Project Description:

The project aimed to improve the academic outcomes of students in the TS/SN programs in Sec. 4 by having Sec. 3 Math and Science teachers work together to create cross-curricular activities and assessments. The project was designed to help students combine the theory and application parts of both courses. The project spanned over several months, and it involved the collaboration of multiple teachers across different departments.

Project Goals:

The primary goal of the project was to improve the academic outcomes of students choosing the TS/SN programs in Sec. 4 by aligning the math and SciTech curricula in secondary 3 as well as by having teachers co-plan for students' frequent misconceptions that impact both subjects. The project also aimed to foster collaboration between Sec. 3 Math and Science teachers and to create resources, cross-curricular activities and assessments that would better prepare students for the TS/SN programs in Sec. 4.

Project Outcomes:

The project achieved several significant outcomes.

First, the teachers mapped out the grade 9 math and science curricula and sequenced the topics they will cover in an optimal way. This ensured that students received a comprehensive understanding of the concepts in both subjects, making it easier for them to integrate and apply their knowledge. In other words, concepts from one subject that reinforce concepts from the other subject will be taught together to better facilitate the transfer of learning and, ultimately, to better prepare the students for the TS/SN programs.

Second, the teachers created math resources designed to support students in their science classes. These resources were used to help students understand the mathematical concepts and formulas used in their science classes, making it easier for them to apply their knowledge in real-world scenarios.

Lastly, the teachers created a cross-curricular math-science activity that requires 2 science classes and 1 math class to complete. This activity involved students working together to collect and analyze data as well as required them to apply their knowledge of both subjects. The activity is designed to be engaging and challenging, and it

provided students with a deeper understanding of the connections between math and science.

Reinvestment:

Moving forward, we recommend that the project be expanded to secondary 4 math and science teachers. Additionally, we suggest that the cross-curricular activities and assessments be integrated into the regular curriculum to ensure that all students benefit from this project.

Final Report:

In conclusion, the project has achieved its primary goal of bringing math and science teachers together to create resources, assessments, and activities with academic outcomes of students in the Sec. 4 TS/SN programs in mind. The project has fostered collaboration between Sec. 3 Math and Science teachers who have greatly enjoyed creating resources and activities together and has allowed for the sharing of tacit knowledge between teachers from different departments and schools. The project has resulted in teachers mapping out the grade 9 math and science curricula and creating math resources that support students in their science classes. The project has also resulted in the creation of rich tasks and cross-curricular math-science activities that provides students with a deeper understanding of the connections between math and science (see the attached documents).