

**Enrichment Program Report**  
Dunrae Gardens Elementary School  
2022-2023

A 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 Dunrae Gardens Elementary School, we successfully designed (or adopted) and implemented **four school-wide enrichment programs**, namely--Mathematics Caribou International, Public Speaking and Debating Junior, one competitive component of The Future Problem Solving International, specifically-the Global Issues Problem Solving, and finally The Battle of the Books Jr. Our programs involved a **total of 87** students (Grade 1-6). We also adapted and implemented one independent study programs for two bright K students, namely--The Lunar Rover Challenge (by Let's Talk Science). Dunrae Gardens' achievements in each program will be discussed below along with the 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 mathematical 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 Measure 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 50 mathematically talented students**, grades 1-6 from Dunrae Gardens Elementary school joined this competition as of January 2022. Their names and achievements (rankings) are included in the table below.

It is worth mentioning that some of our Dunrae Gardens students not only are doing very well, some scoring in the top 6% at the national and international levels, but Izaak Wolfson Trudeau, Grade 1 Dunrae Gardens student, scored Nr. #1 at the international level in the January Contest.



STUDENT NAME	GRADE 1	RANKING (Top within the world)
Izaak Wolfson Trudeau	<b>Total Participating Students = 1,756</b>	<b>Not considered for Caribou Cup Rankings.</b>
Max Carreira Rafael		
Penelope Moon		
STUDENT NAME	GRADE 2	RANKING (Top within the world)
Alexander Fernandez	<b>Total Participating Students = 6,166</b>	12%
Emma Alcaraz		15%
Samuel Khairy		17%
Nicholas St-James		19%
Alyssia Satar		21%
Maria Santayana		24%
Mathias Barbeau		25%
Chloe Assi		28%
Adrien Mazigi		29%
Areti Konstantiou		35%
STUDENT NAME	GRADES 3 & 4	RANKING (Top within the world)
Yuqing Anna Liu	<b>Total Participating Students = 17,149</b>	9%
Erik Back		10%
Edgar Floyd		13%
Vivianne Godin		14%
Isa Santayana		17%
Anna Wild		18%
Sofia Bailey		19%
Noah Mastroberardino		19%
Miriam Todd		19%
Muhammad Rahman		21%
Maria Tsafatinos		23%
Tristan Longo		24%
Charlene Gauthier		25%
Austin Perrault		28%
Christina Lizza		28%
Noemie Donneger		28%
Stamatina Antonopoulos		31%

Mason Vergara		32%
Sacha Bokobza		32%
James Whiteman		34%
Juliette Johnson		44%
Nathan Vicente		48%
STUDENT NAME	GRADES 5 & 6	RANKING (Top within the world)
Marion Williams	<b>Total Participating Students = 22,970</b>	6%
Noah Bokobza		9%
Lilia Tavares		9%
Francesco Pace		11%
Bradley Perreault		12%
Melie Tzanetakos		16%
Marcus Khairy		19%
Julia Gasparini		19%
Christos Zalonis		21%
Peter Luedtke		22%
Sabina Marques		22%
Lily Assi		29%
Tristan Vincente Edward		31%
Arianna Satar		34%
Adamo Paolitto		39%

### Plans 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  $27 \times 15$  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.

**20 Dunrae Gardens students** (G4-6) 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 5-6 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 Dunrae Gardens.

The formal title of our debate was: *This house believes that homework should be abolished.*

This year five schools participated in the Debate and Public Speaking program. Each school engaged in a local in-school debate tournament. The champions of Dunrae Gardens Elementary School in-school debate tournament are Luca Bandera-Gorman, Noah Bokobza and Adamo Paolitto. 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 26<sup>th</sup>.

The teams competing against each other were:

**Dunrae Gardens (Opposition):** Luca Bandera-Gorman, Noah Bokobza and Adamo Paolitto  
vs.

**Willington (Proposition):** Louise Sullivan, Bella Flanz, and Violet Lamoureux

Willington's team won the final debate. Each winner received a certificate of achievement and an Indigo gift card of 25CAD value. In addition, all participants were awarded a 15CAD Indigo gift card covered by the Measure 15027.

The event hosted live and via Zoom welcomed a large audience including other debate competitors (including Dunrae Gardens), 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 (vol. 27 | N° 1 | Fall 2023) and it will also be featured on the Gifted/ EMSB website (currently under construction).

Recommendations for 2023-2024

- Run program for the full year program length (Sept/October - April)
- Invite all school champions to in-person debate competition.
- Host the 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=20)

STUDENT NAME
Sabina Marques
Abuk Bob Justin
Julia Gasparini
Christos Zalonis
Lilly Assi
Marcus Khairy
Charlotte Cassis
Davide Cleinge
Isa Santayana
Noemie Donneger
Miriam Todd
Lilia Tavares
Melie Tzanetakos
Anastacia Ngo

Adamo Paolitto
Noah Bokobza
Luca Bandera-Gorman
Ann Xi
Marion Williams
Sofia Bailey

**Future Problem-Solving Program International (FPSPI) - Global Issues Problem Solving  
(1.5 hour / weekly November 2022 - March 2023)**

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).

**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 possibilities 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.

A **total of 7** students from Dunrae Gardens Elementary (G5-6) embarked on one competitive component of FPSI, namely the Global Issues Problem Solving program, which occurred weekly for 1.5 hours and were coached by a mentor. A complete list of nominated participants in this enrichment program is included on page 8 of this report.

**GLOBAL ISSUES PROBLEM SOLVING (GIPS):** employing the Six-Step Process to respond to a Future Scene--a hypothetical scenario set 20-30 years in the future--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 culminating in a detailed Action Plan. Entries are authentically assessed and scored by trained evaluators. This program was entered as one team of four and one team of three students.

The 2022- 23 topics addressed during the program included:

- E-Waste - Practice Booklet
- Digital Realities - Practice Booklet
- Robotic Workforce - Competitive Booklet
- Throw Away Society - Competitive Booklet
- Currency (International Booklet)

Dunrae Gardens students participated in 3 GIPS events (1 practice booklet and 2 competitive booklets). Each competition lasted two hours and teams received detailed feedback and scoring by trained evaluators from the FPSPI organization for each submitted booklet. Dunrae Gardens Elementary participated up until the Affiliate Bowl competition (Topic: Throw Away Society). Nine students from EMSB (Willington, Pierre Du Coubertin and Royal West Academy) were invited to participate at the international conference (held in June 2023 at the University of Massachusetts- Amherst). An event was hosted on June 20 by EMSB's central office to celebrate the finalists. An article about this event was written by the EMSB Communication Department and will be published in the EMSB Express Newspaper (vol. 27 | N° 1 | Fall 2023) and it will also be featured on the Gifted/ EMSB website (currently under construction).

#### ***Recommendations for 2023-2024***

- Start the program as soon as possible (end of September / early October) to give students the appropriate amount of time to understand the 6 problem-solving steps and adequately investigate the topics.
- Provide a short information session for teachers and administration to help with the student nomination process.
- Only nominate grade 5 & 6 students who are top achievers (across all subjects) and proactive readers, as this program requires a large amount of effort and dedication.
- Depending on topic, provide field trips to places of interest and arrange talks with professionals.

Nominated Participants (N =7)

STUDENT NAME	GRADE
Abuk Justin Yak	5
Chiara De Cesaris	5
Maria Tsagrakis	5
Noah Bokobza	6
Adamo Paolitto	6
Marion Williams	6
Peter Luedke	6

### **Battle of The Books (Junior)**

#### **1 hour Weekly – (October 2022 to May 2023)**

Battle of the Books is a reading and trivia competition originally designed for senior school levels and modified and replicated at the junior levels. In this competition, highly motivated students who enjoy reading are offered the opportunity to: (a) read through a meticulously curated collection of **10 books** varying in genre from fantasy fiction to historical fiction and (b) engage in battles with students from other schools within the program about the content of the books. This program targeted enriching the academic knowledge and vocabulary of participating students while stirring their love for reading in a fun and engaging manner.

**10 ferocious** readers from **grades 5 and 6** were nominated to participate in this program guided by an academic mentor. Over the weeks, these selected readers collectively covered all ten books while engaging in various activities such as literature circle and brain synthesizer, amongst others, to make meaningful connections to the content. As the weeks rolled along, students were coached on creating trivia questions, which formed part of the larger pool of questions prepared for the competition, including those prepared by their enrichment coach.

Given that the required number of players per team was 6, Dunrae Gardens participated in an in-house competition to determine **the representing team** for the final battle. These students showed resilience and determination in ensuring they could ‘divide and conquer’ strategically through continuous practice. The emerging students from this in-house competition (with three reserve players) represented Dunare Gardens School in the **Final Battle of the Books** against the other three competitor schools, namely-- Roslyn, Pierre de Coubertin, and Gardenview.

A Sincere Heartfelt Thank You to Ms. Joanna Genovezos, the Principal of Roslyn’s Elementary School and Ms. Mireille Tehbelian, the Vice Principal of Roslyn’s School for hosting the final Battle of the Books event! It was held live in the Gymnasium on May 19 and welcomed over 50 guests, including parents and students from the four schools.

Dunrae Gardens placed 1st among the four schools, a concrete result of their hard work, commitment, interest, and endless weeks of practice rewarded. All participating students received an Indigo gift card (15 CAD), encouraging them to give more to their reading desires. The participants were also awarded certificates of excellence showcasing their academic achievements. Additionally, all schools were collectively presented with a set of disguised 30 books for their choice as a complementary reward to encourage and stimulate fun in reading.

**DGS Champions** include Marion Williams (Captain and Spokesperson), Ann Xia, Maya Broccolini, Anastacia Ngo, Sabina Marques, Charlotte Cassis

**DGS Back-Up Competitors:** Lily Assis, Luca Bandera-Gorman, Christos Zalonis

Through engaging in the BOB enrichment program, students develop key skills, including:

- Contextual Understanding
- Communication
- Project Delegation
- Teamwork
- Presentation
- Memory techniques
- Critical Thinking

Battle of The Books was a very engaging and creative way to get students involved and excited about reading. We recommend holding this event for the incoming years with stronger principles governing students' attendance and general conduct.

Nominated Participants in BOTB (N = 10):

STUDENT NAME	GRADE
Ann Xia	6
Anastacia Ngo	6
Marion Williams	6
Maya Broccolini	6
Sabina Marques	5
Charlotte Cassis	5
Lily Assis	5
Luca Bandera-Gorman	6
Christos Zalonis	5
Marcus	5

**Independent Program**  
**Lunar Rover Research Project by Let's Talk Science**  
**1 hour Weekly – (January to June 2023)**

**Izaak Wolfson Trudeau (Izzie) and Penelope Moon (Penny), Grade 1**

Dr. Birlean created this individual enrichment program to tailor specifically to the areas of strengths, interests, and needs of the students based on the results of their individual strengths assessments. 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 school team (classroom teacher, school psychologist, special education consultant, and school principal). Each student was given 2-3 options for their enrichment program, based on the results of their strengths assessment and case conferences. Ultimately, Izzie and Penny chose the Lunar Rover Research challenge as their enrichment project.

The Lunar Rover Research challenge was an adapted version of the challenge designed by 'Let's Talk Science.' The objective of this project is to challenge and engage students' critical and scientific thinking to plan a rover mission to uncover hidden ice deposits in the shadows of the moon. This is done through a collaborative and fun board game. Through this game, students learn the importance of the lunar rover mission and gain additional knowledge on Canada's role in space exploration, the need for water on the moon, and the essence of risk and scientific value during research. The necessary skills born from this experience include creativity, teamwork, and analytical thinking.

During this project, Izzie and Penny absorbed lesson contents using interactive games, visual aids, and other activities to equip them with the theoretical knowledge behind the rover mission to the moon and the vital role of water in survival on the moon. Due to their age, the condensed version of the game was their mission map. In applying their newfound knowledge, they built a lunar Lego mission board to transfer what they had learned and offer a tangible representation of their theoretical knowledge. Collectively, they developed learning flashcards that doubled as a charades game to improve memory retention by associative learning. Subsequently, they played and planned out various missions using the condensed game rotating roles as Rover Command Tracker, Navigator, Data Tracker, Battery Level Tracker, and Temperature Tracker. This play allowed them to immerse themselves in the mission's various responsibilities, fostering a comprehensive understanding of the roles in the rover mission. At the end of this project, Izzie and Penny were invited to share their learning experience with their classroom peers, families, and teachers during an in-house showcase on **Tuesday, 13<sup>th</sup> June 2023**.

Through active participation in this independent enrichment program, students had the opportunity to harness several key skills, including:

- Critical and analytical thinking
- Project planning and management

- Teamwork
- Communication
- Creative Problem-solving
- Presentation

A major recommendation in the coming year would be to enable Izzie and Penny to **peer tutor** friends that may be interested in learning more about the rover mission. This would increase their confidence in what they know and help them share their knowledge and inspire others to learn about the lunar mission.

### **Plans for 2023-2024**

#### **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 Dunare Gardens 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 Dunare Gardens. I also welcome the opportunity to share details about the new menu of the school wide enrichment programs planned for the 2023-2024 school year with Dunare Gardens' faculty during a lunch and learn or a staff meeting. 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.

### Two Additional School-Wide Enrichment Programs in our Menu for 2023-2024

#### Let's Talk Science Competition (1.5h/ Weekly) (Grade 6, February-June 2024)

NOTE: This program has been implemented at Dunare Gardens during the academic year of 2021-2022 and resulted in numerous distinctions and awards, including five *Above and Beyond Awards* for design and build challenges in the topics of Earth and Space Sciences. During the 2022-2023 academic year we were not able to implement this program because of lack of resources (i.e., a mentor to run it).

We will start the new school year with three academic success tutors (aka. mentors) two of whom will be hired full time and one part time (10h/week); hence, our expectation that the menu of various enrichment activities could be effectively implemented and monitored.

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

The Play and Learn Weekly activities will be conducted under the guidance of a mentor with the scope of helping students prepare for the final competition. The Let's Talk Science Challenge includes 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*.

### **Destination Imagination Programs**

(Costs for participating teams will be covered by the Measure 15027)

**Rationale:** to allow younger talented students (including K-3) to participate in our school wide enrichment while being formally taught the six steps of the creative problem-solving process. Through engagement in this program, students will build creative problem-solving skills that are transferable across subjects and to real world situation.

#### **Destination Imagination: SkillFire Program**

*SkillFire* has four main components meant to introduce students to certain skills, then enforce and build on those skills in a meaningful way. Each component is a **digital download** that you can start using right away, and includes a free scheduling guide.

*SkillFire* reinforces:

- Teamwork
- Communication
- Creative Thinking
- Dramatic Play
- Self-Expression
- Project Management
- Material Properties
- Resource Awareness
- Literary Analysis
- Research
- Technical Design
- Goal-Setting
- Improvisation
- Rapid Ideation

*SkillFire* is...

- For students from Kindergarten through Grade 4
- Available at any time of year and on any schedule
- Not a tournament or showcase based program

The *SkillFire Handbook* includes 16 sessions, each lasting 45-60 minutes each, to introduce key skills. Along with facilitator instructions, each session is broken into two activities:

- Skill Starter: a team-building activity to introduce new concepts.
- Skill Builder: a longer activity to reinforce learning.
- Cost = \$199 (covered by the Measure 15027)

*SkillFire Skill Extenders* includes 3 medium-length activities for more detailed skills practice and can be completed in a total of 2-5 hours, or over several days:

- Skill Extender 1: Performance-based
- Skill Extender 2: Task-based
- Skill Extender 3: A hybrid activity that is both performance- and task-based
- Cost = \$59 (covered by the Measure 15027)

The *SkillFire Skill Master* is a longer Challenge for use as a long-term project. The Skill Master will reinforce technical and artistic skills, or you can choose to focus on just one skill set. The Skill Master can be solved in a total of 5-7 hours, or over several days – but longer timeframes can lead to more elaborate solutions.

- Cost = \$39 (covered by the Measure 15027)

The *Capstone Event Kit* is a resource for presenting an interactive assembly to serve as a celebration and/or awards ceremony for your SkillFire students.

- Available early 2024

*Report Completed by Dr. Birlean*

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