ONTARIO PUBLIC SCHOOL BOARDS' ASSOCIATION

Leading Education's Advocates

EFFECTIVE PRACTICES IN INDIGENOUS EDUCATION

School Board: Ottawa-Carleton District School Board

Contact Person and Email Address: Dorothy Baker, Superintendent of Curriculum Services, 613-596-8211 Ext. 8573, Jody Alexander, System Vice Principal First Nations, Métis and Inuit Education, 613-596-8211 Ext. 8179

Name of Program/Initiative/Strategy: Indigenous Science, Technology, Engineering and Math (InSTEM)

Description of Program/Initiative/Strategy

The focus is on practices that excite, engage and increase student confidence, achievement and well-being. In the brief description please provide answers to the following questions: Where the program/initiative/strategy is delivered (school/board locations)? Who is responsible for delivering and monitoring the program/initiative/strategy? Who is the target audience? Are there any community partnerships involved? Are there any staffing or budget implications? Are there any special resources required? What are your indicators of success, etc.?

Where the program/initiative/strategy is delivered (school/board locations)?

InSTEM was delivered on site at an Ottawa-Carleton District School Board (OCDSB) Secondary School called Gloucester High School. Indigenous students from nearby Rideau High School joined the InSTEM program.

Who is responsible for delivering and monitoring the program/initiative/strategy?

The Curriculum Services Department, Equity and Inclusive Education division under Superintendent Dorothy Baker held primary responsibility for the program at the OCDSB together with the Gloucester High School staff and First Nations, Métis and Inuit Education division.

Who is the target audience?

Indigenous students from within Gloucester High School and Rideau High School were the target audience and main participants for this initiative. The program, however, also included non-Indigenous students who were interested in the program.

Are there any community partnerships involved?

A strong community partnership was one of the main drivers of the incredible success of this program. This program brought together partners from Actua, University of Ottawa Engineering and Maker Mobile, OCDSB, Gloucester High School, Rideau High School, local Indigenous Elders and Traditional Knowledge Keepers and program Ontario Trillium Foundation.

Are there any staffing or budget implications?

Indigenous Elders and Traditional Knowledge Keepers were invited and played a pivotal role in the implementation of the program. Additionally, since the program united two High Schools there was a cost for transportation. The Ottawa-Carleton District School Board provided funding for both of these items centrally through its First Nations, Métis & Inuit Education Board Action Plan.

In addition, through partnerships with Actua and the University of Ottawa, they, together with Gloucester High School, provided human resources.

Are there any special resources required?

Indigenous Elders and Traditional Knowledge Keepers are integral in the running of this program as they provide cultural knowledge that cannot be simulated through school based resources.

Access to cutting edge technology from the University of Ottawa Engineering Department/Maker Mobile such as the 3D printer and software program Tinkercad are highly specialized resources and not available to schools on a regularly.

What are your indicators of success, etc.?

Collecting feedback from the students who participated in the program are one of our primary indicators for success. In the program, 12/18 students have already submitted evaluation forms to provide feedback on their experience in the program this semester. Of the 12 respondents, the feedback was very positive. When asked how they found the program, two (2) said "Amazing", nine (9) said "Very Good", one (1) said "Good" , Zero (0) said "Liked it a little" and Zero (0) said "Didn't like it". Of the 12 respondents, ALL 12 students said they "maybe" or "are" interested in participating again if this program is offered in the future. In their personalized responses to the evaluation, the comments were encouraging:

"It was so great, honestly!"

"PLEASE DO THIS NEXT YEAR ☺"

"I really enjoyed this program and definitely think it should run again. Met really cool people and learned lots"

"Loved it! Very good program, would do it again"

What has been the impact on Student Learning?

The impact of student learning from the Indigenous STEM program is difficult to measure as we will continue to see the positive outcomes as the students move forward in their education but unquestionably the immediate impact is positive. Regular student attendance, registration and participation in the NDA3M/InSTEM pilot course, the output of meaningful project prototypes and the student-directed sharing of culturally relative and socially mindful conversation are all indicators of positive impacts of this program.

Additionally, through engagement with Community Elders and Knowledge Keepers, students gained meaningful context from the Indigenous perspectives as related to Science, Technology, Engineering and Mathematics. They also addressed social justice issues together involving Indigenous communities and perspectives. Indigenous students demonstrated a pride sense of identity and non-indigenous were exposed to positive experiences in indigenous knowledge.

Finally, it has provided a starting place for students from both Gloucester High School and Rideau High School to enter into meaningful dialogue while they amalgamate in the upcoming school year.