



Robot Introduction for Children

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Introduction

STEM (Science, Technology, Engineering, and Mathematics) has been growing into an important role that is needed for advanced community. However, there are kids who don't have an opportunity to get in touch with in the early education, so in CPSS240, we work to create an experience for students who are interested in it.



Activities:

First, we had to learn and be an expert with the Lego robotics kits and EV3. We went through lessons and tutorials for constructing and programming so that we are sure we can answer the questions from the students. Then, we had to make 3 challenges that all leads to the grand challenge because those will motivate students to participate in the course. Next, we created lesson plans to guide the process and to develop objectives for each weeks. With our lessons scheduled, we were able to teach the students and help them to build and develop their robots to achieve the grand challenge in the end.

Impact:

This project emphasized to me the importance of equal opportunity in education. I was able to get a start with programming experience offered by my high school, and those knowledge and experience has greatly helped me get in as a Computer Science major here. By contrast, there was a lack of traditional STEM education at CPA that students are less early exposure to STEM in their school. Early exposure to STEM can be important for sparking an interest and help suite a career path, so this project gave me a chance to help others to learn about it and reflect my lucky experience as a reminder of importance of equal opportunity in education and community.

Site Information:

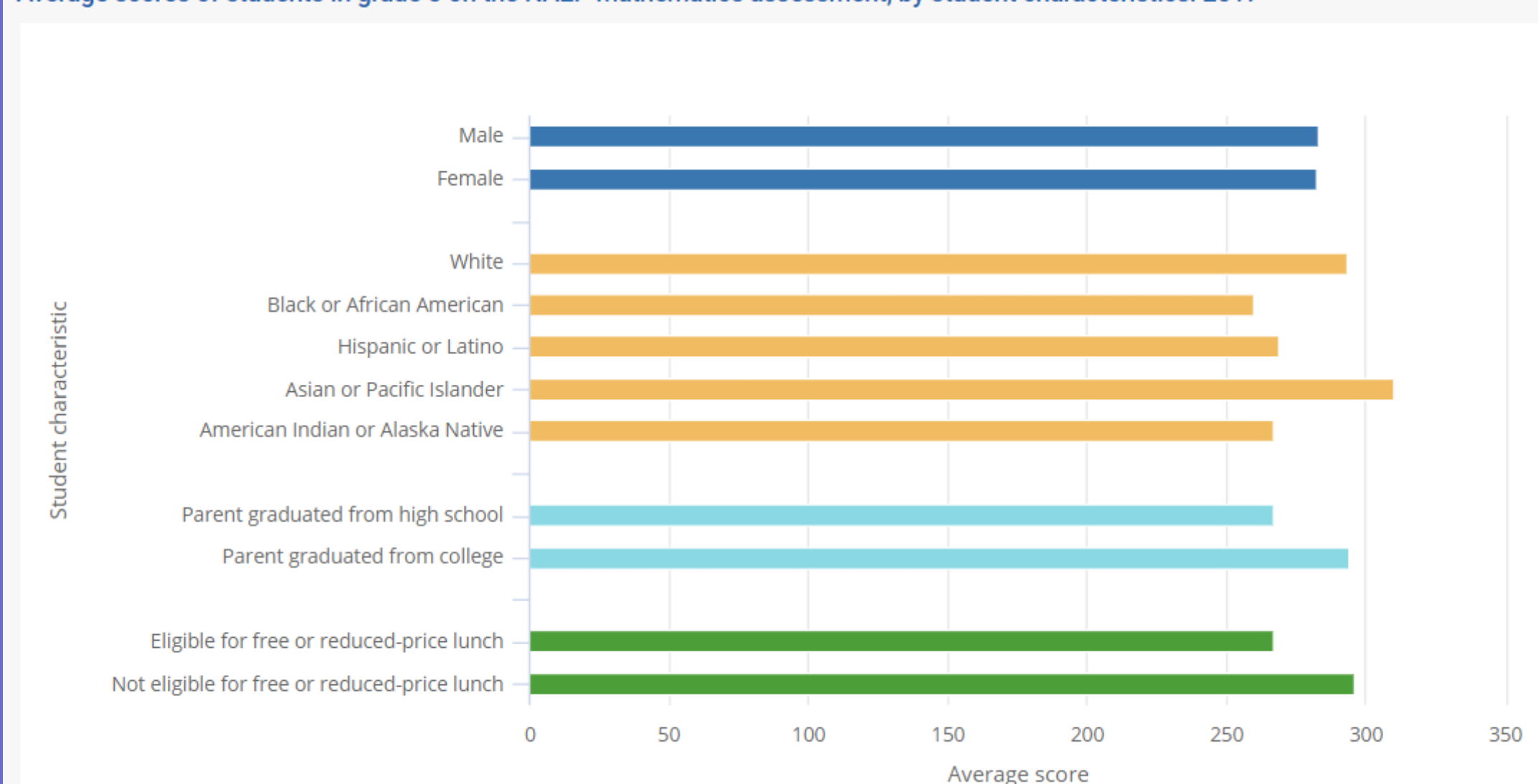
CPSS240 - CPA(College Park Academy)
734 University Blvd E, Silver Spring, MD 20903

Timothy Reedy

CPA's mission is to bring experience to more people who are interested in STEM to create their career path.

CPA's goal is to provide a safe place for students to come in and learn about robotics including hands on experience and block coding.

Average scores of students in grade 8 on the NAEP mathematics assessment, by student characteristics: 2017



This is the data collection by Science and Engineering Indicators, <https://nces.nsf.gov/pubs/nsb20196/student-learning-in-mathematics-and-science>.

It's about how different background of students in 8th grade scores differently in avg scores.

Issues Confronting Site:

Due to Pandemic, CPA turns online tutoring whereas students will need to have access to internet with cam and mic to communicate with us. So, students without those requirement or others who can't reach us will miss this STEM learning opportunity

We hoped to spark an interest in STEM for these kids and provide some experience in the process.

Discussion:

During Pandemic, we would have to tutor and help the students via Zoom, so there are much lesser in-person activities, and we lost a lot of connections between us and the students. Something didn't go well with this format will be the unexpected absence, and you can't do anything about it.

Future Work:

I really enjoyed the time in CPSS240, and in the future, I hope to be able to help more in the field of STEM. I have learned many facts and analysis on inequalities in education system due to different backgrounds, identities, and more. So, I hope I can contribute my work to help to balance it. Overall, this was a good experience, and I hope more and more students would want to learn more about STEM education to benefit them and the system.

Acknowledgments:

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