

HOPE Grant

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Proposed Project:

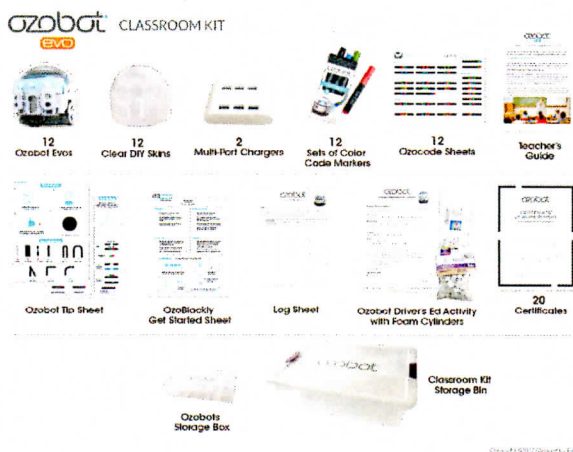
I would like to purchase two (possibly three) Ozobot classroom kits to use with the after school Computer Clubs that I have been conducting at Heyworth Elementary. After successfully piloting them with the Club, I would like to incorporate them into the elementary Library Tech classes as well.

An **Ozobot** is a little robot that blends the physical and digital worlds. Students will get beginning experience with programming with a hands-on project that will let them **use** the code that they are creating to make their Ozobots move and respond. Ozobots make STEM concepts engaging and seamlessly support lessons for grades K–12 on a range of topics from computer science, programming, and math, to art, literature, and history. I look forward to testing many of these lesson with our Heyworth students as they learn the programming concepts to bring the lessons to life.

There is no formal computer or coding class at Heyworth Elementary other than what I teach in Library classes, so the need is definitely there.

Estimated Cost

Each kit is \$1,149 and has all the components needed for 12 students. Two kits would allow me to have 24 students participate. Three kits would be a full classroom set plus spares. In addition to the robots themselves, the kit includes chargers, code sheets, guidebooks, and more, all packed in a secure storage bin.



Total cost for two kits: \$2,298.

(no tax or shipping with our school Amazon account).

Two kits would mean that a large after school Computer Club would need to pair up. Also, we have a few elementary classes with more than 24 students.

Three kits would give us 36 robots, so the Club members would not all be required to pair up, plus there would be enough for a

full elementary class, with a few left over for replacement/repairs. **Total cost for three kits: \$3,447.**

Who and how many would benefit?

I would pilot the program with the 4th-6th graders who sign up for the afterschool Computer Club. This club was wildly popular last year with 44 students participating. Once word gets out about Ozobots, I would anticipate even more interest. I could offer two sessions instead of one to keep numbers manageable. With 24 Ozobots, I would have students pair up to work, as necessary.

After a successful pilot period, I would use the Ozobots in Library Classes during the coding units. I would start with the 6th grade (69 students), but would incorporate the robots into lower and lower class levels. (5th = 76, 4th = 71, 3rd = 72, etc.) The literature indicates that the Ozobots can be used with students as young as Kindergarten. Exciting!

Impact on students and staff?

STEM stands for Science, Technology, Engineering, and Math. Students benefit from hands-on learning; using coding to program Ozobots would be a fun and innovative way to bring those lessons to life. Many of our students have expressed desires to have careers in gaming, architecture, fashion, teaching, business, science, computer science, and more. The programming skills they start learning right now will have direct applications in the careers they are able to excel at in the future. Students' confidence grows when they can see the practical outcome of their learning.

The skills and practice that elementary students have with coding will give them a great foundation for more advanced lessons and skills at the junior high and high school level. When we "up our game" at the grade school, the junior high and high school staff can design higher level courses because they know our kids will come to them with the basic skills they need.

Success in one area often encourages success in others, so all teachers might benefit.