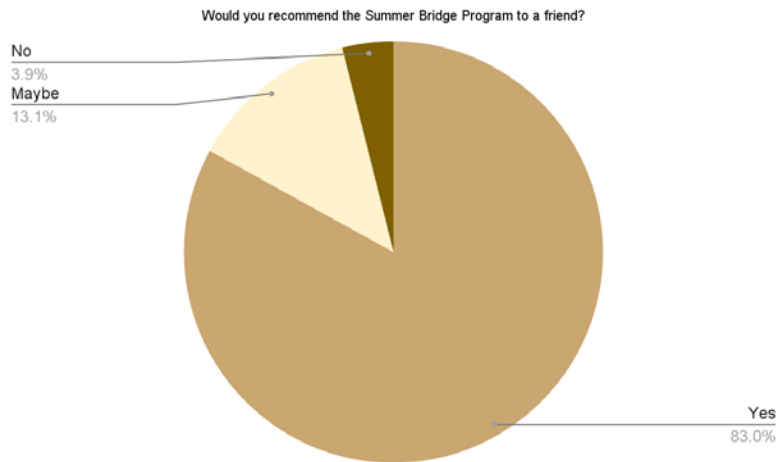
Choosing to go to summer bridge was the best decision that I made coming into high school. Summer bridge allowed me to get familiar with the building and get to meet my fellow classmates. I met some of my closest friends in my summer bridge class. Ironically the kids in my summer bridge class were in most of my actual classes when school started. Summer bridge made me feel comfortable and motivated to start my high school journey, especially knowing that I already knew a handful of people. Without summer bridge I would not have been as prepared for high school and I would have been super nervous on the first day. Some of the most successful and involved students I know attended summer bridge. I couldn't imagine how different 9th grade would have been for me if I hadn't gone to summer bridge. I met my best friend at summer bridge and I am forever grateful. ~A.M.

Summer bridge allowed me to expand my horizons when it comes to friendships, goals, and habits that developed over my summer. Summer bridge helped me get over my fears of meeting new people, learning more complex things, and eased the transition from middle school to high school. ~E.R.

Summer Bridge allowed me to meet new people and gain new relationships so that when the school year began, I knew somebody in every class that I took. It also showed me the dynamic of high school and gave me more of an idea of where my classes would be, as well as the layout of the school. It honestly made my transition from middle school to high school much easier. ~N.N.

Summer Bridge allowed me to actually survive high school so far. Without it, I would've been so lost my freshmen year. Summer Bridge gave me the opportunity to get familiar with the school and most of the teachers I'd have. The work we had was also a nice transition into the work I'm doing now. Finally, Summer Bridge allowed me to meet the friends that I've been with for the past 3 years. ~J.G.

Student Perception Data



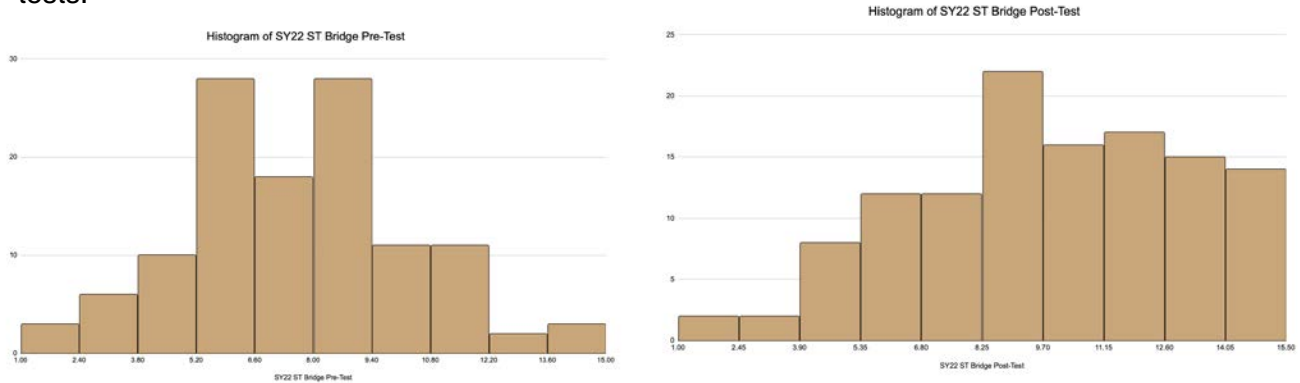
Students also expressed in a survey their favorite part of the Summer Bridge Program. The top five responses are shown below:

- Meeting new people
- Competition

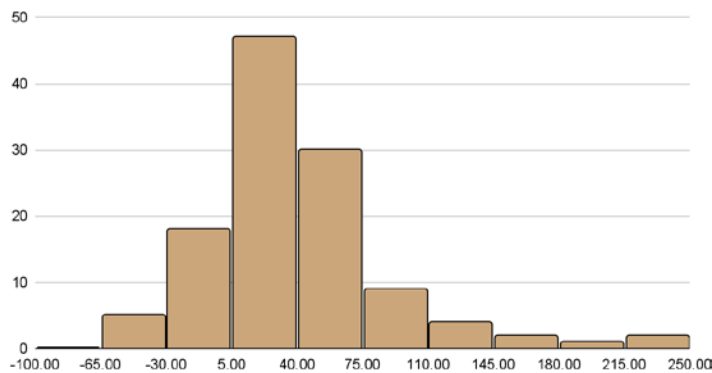
- Learning in a fun environment
- Collaboration
- Feeling ready for high school

Math Data

The goal of the Summer Bridge mathematics course was to fill in missing gaps, improve problem solving skills, enrich analytic and logical thinking, and foster/create a passion for mathematics. The graph below demonstrates students' percentage of change of pre/post tests.



Histogram of Percent Change between Pre and Post Test Data



| | |
|----------------------------|-------------|
| Sample Size, n | 138 |
| Pretest Average | 7.344202899 |
| Pretest Standard Deviation | 2.730137777 |
| | |

| | |
|-----------------------------|-------------|
| Posttest Average | 9.93442623 |
| Posttest Standard Deviation | 3.300357368 |
| | |
| Z-Statistic (Critical) | |
| | |
| Alpha Level = 0.05 | 1.96 |
| Alpha Level = 0.01 | 2.575 |
| Average Change in Score | 16% |

English Data

The goal of the Summer Bridge English course is to ensure students retain the knowledge and skills taught in their middle school English classes. In addition, the goal is to improve upon/address gaps in the learning/strengthen reading and writing skills in order to be prepared for the rigors of high school level reading/writing. This year due to the virtual bridge, students were given an opportunity to write and narrate books as they prepared for 9th grade honors English. See the following links to student samples below.

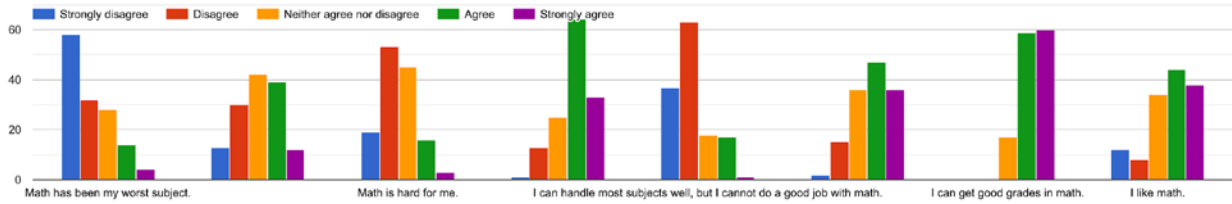
[Storybook Presentations](#)

[Dare to Dream Story Books \(Book Creator\)](#)

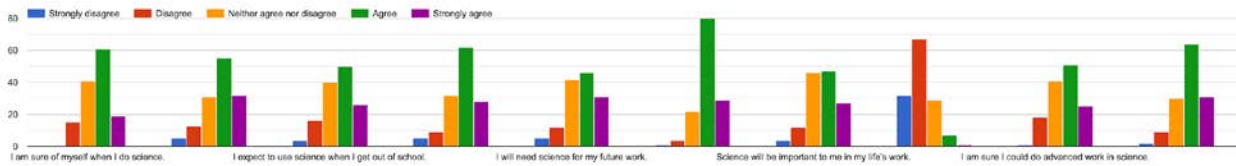
STEM Data

The Summer Bridge program uses an integrative and problem/project based learning approach to prepare students for the program and the rigors of high school. Based upon the premise that students are coming into the program with different skill sets and knowledge, the summer bridge schedules students in English, Mathematics, Science and Engineering courses. Program teachers use this time to evaluate students (through pre/post assessments) and as a team, each center develops a plan of action to get all students to where they need to be to be successful in the program. Students are also developing and exercising their 21st Century skills through competitions, teamwork and presentations.

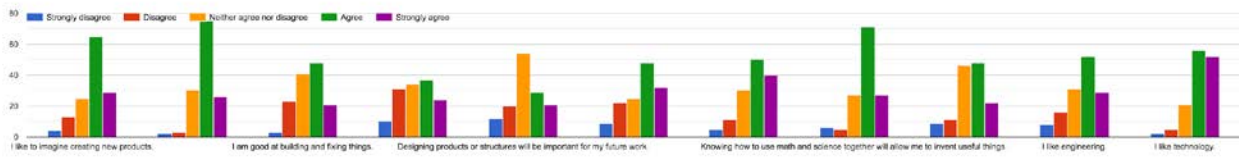
Math



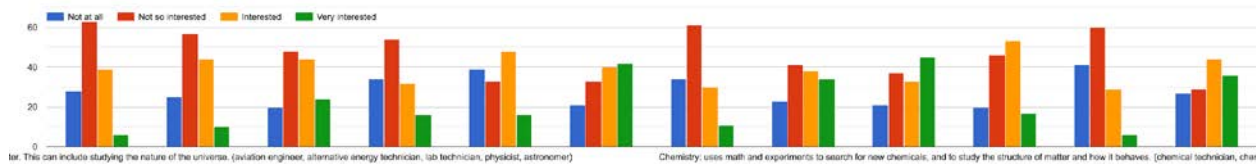
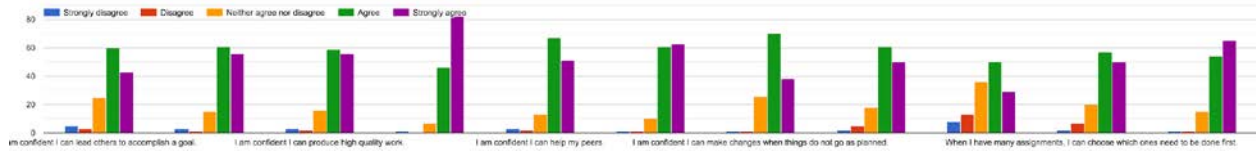
Science



Engineering and Technology



21st Century Skills



SEL Data

Approximately 652 students registered and participated in the PGCPS AEAT and S&T Summer Bridge Program, attending five days a week. With the goal of not only preparing future leaders for the rigorous program, the Summer Bridge program is built on the foundation of relationship building and has a strong social and emotional approach to learning. Assessing the behavioral, cognitive and emotional engagement in learning during summer bridge is an overarching goal summer bridge program that is directly correlated to social emotional learning.

The evidence of SEL learning can be summed up best by our Grand Prix Competition seen here: https://wke.lt/w/s/_-mwozY and [summer bridge memories.](#)

Transition Data

The Summer Bridge program aims to ensure that the students have a smooth transition to high school. Most students noted that the program was effective at preparing them for high school. However, first quarter data is also analyzed.



Attendance

It is the expectation that all newly registered students into the program attend summer bridge. Students who register and attend Summer Bridge from the first day have a 96% attendance rate.

Future data analysis

We are looking to continue our research for summer bridge and do a longitudinal data study about the summer bridge to inform the work and future planning of the summer bridge program.