

# New way of teaching continues to pick up STEAM at local schools

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Shortly after becoming principal at Pierre Elliott Trudeau Elementary School, Anna Sanalidro knew something had to be done with the school's seldom-used computer room. The room had about 18 computers that had become obsolete because they were too old and too slow.



As a former math and science consultant, Sanalidro was familiar with new educational initiatives that have fostered a love of science, math and technology among students across North America. So when an English Montreal School Board administrator signalled the board's intention to introduce a similar program called STEAM, Sanalidro's hand shot up at the meeting held in the fall of 2015.

"I said: 'Yes, we are in,'" Sanalidro recalled.

More than a year later, the former computer room at the elementary school in La Petite-Patrie is bustling with activity. Eager students are involved in several hands-on projects that involve using small robots, building basic circuits, recreating scenes from a Greek myth and solving math problems.

The STEAM program, an acronym for science, technology, engineering, arts and math, attempts to incorporate aspects of science and technology across the curriculum. One of the goals is to ensure subjects taught at school better reflect what students will experience when they enter the job market.

The educational philosophy was developed in 2006 by American teacher and education consultant Georgette Yakman and is changing the way some students are being taught. The program requires students to complete group projects by using creativity, collaboration and problem solving.

The hands-on projects help students "figure things out on their own and teaches them skills apart from reading and writing," said Jennifer Lacroix, a teacher at Pierre Elliott Trudeau who

has embraced the STEAM concept.

“We are trying to get the kids to try something and if it fails, to try again and not feel bad about it,” she said in an interview.

The pilot project at Pierre Elliott Trudeau and General Vanier schools has been so successful that the EMSB is announcing Friday it will expand the program to several schools starting next fall.

The board’s announcement comes ahead of kindergarten registration week, which begins Feb. 6. EMSB spokesperson Michael Cohen said as many as 10 schools have expressed an interest in becoming STEAM schools but “funding issues” will determine how many can start next year.

Sanalidro said several of her colleagues came to the school’s open house Thursday to see the STEAM projects students have completed.

In a Grade 1 class, students learned how to build a basic circuit using alligator clips and a battery that illuminated a small house the children constructed. Other students have been solving math problems using small pieces of Lego, and Grade 6 students have built a robot that moves to music.

In some STEAM schools, projects are done in a room dubbed the makerspace, which contains tools, technology and supplies for the projects. Education consultants from the school board have been visiting the schools each week to brainstorm and come up with suitable projects for the students.

When the Montreal Gazette visited Pierre Elliott Trudeau school this week, Grade 5 student Tao Georgopoulos and some classmates were using clay to create characters from the Greek myth, the Twelve Labours of Hercules.

“We are recreating a scene and it’s super fun,” Tao said. “We are learning about Greek mythology and are having fun while doing it. Sometimes in class if we are reading a book, we lose interest and get off topic.”

In the same room, Maya Ramroop and a classmate were using aluminum foil to make a boat that could carry 12 toy animals down a river (using water in a basin) as they recreated another scene from the Greek myth.

Down the hallway, Grade 1 students who had read *The Three Little Pigs* built sturdy houses that couldn’t be blown down by the big bad wolf — teacher Angela Burrascano improvised by placing a mask of a wolf over a hair dryer to test the strength of the houses.

At a time of declining enrolment, General Vanier principal Joseph Schembri said he hopes the STEAM program will attract new students to his school, which has 166 students.

“With the STEAM program, kids are learning about robotics, using glue guns and learning how a 3D printer works,” he said.

At the Lester B. Pearson School Board, several schools have oriented their instruction toward the STEAM approach in the past two or three years and aspects of STEAM are evident in much of what the board promotes, said Tom Rhymes, the board’s director of educational services.

Rhymes said there is evidence the STEAM approach prepares students for 21st-century jobs by teaching students how to problem solve, work in groups and increase their knowledge of sci-

ence and technology.

For the program to be successful, teachers need to be on-board because the STEAM philosophy requires teachers to give up a little bit of control of the classroom, Lacroix said.

For many students, participating in STEAM projects is the highlight of the school day, she said.

“It allows for their creativity to come out and the opportunity to figure things out for themselves by doing hands-on activities,” she said. “They just love it.”