

PowerUP Jax Fall 2016 Grant Winner

6. **Bethany Patel**
John Stockton
Subject/Grade: 3rd Grade Math/Science/Technology
Project Title: Wonderful WonderBots!

Summary of Project:

Technology is everywhere around us. In the classroom, teachers and students use computers daily to support and enhance lessons. At home, we use technology for communication and entertainment. But while everyone is becoming more adept at using technology, how many of us know how to talk to technology? In the future, many careers will require our students to know the language of code. Which is why I am making it my mission to introduce my third graders to digital literacy. We are currently using the free online site, Hour of Code to learn about logic puzzles and coding techniques. The coding activities are engaging and challenging for the students, and many of the puzzles require the students to collaborate together to reach a solution. However, this is only the beginning, I also want my students to see how computer programs can be used to communicate with robots. With this grant I will be able to purchase two robots that will react to algorithms written by the students. These robots will help my kids understand how the abstract concept of writing code interacts directly with technology. In addition to the robots, I will purchase two Nabi tablets that will allow us to communicate to the robots, as well as a one year subscription to the Wonder Workshop so my students will be able to experience the robots to the fullest.

How many students will be directly involved? Explain any further impact on other students, teachers, the school as a whole, and/or the community.

This project will touch the lives of 36 students this year. However, these robots will be in the classroom for future third graders as well. The impact of this project will be opening doors for my students as they continue their education and become adults. Without the knowledge of code, college and career opportunities will be limited. Already some middle school programs only accept students with coding and robotics experiences. This project will allow my students to learn the language of the future.

How will the project specifically increase student learning? Be sure to explain the project's connections to existing learning standards. Be clear about what new skills, knowledge, and/or dispositions the students will acquire.

In addition to this project being Common Core and NGSS aligned, students will be gaining exposure to the world of robotics, engineering, and technology. Students will be creating algorithms, completing sequences, and solving problems. The Wonderbots project will also allow the students to work in groups while collaborating together to complete the lessons.

What is your plan for evaluating the success of your project? What artifacts (photographs, samples of student work, testimonials, etc...) would you use to demonstrate the effectiveness of the project?

Students will be expected to keep all of their Wonderbot work in their computer science notebooks. For each lesson, the students will first write out their plan for the robots. They will then use the tablets to complete the algorithms within the coding applications. Photographs and videos will be taken of the students while they are working on the lessons. These will be shared with parents and other educators at the school.