Annual Enrichment Program Report Willingdon Elementary School 2022-2023

One specific aim of the Gifted and Exceptional Learners' mandate for the 2022-2023 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 Willingdon Elementary School, we successfully designed and implemented *two school-wide enrichment programs*, namely--Mathematics Caribou International (Jr. and Sr. campus) and Public Speaking and Debating (Sr. campus). We also designed and implemented three dyad or small independent study programs, specifically: (a) The Lunar Rover Challenge by Let's Talk Science; (b) The Scenario Writing Future Problem, a competitive component of Future Problem Solving International, and finally (c) a Mini Debate Jr Program. Our programs involved a total of 52 students (Grade 2-6). Willingdon's achievements in each program will be discussed below along with recommended future enrichment plans for the upcoming school year of 2023-2024.

Caribou Cup: Mathematics (Six contests: Oct 2023-May 2024)

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 28 mathematically talented students, grade 3-6 from Willingdon Elementary school joined this competition as of October 2022. Their achievements (rankings) are included in the table below.

NAME	GRADE	RANKING (Top within the
Sky Fraser		9%
Logan Chin	Grades 3 & 4 Total	12%
Biwa Natsumeda		15%
Sopiha Vrakotas	•	21%
Lea McNeill	Participating Students: =	22%
Eve Garthshore	17,149	23%
Morgana Grindlay		26%
Penelope Collins		30%
Grace Tindall		31%
Sienna Lowrie		38%
Raika Moir		39%
Isabelle Desaunettes		43%
Griffin Huff		47%
Steven Elbling		48%
Kalista Ivy Burgos-Bougadis		48%
Marko Popovic		62%
Gia Ramos Laporte		64%
Sacha Urbain		71%
Luca Negrete		78%
Winter Rockman		82%
NAME	GRADE	RANKING (Top within the world)
Karl Muller	Grade 5 & 6 Total	16%
Jonay Eberhard		23%
Noah Roberts	Participating Students =	28%
Ashton Avsker	22,970	32%
Felix Dupeyron		34%
Felix Wiltshire		34%
Remy Yoo		46%
Adoriah Garcia-Maharai		63%

Recommendations for 2023-2024

Given an appropriate allocation of funds* (to enable the hiring of a resource person) the international Caribou Cup will be extended into an enrichment program offered to mathematically talented students on a bi-monthly basis and facilitated by a mentor. The 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).

*NOTE: The funding for the Gifted and Exceptional Learners Dossier has been reduced by 10% for the academic year of 2022-2023.

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.

Junior School Enrichment Program: Debating and Public Speaking (1h/ weekly February-April 2023--Compacted Program)

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. This year five schools participated in the Debate and Public Speaking program, namely--Roslyn, Willingdon, Dunrae Gardens, PDC, and Gardenview. Each school engaged in a local in-school debate tournament, while the top two scoring finalists battled in the final debate for the championship prize. The top two scoring teams throughout the EMSB--*Willingdon and Dunrae Gardens Elementary*--were further invited to debate against each other at Dunrae Garden's Elementary on April 26th.

15 Willingdon students (G5-6) embarked in the Debating program's sessions, which occurred weekly for one period and were coached by a mentor. A complete list of nominated participants in this enrichment program is included on pages 4-5 of this report. 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 other teams at Willingdon followed by their participation in the *final between-schools debate* against the Dunrae Gardens' finalists.

The motion of our debate was: This house believes that homework should be abolished.

The champions of Willingdon Elementary's in-school debate tournament are Louise Sullivan, Bella Flanz, and Violet Lamoureux.

The final debating battle was conducted between:

Dunrae Gardens (Opposition): Luca Bandera-Gorman, Noah Bokobza and Adamo Paolitto vs.
 Willingdon (Proposition): Louise Sullivan, Bella Flanz, and Violet Lamoureux

Willingdon's team won the final debate. Each winner received a certificate of achievement and indigo gift card of 25CAD value. In addition, all participants were awarded a 15CAD Indigo gift card covered by the Mesure 15027. The event (live and via Zoom) welcomed a large audience including other debate competitors, families, school administration, students, and teachers. An article about this event was written by the EMSB Communication Department and will be published in the EMSB Express Newspaper and it will also be featured on the Gifted/ EMSB website (currently under construction).

Recommendations for 2023-2024

- Run program over the full program length (as per our course curriculum---September/October 2023 April 2024) at both senior and junior campuses.
- Ensure that grade 5 students, who participated in this program during their stay at the junior campus are prioritized to participate in this program.
- Invite all school champions to in-person debate competition.
- Host final debate competition on a PED day to prevent students from missing class while also giving an opportunity for parents, teachers, and admin to participate.

Nominated Participants (N =15):

Student Name
Violet Lamoureaux
Daniel Garrido Gomez
Gabrielle Weatherston-Pierre
Caitlyn Kemp

Bella Flanz
Hannes Schober
Isla Goodchild
Elsa Roald
Nikki Fraser Ubhi
Eva Nuselovici
Alison Driver
Wolf Lavigne
Elliot Bourque Seamone
Louise Sullivan
James Stephens

Challenges of the 2022-2023

To enhance the opportunities available to students in the upcoming school year (2023-24), it is imperative to address the communication challenges that have arisen between our department and the administration and teachers at Willingdon's junior and senior campuses. Regrettably, there have been instances in which communication from teachers and administration members was infrequent. Teachers and administrators were unable to attend student strength assessment meetings with parents resulting in a lack of communication concerning student enrichment plans and program success. Attempts to reach out via email to both administration and teachers often went unanswered, including inquiries for administration representation at significant events, and ensuring students received enrichment opportunities such as Battle of the Books and Debate and Public Speaking program at the junior campus.

To foster greater collaboration and student enrichment, we propose initiating a meeting with teachers and administration at the commencement of the 2023-24 school year, aiming to establish stronger connections and enhance collaboration. We enthusiastically anticipate the opportunity to strengthen our lines of communication with Willingdon, thus ensuring that our students receive the utmost opportunities and enrichment.

Independent Enrichment Programs (November 2021 – June 2022)

Dr. Birlean conducted strength assessments and created independent enrichment programs for nominated students. Independent enrichment programs tailor specifically to students' areas of strengths--learning preferences and expression styles and interests. Following the strength assessment, Dr. Birlean conducted a comprehensive report outlining the tier 1 (classroom differentiation) and tier 2 (enrichment program differentiation) interventions for these students. Dr. Birlean led case conferences with the students' parents and/or guardians, their classroom teachers, and other school team members, such as the school psychologist and special education consultant. Each student was given 2-3 options for their enrichment program, based on the results of their strengths assessment and case conferences.

NOTE *: Appendix A (p. 13) offers a more detailed description of the Strength Assessment process.

Program: Future Problem-Solving International Scenario Writing Competition

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 (FPSI) 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. Student work is submitted electronically, and evaluation and feedback are provided from trained evaluators from FPSPI. Qualified students earn invitations to participate in the annual International Conference (taking place in June 2023 at University of Massachusetts Amherst).

Student Participants: Sky Fraser and Kalista Ivy Burgos-Bougadis (G4)

Sky and Kalista benefited from an independent enrichment as an alternative program to their compacted curriculum, which program was mentored weekly by Sarah Lubbe, academic success tutor for the gifted dossier. One option for independent enrichment recommended by Dr. Birlean for Kalista and Sky was participation in FPSPI Scenario Writing Competition. Within the scenario writing problem solving program students develop short stories related to one of the annual FPS topics (e.g., digital realities, throwaway society, e-waste, robotic workforce). Entries are 1500 words or less, set at least 20 years in the future, and is an imagined, but logical, outcome of actions or events taking place in the world. Student work is assessed based on the character, plot, and the feasibility of possible outcomes which directly reflect trends in the researched topic. Both Kalista and Sky chose Throw Away Society as their writing topic. To help prepare for the competition the two students benefited in addition to the weekly 1-hour enrichment session from a visit to the Montreal Science Centre and participation in a virtual discussion with science-based community outreach University of Toronto's Trash Team.

Sky Fraser, G4 qualified to the international competition held at University of Massachusetts (June 7-11) and was celebrated at the Commissioners Meeting at EMSB, June 20.

Skills gained from this program.

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 Creative scenarios and settings 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 mentor 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. Students engaged in writing and editing sessions in which they shared and received feedback on their writing.

The two grade 4 students from Willingdon, Kalista Ivy Burgos-Bougadis and Sky Fraser, created completed short stories (1500 words max) using FPSPI online platform for this individual enrichment program. Before beginning the creative writing process, the students completed activities related to elements of character development, the story arc, and other skills related to the story creation process. The two students practiced creating their characters, completed individual writing activities, and learned how to find and use credible sources before beginning the creative writing process. Students participated in multiple writer's workshops, where they shared pieces of their writing and offered constructive feedback before submitting their work.

Students researched the topic Throw Away Society by reading news articles, visiting the Montreal Science Centre (covered by the Mesure 15027), and meeting with University of Toronto's Trash Team.

Finally, once the story was completed, the students made final edits, and each entered their story into the FPSPI Scenario Writing competition. Students received feedback and Sky Fraser, the only Canadian elementary student in this component, earned an invitation to the international competition. In addition, Sky Fraser was awarded 2 certificates (one from Mesure 15027 and one from EMSB Board) and a \$25CAD Indigo gift card covered by the Mesure 15027.

Future Recommendations for Kalista.

Kalista would greatly benefit from future alternative program such as:

- Learning centers within the classroom in areas she excels.
- Embarking in another individual alternative program in an area of her interests, such as space exploration (Let's Talk Science & Lunar Rover Challenge), or environmental science (researching and conducting an experiment based on climate change).
- Future Problem-Solving International Community Problem Solving (CMPS).
- Future Problem-Solving International Global Issues Problem Solving (GIPS).
- Junior School Enrichment Program: Debating and Public Speaking.

Areas in which Kalista can be challenged: Reading.

- Kalista would benefit from reading more regularly. Encouraging Kalista to explore adventure fiction books, environmental and space nonfiction books. These genres could be a strategy to encourage more active reading. Science based graphic novels may be of interest to Kalista.
- To help Kalista broaden her horizon of reading various genre she would greatly benefit from engagement in the Junior School Enrichment Program, Battle of the Books

Future recommendations for Sky.

Sky would greatly benefit from future alternative programs such as:

- Learning centers within the classroom in areas she excels (Math and ELA).

- Embarking in another individual alternative program in an area of creative writing, such as Future Problem-Solving International Scenario Writing.
- Continue participating in Caribou Math International Competition alongside math schoolwide enrichment program if offered.
- Junior School Enrichment Program: Debating and Public Speaking.
- Junior School Enrichment Program: Battle of the Books

Areas in which Sky can be challenged: Deeper (Analytical) Learning.

Sky can be challenged to integrate more evidence and research in her writing. Sky can embark
on activities such as researching different sources of valid information, effective research
techniques and effective note taking. Sky can explore these components in the Junior School
Enrichment program: Debate and Public Speaking.

Independent Program: Scratch Coding (by MIT) Student Participant: William Ordonselli

William benefited from an independent enrichment as an alternative program to their compacted curriculum, which program was mentored weekly by Sarah Lubbe, academic success tutor for the gifted dossier. Dr. Birlean tailored this program to specifically address William's strengths based on a formal strength assessment conducted the year prior. William engaged in Scratch Programming throughout the school year, creating various animations and video games through the using the Scratch coding system. William created a slideshow for his final presentation, which he showcased along with his Scratch creations to his parents during a *"Bring your family to school"* final presentation event (June 16, 2023).

Skills gained from this program.

- Animation. Creating short animations using code "blocks" on Scratch.
- **Computational Thinking.** Using problem solving to identify and correct code errors.
- **Graphical Programming Block.** Building understanding and fluency of programming Scratch "blocks".
- **Digital Character design.** Using tools in scratch to create original characters and costumes.
- **Sound Design.** Use of Scratch sound blocks to add soundtracks.

Future recommendations for William.

- Learning Centers within areas in which he excels.
- Caribou Math International Competition alongside math schoolwide enrichment program, if offered.
- Embarking on another individual or group alternative program to deepen his abilities in Scratch programming.

Areas in which William can be challenged.

- Design Process. William can be challenged to create larger projects, either as animated videos or video games. This process would include planning, executing, recording and improving on his original design.
- Computational Thinking and problem solving. William can be challenged to explore more Scratch blocks and engage in more code problem solving. William can interact with Scratch *De-Bug It* activities, in addition to reading Scratch books and watching Scratch tutorials.

Small Group Enrichment Program: Lunar Rover Challenge by Let's Talk Science

The Lunar Rover Research Challenge was developed by Education Specialists at Let's Talk Science in collaboration with subject matter experts in the space and rover industries at Canadian Aerospace and Avalon Space. The Lunar Rover project aims to challenge and engage students' critical and scientific thinking to plan a rover mission seeking out ice deposits hidden in the moon's shadows. This is done through a collaborative and fun board game. **Student Participants:** Jackson Garofolo, Logan Chin, Theodor Muller, and Luca Negrete

The four Willingdon students benefited from this independent enrichment recommended by Dr. Birlean as an alternative program to their compacted curriculum, which program was mentored weekly by Sarah Lubbe, academic success tutor for the gifted dossier. Set in the context of space exploration, this free STEAM based competition, challenges students to plan a rover mission seeking out ice deposits on the moon. Using a collaborative board game, the students design, analyse, improve and submit a plan to accomplish the mission objective. Students design their research mission by considering the pro and cons and weighing risks and reward of their lunar rover mission. The team communicated their mission proposal using a slide deck and graphed their mission's science points and battery levels. Students received feedback from Let's Talk Science evaluators.

Students researched Canada's role in space exploration and lunar rover functions by exploring various readings and websites, visiting the Rio Tinto Planetarium (covered by the Mesure 15027), and meeting with Gary Matthews, a mechanical engineer who worked on the James Webb Telescope.

Skills gained from this program.

- **Canada's role and contributions in space exploration.** Students researched the Artemis missions, Canadarm3, Lunar Gateway and International Space Station.
- Communication. Students choose roles (navigator, rover operator, battery monitor, temperature monitor & Scientist) and work collaboratively as a team to complete the mission.
- **Critical Thinking.** Students must determine the success of their mission by weighing it's risks and benefits.
- Create a project pitch. Using the assigned slide deck students communicate using science and technology vocabulary and identify key information to share.

Feedback offered by Let's Talk Science evaluators is included verbatim below:

Here is their feedback about your submission:

- Great way to research and collect information (from the planetarium visit and chat with the Engineer). Good explanation of the process and planning followed. In the future, you might consider listing each of the alternatives, you could write clearer and convincing the analysis of results to get better summary and conclusions of the research.
- Using the colored arrows on the map helped to follow it easily. Intelligent decision to ask for advice from others and learn more in real life. Pay more attention to the wording as it is informal in some areas and explain more your mission and its rationale.

Future Recommendations for Logan.

Logan would greatly benefit from future alternative programs such as:

- Learning centers within the classroom in areas he excels.
- Embarking in another alternative program in an area of science or engineering design process such as (Let's Talk Science Competition or deepen his knowledge of the Lunar Rover Challenge).
- Continue participating in Caribou Math International Competition alongside math schoolwide enrichment program if offered.
- Junior School Enrichment Program: Debating and Public Speaking.

Areas in which Logan can be challenged.

- Deeper Learning. Logan can be challenged to deepen his knowledge of science or the engineering design process. Logan could expand his interest in through the Let's Talk Science Competition or the Lunar rover Challenge (implementing the feedback he received this past year).
- Creativity. Logan can be challenged to engage in divergent thinking and explore how the ARTs can be included into STEAM based projects. Logan may benefit from exploring various forms of art such as object creation, painting/drawing, performance.

Future Recommendations for Theodor.

Theodor would greatly benefit from future alternative programs such as:

- Learning centers within the classroom in areas he excels.
- Embarking in another alternative program in an area of science or engineering design process such as (Let's Talk Science Competition or deepen his knowledge of the Lunar Rover Challenge).
- Junior School Enrichment Program: Debating and Public Speaking.

Areas in which Theodor can be challenged.

- Math. Theodor may benefit from participating in Caribou Math International Competition alongside math schoolwide enrichment program if offered.
- Deeper Learning. Theodor can be challenged to integrate more evidence and research in his writing. Theodor can embark on activities such as researching different sources of valid information, effective research techniques and effective note taking. Theodor can explore these components in the Junior School Enrichment program: Debate and Public Speaking.

Future Recommendations for Jackson.

- Learning centers within the classroom in areas he excels (Science).
- Junior School Enrichment Program: Debating and Public Speaking.

Areas in which Jackson can be challenged.

Focus and engagement. Jackson has shown some challenges in maintaining focus and engaging in independent work. His frequent distractions can disrupt the learning environment and hinder his own progress. Jackson can be challenged to develop skills in independent work, focus and respect to maximize his learning potential. A student behaviour contract may be beneficial if Jackson continues with an alternative program next year.

Future Recommendations for Luca.

- Learning centers within the classroom in areas he excels.
- Junior School Enrichment Program: Debating and Public Speaking.

Areas in which Luca can be challenged.

Time Management. Luca has expressed concerns about not having enough time to engage in extra learning activities outside of the classroom. Luca can be challenged to create a balanced and manageable schedule with activities he has interest in. To help manage his time, Luca can set realistic goals, and use a daily and monthly schedule. This may help Luca dedicate time for additional enrichment. As Luca is moving to the senior campus next year, it is essential to consider the future workload and demands of Luca's curriculum.

Small Group Mini Debate Program was offered upon completion of competitive independent programs.

May - June 2023--Compacted Program

This program offered eight participants an introduction to the Junior School Enrichment Program: Debating and Public Speaking. This compacted program focused on three specific areas: (a) researching for valid and reliable sources, (b) writing persuasive arguments to support the chosen stance, and (c) critical thinking (e.g., evaluating the sources read). Near the end of the program, the children were offered the opportunity to present a three-minute persuasive speech in front of peers and family members. The motion of this persuasive speech was: *If humans find a habitable planet, the citizens of Earth should move there*. Students had an opportunity to ask the opposing team three questions while also answering questions from the audience members.

Nominated Participants (N=8)

Student Name
Kalista Ivy Burgos-Bougadis
Logan Chin
Theodore Flynn
Sky Fraser
Jackson Garofolo
Eve Gartshore
Theodor Muller
Luca Negrete

Recommendations for 2023-2024

- Run program for full program length (September/October 2023 April 2024) at both junior and senior campuses.
- Ensure grade 5 students who participated in the debating program at the junior campus are considered to participate in the full debate and public speaking program at the senior campus.
- The following students would greatly benefit from future independent programs.
- Kalista Ivy Burgos-Bougadis

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- o Logan Chin
- Sky Fraser
- Eve Gartshore
- Theodor Muller
- Theodore Flynn
- *Jackson Garofolo (ONLY if able to sustain focus in class and demonstrate proficiency of 90% and above across subjects)

APPENDIX A

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.

When the need for differentiation within one classroom is identified (i.e., a single or a small 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.

At the request of school administration, Dr Birlean can also conduct strength assessments for talented or formally identified gifted students (especially those in the cycle 1 for whom school wide enrichment programs are not available). 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 independent 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).

Professional Development

Support can be equally offered to faculty at Willingdon. At the request of Willingdon's school administration, Dr. Birlean is scheduled to meet the faculty at the end of August (TBD) to offer an overview (debrief) about the achievements of the gifted dossier at Willingdon elementary school during the academic year of 2022-2023. Dr. Birlean and her team also offers 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.

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