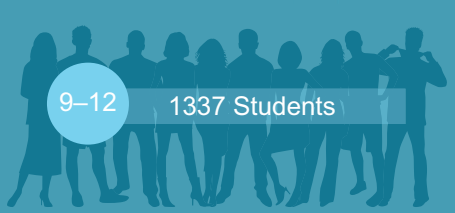
DATA AND SCHOOLS:
A Journey of Learning

John McCrae Secondary School

Ottawa-Carleton District School Board



John McCrae Secondary School is a rapidly growing school in a diverse community. Population projections indicate the school could have over 1800 students within the next six years. The school has a High-Performance Athlete program to support provincial and national athletes academically.

This school is diverse in ethnicity, culture, and religious beliefs, and has a large percentage of English language learners.

“My teacher wouldn’t accept that I couldn’t do it. He encouraged me to keep trying, and he helped me when I needed help.”

— Grade 9 student

Analysis

1 Tracking for Success

Teachers identify students in applied-level mathematics classrooms to better understand the progress of the student group. The team also moderates student work collaboratively to better understand their learning needs.

2 Evidence Informed

Based on the data, staff form professional learning teams. The teams also review data to determine a focus for the school learning plan, and to check that the plan is working. Evidenced-based instructional strategies are selected according to the students’ needs. The strategies are good for all but necessary for some learners.

3 Collaborative Environment

Teachers provide opportunities for students to work in small groups focused on problem solving. Teachers act as facilitators responding to questions that arise as students work and learn collaboratively.

4 Observe and Refine

Through observations, conversations and the students’ products, teachers monitor how the students’ understanding is developing. The instructional approach is adjusted in response to what the assessments for learning uncover.

5 Iterative Approach

The impact of this professional learning cycle approach is confirmed by growth in credit accumulation trends, by achievement on EQAO assessments and by qualitative data collected from students and teachers.

Action

Spiralling Mathematics Curriculum

Teachers noticed that gaps in student understanding were not always being addressed when math was being taught as discrete units and strands. Although students reviewed material before final assessments, their understanding was not proficient.

Math teachers worked to spiral the Grades 9 and 10 curriculum, so concepts were integrated and connections across strands reinforced. Concepts were revisited multiple times over the course of the year in order to build upon students’ learning and understanding. Each time, the students’ comprehension deepened.

Vertical Non-Permanent Surfaces

Teachers have begun incorporating Peter Liljedahl’s method of using vertical non-permanent surfaces in classrooms. Teachers visited other classrooms throughout the board to observe the method in action.

In this collaborative problem-solving model, students are randomly organized into groups of three. Students collaborate while using a whiteboard to work on math problems. They are encouraged to observe what other groups are doing. Meanwhile, the teacher facilitates while circulating through the room. Teachers observe that students develop a much deeper conceptual understanding and are engaged longer.