

Teaching Robotics to Elementary Schoolers

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College Park Scholars – Science & Global Change Program Computer Science arozen@umd.edu College Park Scholars Academic Showcase, May 1, 2020



Background

In the Fall semester of 2019, I participated in a service learning class. Once a week I, and two of my classmates, visited Prince George's County Public Schools' Hollywood Elementary School, and we helped run a robotics club for an hour. My four 5th grade students, Michael, Leanna, Elizabeth, and Stephany, built a robot with my help, which was designed to hammer the other group's robot in a battle.



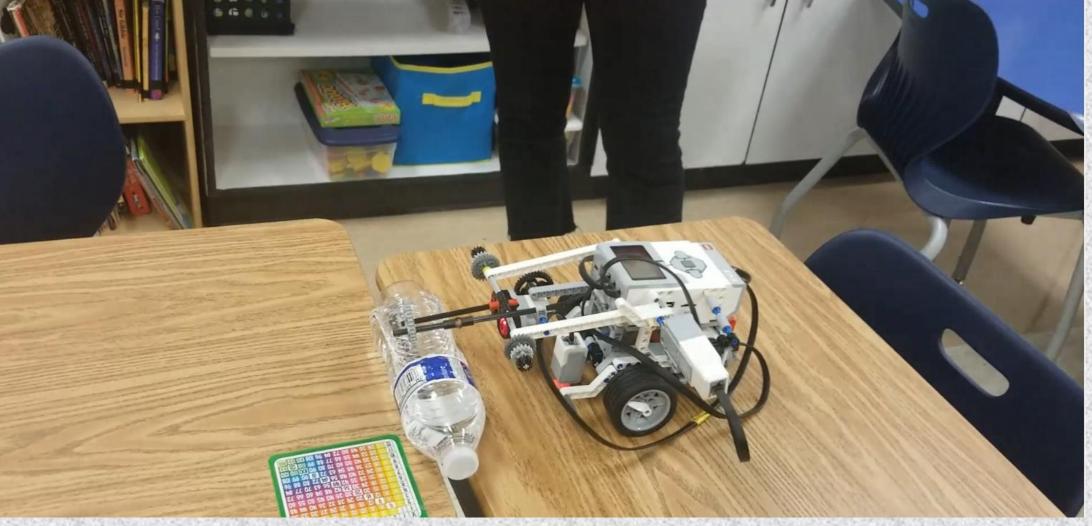
Site Information:

Hollywood Elementary School 9811 49th Avenue College Park, Maryland 20740 Supervisors:

Timothy Reedy and Alyssa Jaramillo



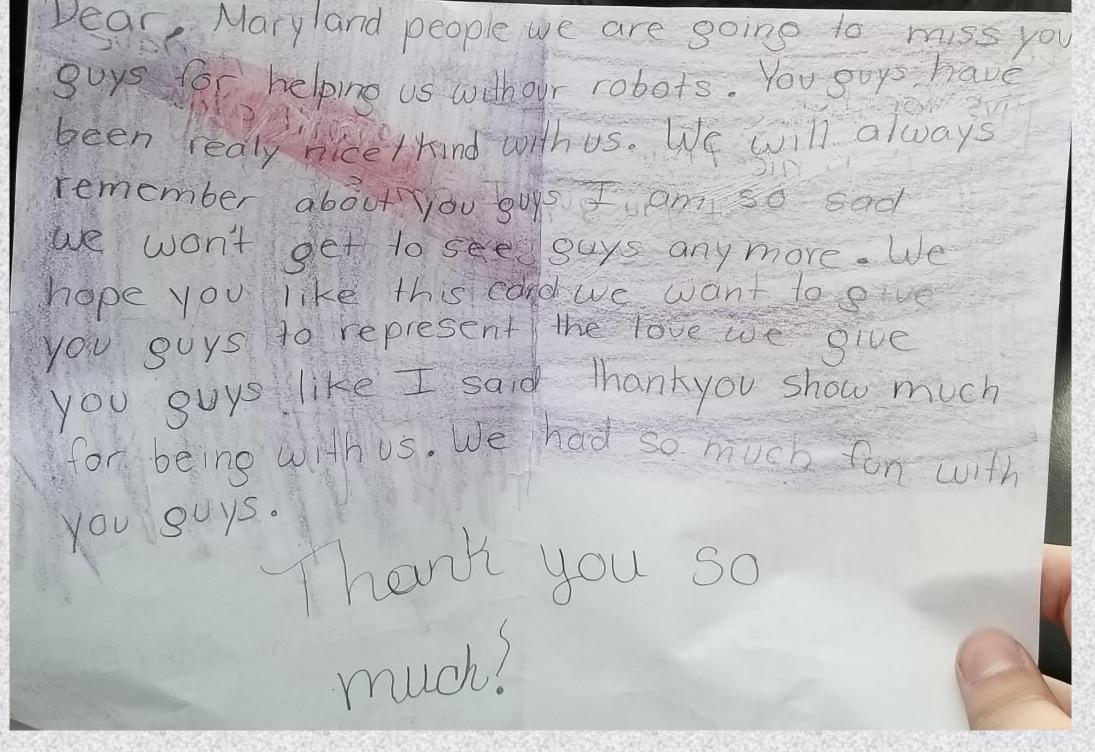
- Teach fundamental programming concepts
- Impart problem solving techniques
- Inspire students to think creatively

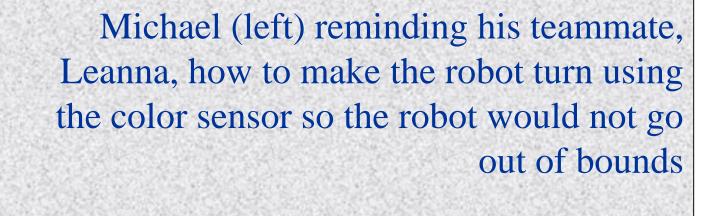


Demonstrating to Alyssa the robot's ability to move its hammer up and down

Impact on Hollywood Elementary School:

- Students improved critical thinking and problem solving skills
- Students are more excited about STEM
- Students learned to work as a team
- Students realized learning can be enjoyable
- Students can build a robot that follows simple commands





The inside of the farewell card that Elizabeth and Stephany gave me. Not pictured: A fun-sized Snickers bar and a few starburst

Impact on Me:

- I learned about the students and their different backgrounds
- I am no longer considering a career that may involve management of children
- I am a better teacher
- I understand how to use a LEGO® MINDSTORMS® EV3
- I have realized that teachers must learn along with their students

Elementary Problems:

- I did not know how to make the battle robot initially
- Students forgetting what we did the week before without a reminder
- Keeping students on task and not distracted
- Keeping students engaged while others were programming on my laptop
- Wanting to change robot to not have the hammer the week before the battle with the other groups



Acknowledgments:

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