Enrichment Program Report
Roslyn Elementary School
2021-2022

One specific aim of the Gifted and Exceptional Learners' mandate for the 2021-2022 academic year was *Matching Instruction with Needs* through design and implementation of School-wide Enrichment initiatives and Acceleration Strategies (i.e., compacting curriculum) for individual bright and talented students at EMSB schools.
At Roslyn Elementary School, we successfully designed and implemented three school-wide enrichment programs, namely--Mathematics Caribou International, Public Speaking and Debating Junior, and Let's Talk Sciences. Roslyn's achievements in each program will be discussed below along with the future enrichment plans for the upcoming school year of 2022-2023.

Caribou Cup: Mathematics
(Six contests: Oct 2021-May 2022)

Caribou Cup is an international online math contest, focused on complex problem solving and mathematically reasoning. It contains interactive questions and feature mathematical puzzles rather than strictly knowledge-based questions, it comes with results and statistics available on the evening after the contest, it provides 250 video solutions to selected questions and offers interactive practice access to contests from previous years and detailed written solutions. Its cost of 320.00 CAD--entailing of unlimited School wide access codes--was covered for all selected participants by the Ministry Mesure 15027 (Gifted and Exceptional Learners). It is normally held six times over the school year, typically over 2 days in October, November, January, February, April, and May. A total of 23 mathematically talented students, grade 3-5 from Roslyn Elementary school joined this competition as of January 2022. Their achievements (rankings) are included in the table below:

NAME	GRADE	RANKING (within Top)
Oliver Mansour	3	15%
Theodore Finch		25%
Milton Lui	Total participating students: 17,328	20%
Beckham Dunn		25%
Eva Clark		50%
Felix Potter		20%
Louie LeMaistre	4 Total participating students: 17,328	15%
Felicity Klamph		N/A

Adara Allidina	5	50%
Adi Raisman		50%
Morgane Davies	Total participating students: 23,988	40%
Evan Jasinsky		50%
Nicolas Clark		40%
Eve Karamchandrani	6	15%
Dylan Miao		15%
Laura Davies	Total participating students: 23,988	N/A
Emma Luca Lakatos		20%
Joel Hart		20%
Noa Elbogen Deschamps		20%
Reuben Alter		N/A
Mathew Lee		25%
Kieran Smalley		20%
Alessia Di Gennaro		50%

Plans for 2022-2023

The international Caribou Cup will be extended into an enrichment program offered to mathematically talented students on a weekly basis and facilitated by a mentor. The weekly sessions will include mathematical challenges, interactive math questions and puzzles aligned with the requirements of the Caribou Cup as well as Complex Mathematical Explorations designed by National Council of Teachers of Mathematics (NCTM, VA in collaboration with Dr. Renzulli, J. at Univ of Connecticut).

Examples of Mathematical Explorations include:

1. Divide like an Egyptian, in which students are introduced to the Egyptian notations, answer questions of division using that notation, and then make connections to our modern representations. Students also explore a variety of methods for comparing fractions without needing common denominators.
2. Demystifying Multiplications Students build models of the operation 27 x 15 and its result in a variety of ways. The activity promotes student reasoning and sense making by analyzing various multiplication algorithms (area models, partial products, lattice multiplication, and the traditional method.
3. What's on your Plate? Teachers and students explore various facets of health and nutrition while using mathematics in the investigations of data from government sources on nutrition. Mathematics and mathematical thinking include basic operations, reading and interpreting data from charts and tables, predicting outcomes based on data, and combinatorics.
4. Solar System Exploration: *Are We There Yet? A Journey through Our Solar System* helps students use proportional reasoning to build a football-field-size scale model of our solar system. This is a hands-on activity designed to help students experience the vast distances between celestial objects. The activity concludes with students developing a logarithmic scale to help represent the immense distances between planets and other celestial objects in our galaxy.

Let's Talk Science Competition
(1.5h/ Weekly February-May 2022)

Since 2005, Let's Talk Science Challenge offers to Canadian youth (Grades 6-8) with an interest in science the opportunity to engage in enrichment challenges related to technology, engineering, and math (STEM). Specific benefits associated with engagement in LTSC include:

- Provides an outlet for students who are not being challenged by the curriculum
- Inspires students to consider future education in STEM and potential STEM careers
- Enriches curriculum in eight subject areas: Biology, Chemistry, Earth Sciences, Engineering & Technology, Environmental Sciences, Math, Physics and Space Sciences
- Emphasizes team collaboration, cooperative learning and problem-solving skills

Through engaging in STEM enrichment challenges, students develop key skills including:

- Creativity
- Critical analysis
- Teamwork
- Initiative
- Communication
- Problem solving
- Independent thinking
- Digital literacy

This year's edition of the Let's Talk Science Challenge was virtual. The Play and Learn Weekly activities were conducted under the guidance of a mentor with the scope of helping students prepare for the final competition. The Let's Talk Science Challenge included three components:

- The theory component with the weekly quizzes leading to the Final Question and Answer Competition
- The hands-on component with multiple Design and Build Challenges that help students prepare for the Final Engineering Challenge
- The team spirit component with the Above and Beyond badges and the Lorna Collins Spirit Award.

Eight bright students in grade 6 with a great interest in sciences formed the Roslyn School's delegation. These are Eve Karamchandani, Marc Anthony, Felix Chadwick, Dylan Miao, Kieran Smalley, Laura Davies, Zakary Fernandes, and Alessia Di Gennaro. Each participating student was awarded a $15CAD Indigo gift card covered by the Mesure 15027.

Roslyn's achievements are listed below:

Final Q&A Competition: The final theory component. Students participated in a two-hour quiz.

2nd place, Roslyn School, Montréal, Québec

Engineering Challenge
Roslyn School - https://flipgrid.com/s/Ekmkoej3UFdh

Lorna Collins Spirit Award: Renamed to honour the memory of a Let's Talk Science team member, the Lorna Collins Spirit Award was given to the team or individual that showed the greatest spirit, team commitment, fun and creativity. Lorna understood the importance of collaboration and enthusiastically supporting each other - while working hard and having fun!

Finalists, Roslyn School, Montréal, Québec (enclosed Flipgrid videos)
https://flipgrid.com/s/WrKRtxqsPdLU

ABOVE AND BEYOND AWARDS (enclosed Flipgrid videos):
Each week between February 14 and April 25, students participated in fun interactive quizzes and submitted videos for design and build challenges. Below are the winners of the weekly Above and Beyond awards for these events:

Earth Sciences:
Felix Chadwick, Zakary Fernandes, and Dylan Miao: https://flipgrid.com/s/Dfbw3zzTti3k
Alessia Di Gennaro, Eve Karamchandani, and Laura Davies: https://flipgrid.com/s/Co7s2_ynyZny

Space Sciences (climate satellite)
Zakary Fernandes and Dylan Miao: https://flipgrid.com/s/AZEfPxQz_TTw
Kieran Smalley and Mark Anthony: https://flipgrid.com/s/sSuqNpYyG95E
Felix Chadwick: https://flipgrid.com/s/S2dqb9WnAX2z

A newsletter about this event has been written and posted on the EMSB website by the Communication Department.
The newsletter can be found at: https://www.emsb.qc.ca/emsb/articles/gifted-exceptional-learners-enrichment-programs-mark-a-successful-academic-year

The complete details of the 2022 winners of the Let's Talk Science can be found at: https://letstalkscience.ca/about-us/news-and-media/announcing-2022-lets-talk-science-challenge-winners

Recommendations for 2022-2023

- School administration should communicate any conflict in scheduling in advance so alternate plans can be made
- There is a need for a dedicated room with smart board and audio system

- Plan for at least 1.5 hours per session, once a week
- Communicating directly with the parents through a weekly email
- Select students who can work independently and who are excited to learn and participate – some students were not engaged and seemed to simply be enjoying their time out of the classroom. These students were disrupting those who were participating well.
- Plan a field trip to the Planetarium / Insectarium / Biodome / Cosmodome / Science Center

Junior School Enrichment Program: Debating and Public Speaking
(1h/ weekly January-April 2022)

This program offers participants an ideal preparation for the future high school debating clubs and helps readdress the dearth of competitive opportunities for young debaters and public speakers. Our rounds of speech events combine the emphasis on debate skills with persuasion and rhetoric.

23 Roslyn students (G4-6) embarked in the Debating program's sessions, which occurred weekly for one period and were coached by a mentor.

Our program particularly focused on the development of the following skills: public speaking, researching for valid and reliable sources (e.g., library workshop), note taking, organizing information (e.g., designing concept maps), writing persuasive arguments to support the chosen stance, critical thinking (e.g., evaluating the sources read), listening, and team working. Near the end of the program, children were offered the opportunity to enact a real debate on a given topic using the Canadian Parliamentary structure as they competed in the semi-final and final debate against Willingdon Elementary School.

The formal title of our debate was: ***Children under the age of 16 should not be allowed on social media.***

The junior teams competing against each other were:
Roslyn opposition - Amilcar Melilr Vawda, Oliver Lee and Zack Crosbie
vs.
Willingdon proposition - Zoe Flanagan, Jaya Pasquero and Marley Corina Cowper

The senior teams competing against each other were:
Roslyn opposition: Kieran Smalley and Alessia Di Gennaro
vs.
Willingdon proposition: Louise Sullivan, Taiya Bernard and Alison Driver

Roslyn's team won the final debate at the senior level against Willingdon Elementary School. Each winner received an Indigo gift card of 25CAD value. In addition, all participants were awarded a 15CAD Indigo gift card covered by the Mesure 15027.
The event was recorded and welcomed a larger audience including families, school administration, school students and teachers, and a representative from the EMSB

communication department. A newsletter about this event has been written and posted on the EMSB website by the Communication Department.

The newsletter can be found at:
https://www.emsb.qc.ca/emsb/articles/roslyn-and-willingdon-elementary-learn-fundamentals-of-public-speaking-through-interschool-debate

Plans for 2022-2023

Addressing Student Individual Needs: Differentiation, Acceleration and Enrichment

As part of our mandate for the Gifted and Exceptional Learners, we will continue to offer support bright and talented students at Roslyn who require additional cognitive stimulation to keep themselves learning and motivated.

At the request of school administration, Dr Birlean conducts strength assessments for identified talented or gifted students. The strength assessment is based on three inventories created for gifted and talented learners by Dr. Renzulli at University of Connecticut and validated by over 30 years of authentic research evidence from schools across the world. This assessment aims to collect data about student interest, learning preferences, and student's preferred ways to demonstrate learning. Outcomes of this assessment inform ways to differentiate teaching, learning, and assessment, specifically by (a) aligning instructional strategies to identified learning preferences, (b) offering alternative assessment that match identified expression preferences, and when differentiation is not sufficient, (c) tailoring enrichment activities that center on learner's interest and learning preferences.
When enrichment is needed, the student will benefit from a formal alternative program, specifically, a weekly independent enrichment program tailored to student's needs and interest and monitored by a mentor. The process and outcomes of this work are disseminated at the formal Knowledge Fair organized near the end of the school year (usually in May).

When the need for differentiation within one class is identified (i.e., a group of students requiring enriched activities), Dr. Birlean can design/adapt and set up Learning Centers (in various subjects). Learning Centers are differentiation structures located in the classrooms and opened to high achieving students who consistently complete their work well and faster than their average peers. These centers will be monitored on a weekly basis by a member of the Gifted and Talented team.

Professional Development

Support can be equally offered to faculty at Roslyn. At the request of Roslyn's school administration, Dr. Birlean and her team can conduct a series of workshops meant to raise awareness about the needs of gifted and talented students and to equip the faculty with effective tools and strategies for addressing the identified needs of gifted and talented students.

An Additional School-Wide Enrichment Program: Future Problem-Solving Program International (FPSPI)

FPSPI is a dynamic international program involving thousands of students annually from around the world. Developed in 1974 by creativity pioneer Dr. E. Paul Torrance, Future Problem Solving (FPS) provides competitive and non-competitive components for today's curriculum via a six-step model which teaches critical and creative thinking, problem solving, and decision making. FPS can be used as part of classroom curriculum, an extracurricular activity, by individuals or clubs. Student work is submitted electronically, and evaluation and feedback are provided from FPSPI. Qualified students earn invitations to participate in the annual International Conference (taking place in June 2023 at University of Massachusetts- Amherst).

Four thinking skills taught and modeled systematically to student participants engaged in the program are the corner stones of the Future Problem-Solving process

- **Creativity –** Problem solving situations are set in the future to encourage inventive thinking. Students explore future possibility from the present
- **Communication –** Clear and articulate communication is developed while working with a team and ideas are presented in written and verbal modes.
- **Critical Thinking –** Students use analysis to gain an understanding of global issues and to comprehend significant aspects of complex situations
- **Collaboration** – Students work together while learning and applying problem solving skills. Teamwork is nurtured as students advance through challenging and exciting situations.

Four Components of FPSI available include:
GLOBAL ISSUES PROBLEM SOLVING (GIPS): employing the Six-Step Process to respond to a Future Scene provided for each topic.
This program enables students to think creatively and explore collaboratively a selected inquiry topic from a diverse range of contemporary global topics. The 2022- 23 topics are:

- E-Waste
- Digital Realties
- Robotic Workforce
- Throw Away Society

Participants research a chosen topic and apply FPSPI's six-step problem solving process to resolve the Future Scene -- a hypothetical scenario set 20-30 years in the future. Culminating in a detailed Action Plan, entries are authentically assessed and scored by trained evaluators. Students invited to the international conference will also complete booklets while on-site. This program

can be entered as **teams of 3 to 4 students** or **individuals,** taught by a coach (i.e., the school librarian in collaboration with a mentor funded by the Gifted and Talented Mesure at EMSB).

COMMUNITY PROBLEM SOLVING (CMPS): Students identify an Area of Concern from their own community to examine over the course of the school year. Projects are developed and implemented utilizing the Six-Step Process.

SCENARIO PERFORMANCE (SCP): Students develop and perform an oral story of up to 5 minutes, based on their future projection of one of the annual topics.

SCENARIO WRITING (SW): Student authors write an original 1500-word piece of fiction projecting their choice of one annual topic into the future.

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