Racing Robots: 21st Century Skills at Work
Bay Elementary School
Third Grade - Nancy Rentz

Students loved coding with robots. Thank you so much for funding my project to help boost my students' love of math and science. My students were engaged with each other solving real world problems and they didn't even realize they were improving their critical thinking skills.

Each day students welcomed the challenges they were presented with while working with their robot. It definitely set the tone for enjoyable productive struggles in my classroom. It helped to build my students stamina to be able to handle the challenges during math and science instruction. Students had many opportunities to put their logic skills to the test. These challenges definitely helped to raise my students' math and reading scores.

Students collaborating with jumping drone

At the beginning of this school year 23.8% of my students scored in the bottom 25th percentile on our STAR reading test. Of these students 80% were English Language Learners where English is not their first language. I knew that I needed to find a way to engage these students in unique ways to help build their reading skills while giving them real applications for learning the language.

By introducing the OSMO games in the classroom, I was able to incorporate language in a more tactile way. Students were eager to learn how to use the tools. This gave them a real purpose for understanding the language necessary to be able to participate. The OSMO games allowed words based on the student's abilities to be incorporated in a visual representation. Students were able to practice using the English language in a very engaging way.

Students coding Minion MiP

The final STAR Reading Report shows that these two students were still in the 25th percentile, but they both showed growth during the year. One student showed 81% growth and the other student (new to the US this year) showed 20% growth.

At the beginning of the year, my students were more proficient in the area of math. I had no students in the bottom 25th percentile, so I wanted to provide additional enrichment opportunities to further extend my students learning in the area of math. I felt that students needed to work on improving their critical thinking skills to help develop their math brains. 23.8%

of my students were in the 50th percentile on the STAR Math test. Again, 80% of these students were identified as English Language Learners.

By introducing the robots into my classroom students were encouraged to work together to learn how to complete a variety of challenges with the robots. Enrichment time became an exciting time in our classroom. Students put their heads together to accomplish many new challenges. They worked well together to learn how to get the most out of the robots were purchased in the classroom.

In December, my STAR Math Report indicated that 13.6% (3 students) scored below the 50th percentile. Two of these students were English Language Learners and one was new to the school. While these three students remained in the bottom of group at the end of the year, each one of them showed growth in the mid 20's and 30's (26%, 27%, and 35%).

Students were engaged during each use of the materials provided in this grant. I am very appreciative to have been granted the opportunity to share this technology with my students. They loved being in my class and worked very hard for all the opportunities they were given. I look forward to being able to use these tools again next year to stretch my new students once again.

Using Coding Challenge Cards with Dash Robot

OSMO Tangrams