Project Description

The purpose of our project involved using the thousands of dollars of robotics equipment purchased by the school under last year's technology in schools measure.

We wanted to learn how to use the hardware and software, and how to incorporate the kits into meaningful learning activities in the classroom.

We decided to hold our first group meeting in November, once teachers had had a chance to pull the robotics kits out of the cupboard and try some of them with students. Organizing the kits and sign out procedures was a lengthy process considering that we have multiple kits of seven different kinds of robots.

Teachers met informally to brainstorm activities and share experiences.

At our first group meeting, we starting creating activities that could be shared with other teachers and used in future years.

At the second group meeting, a sub group focused on certain kits and subject specific objectives.

Our third group meeting was planned to include the CQSB Recit-IT consultant who was going to provide additional resources. Unfortunately, this meeting did not happen due to school closures.

During the school closures, teachers continued to research activities online. Some teachers attended webinars. However, we could not try activities with students. We could not access any robotics kits to adapt activities for our needs.

In May, once we returned to school, professional development activities were closed. In order to respect public health measures regarding students' sharing equipment and minimizing equipment, we could not utilize the kits in our classrooms.

Therefore, we did not use all the days allotted to our project.

Project Goals

Despite the pandemic and the unusual conclusion to the school year, teachers attained the most important goal: to get robotics kits off the shelves and into the classroom. Consequently, we:

- gained confidence in organizing small and large group activities.
- learned how to download programming software onto devices.
- practised managing kits of equipment with a classroom of students.
- organized some learning activities to complement the QEP.
- explored the pros, cons, and applications of various robotics equipment.

Unfortunately, we did not write up and curate as many learning activities as we had hoped. We had planned to write multiple activities for the main subject areas in all grades involving all of the kits in our school.

Although we were in virtual contact with the IT consultant, we would have liked to connect in person.

Project Outcomes

We agreed that, after an initial period of exploration, students worked best when presented with structured activities. Some students could focus for long periods, asking questions and devising tests for the robots to try, but others lost interest or did not focus unless a clear sequence of steps to follow was in place.

This year, we felt comfortable enough to establish a noon hour Robotics Club in the school that was open to students in grades 4-6.

Despite the limitations of this unique school situation, we are ready to use robotics in our classrooms next year. Thanks to the PDIG, we

- created some activities that we can use for years to come.
- understand which kits adapt better for different ages of students.
- started a bank we can use to share resources that we find and create.
- incorporated different robotics kits into math, English, science, and social studies lessons.
- Gained enough knowledge to assist other colleagues in using robotics in their classrooms.

Re-investment

Now that we have "broken the ice" in terms of using robotics, we can easily continue to work on this project next year by creating and sharing new resources.

We encourage other school teams to apply for PDIG projects in order to have time to experiment with the kits, explore the pedagogy, and collaborate to create resources.

The link for our Sharepoint where activities will be stored is:

https://cqsb.sharepoint.com/:f:/s/RoboticsPDIG2019-20/Ei_T025vAclFkxVrgzDZrTwBngqs4Dkv6YsIqO26d6Wo6A?e=vrrcWJ