

Enrichment Program Report
Dunrae Gardens Elementary
2021-2022

A 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 Dunrae Gardens Elementary School, we successfully designed and implemented five individual enrichment programs, and three school-wide enrichment programs, namely-- Mathematics Caribou International, Public Speaking and Debating Junior, and Let's Talk Sciences. Dunrae Gardens' 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 56** mathematically talented students, grade K/1-6 from Dunare Gardens Elementary school joined this competition in October 2021. Top achievements (rankings on top 50% worldwide) are included in the table below:

NAME	GRADE	RANKING (within Top)
Adrian Mazigi	K/1 Total participating students: Dunrae Gardens: 10 Worldwide: 3,050	N/A K/1 were simply awarded for their participation in the contest and a diploma was issued and given to each participant at the end of the school year.
Alyssia Satar		
Auguste Atkinson		
Matthäus Di Sabato		
Amelia Mathews		
Annie Tukai		
Nicholas St-James		
Gabriel Sarhan		
Arman Sojoudi		
Emma Alcaraz		
Alexander Fernandez		
Vivianne Godin	2	15%
Alexandre Bassili		22%
Elena Beaulieu-Grullon		22%
Austin Perreault		25%

Muhammad Rahman	Total participating students: Dunrae Gardens: 7 Worldwide: 6,507	30%
Anna Rose Wild		40%
CHUNG Sangyoon	3 & 4 Total participating students: Dunrae Gardens: 22 Worldwide: 17,328	6%
Marcus Khairy		7%
Francesco Pace		15%
Sabina Marques		15%
Yuqing Liu		20%
Christos Zalonis		20%
Olivia Hum		30%
Julia Gasparini		30%
Matteo Morello		30%
Joshi Arav		40%
Charlotte Cassis		40%
Laila Mangione		40%
Christian Lizza		50%
Milan Mangione		50%
Christopher Stathopoulos	50%	
Elin Wilson	5 & 6 Total participating students: Dunrae Gardens: 17 Worldwide: 23,988	4%
Mathilda Keightley Karpatai		8%
Bradley Perreault		15%
Leyla Fernandez		15%
Noah Bokobza		20%
Marion Williams		30%
Alexandre Meunier		30%
Sara Alcaraz		30%
Mihalis Rouvalis		40%
Melie Tzanetakos		40%
Petros Katiforis		50%
Liliana Lecas		20%
Adamo Paolitto		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 27×15 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 an interest in sciences were nominated by their science teacher to form the Dunrae Gardens School's delegation. These are Nathan Bailey, Leyla Fernandes, Maria Roussis, Nia Fiorilli-Côté, Elin Wilson, Matias De Santis, Frederic (Marcus) Rego and Mia Breton. Each participating student was awarded a \$15CAD Indigo gift card covered by the Mesure 15027.

Frederic (Marcus) Rego, Matias De Santis, and Nathan Bailey won a 35\$ Indigo gift card for their participation in the design and build Math challenge: <https://flipgrid.com/s/zkUXm3spa9-V>

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
- 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 Science Center / Planetarium / Insectarium / Biodome / Cosmodome

Junior School Enrichment Program: Debating and Public Speaking (1h/weekly April – June 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.

22 students (Grades 4, 5, and 6) embarked in the Debating program's sessions, which occurred weekly for one period, and were guided by a coach under the assistance of Dr. Birlean. Our program mainly 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 Gardenview Elementary School.

The formal title of our debate was: *"This house believes that school start times for pre-teens and teens (12 and up) should start later."*

The junior teams competing against each other were

Dunrae Gardens opposition – Ann Xia and Mèlie Tzanetakos

Vs.

Gardenview proposition – Annabella Popescu and Luna Melo

The senior teams competing against each other were:

Gardenview opposition: Eleni Giannoukakis and Olivia McFarlane

Vs.

Dunrae Gardens Proposition: Leyla Fernandez and Maria Roussis

Both Dunrae Garden and Gardenview's teams won the final debate at the junior level. Additionally, Dunrae Garden's Senior team won the final debate. Each winner received an Indigo gift card of 30CAD value. In addition, all participants were awarded a 20CAD Indigo gift card covered by the Mesure 15027. The event was recorded and welcomed a more extensive 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/gifted-exceptional-learners-enrichment-programs-mark-a-successful-academic-year>

Recommendations for future debate programs

- Extend the time slot from 1 hour to 1 hour and 15mins
- Expand the schedule from 13 weeks to 15 weeks
- Ensure the debate class is taught in a quiet room equipped with a Smartboard with a working laptop and internet connection
- Ensure students nominated are strong readers, active participants in class discussions, and able and willing to commit to time and work expectations.
- In-person final debate completion
- Field trip to Ottawa to view a debate within the house of parliament

All the grade 4/5 students who participated in this program this year are recommended to continue with this program next year (if their grades allow).

Math Learning Center (June 2022)

Designed by Dr. Birlean, this enrichment learning center was monitored by the academic success tutor, Ms. Lubbe, during the last three weeks of the school year in two grade 5 classes and one grade 4 class at Dunrae Gardens School. Students who displayed exceptional skills in mathematics could access the learning center at the discretion of their homeroom teacher. This learning center is a resource available to all students, who complete their math work effectively and well in advance of their peers. The goal for the students was to work autonomously in their classroom, with the learning center serving as a resource for their math teacher once they completed and exceeded the regular curriculum expectations.

The learning center featured a series of problems to challenge the students beyond the grade 5 curriculum. Students had access to situational word problems such as Problems of the Week (POWs) and Figure This! Challenges. Students were able to solve these problems individually or in small groups. The math teacher also had access to a folder with specific word problems that would change each week.

Ms. Lubbe's role as academic success tutor was to make herself available to students once a week for further guidance and additional cognitive stimulation. Specifically, she conducted four 30-min sessions (Math Club) with a mix of grade 4 and 5 students. The students engaged with 2 POWs and began working on one explorations package (Divide like an Egyptian).

Individual Enrichment Programs (November 2021-June 2022)

Austin Perreault – Book Creator

Austin Perreault benefited from a weekly formal alternative program facilitated by Sarah Lubbe in collaboration with Dr. Birlean. The program was designed by Dr. Birlean and tailored specifically to address Austin's learning styles, strengths, and interests identified through the formal strength assessment. Austin's project consisted of writing a book about dinosaurs using Book Creator's program. This book describes the Mesozoic era, including the Jurassic, Triassic, and Cretaceous periods, various profiles of dinosaurs, and information on paleontologists. Austin created a slideshow for his final presentation and presented his work at the EMSB knowledge fair. Austin's book has been printed, and a copy will be given to the Dunrae Garden Library for display.

Skills Austin gained from this program.

- **Writing.** Austin wrote and edited (with assistance) paragraphs in Book Creator using proper grammar, punctuation, spelling, sentence structure, etc.
- **Using Book Creator.** Austin uses the program Book Creator confidently and independently.

- **Researching and locating credible sources.** Austin practiced finding credible sources online or in the library. Austin practiced summarizing and deciding which information to add to his book written in his own words.
- **Mesozoic Period.** Austin researched and wrote a page on the three periods (Triassic, Jurassic, and Cretaceous period)
- **Organization of ideas.** Austin planned how to structure his book and implement his ideas and information (periods with various dinosaurs from each period).
- **Drawing.** Austin shared hand-drawn illustrations of different dinosaurs.

Future recommendations for Austin.

- Learning centers within the classroom in areas he excels.
- Embarking in another individual alternative program in an area of his interests, such as creating more books in his interests (dinosaurs, etc.)
- Research and Critical Thinking. Austin can benefit from deepening his knowledge of researching for credible sources and practicing summarizing in his own words.
- Drawing. Austin showcased strength in his drawing, and further instruction on illustrations may interest him.

Areas in which Austin can be challenged.

- **Planning.** Austin can be challenged to plan more extensive projects, reflect, and present effectively on his learning journey. The use of graphic organizers and a calendar may be beneficial for Austin.
- **Writing.** Austin can be challenged to write longer paragraphs, practice summarizing information in his own words, and deepen his knowledge in editing (punctuation, grammar, etc.)
- **Public speaking.** Austin can be challenged to practice speaking and reading aloud confidently and writing a script for future presentations.
- **Typing.** Austin could benefit from a typing course to help him type faster and more effectively.

Sofia Bailey – Book Creator

Sofia benefited from a weekly formal alternative program facilitated by Sarah Lubbe in collaboration with Dr. Birlean. The program was designed by Dr. Birlean and tailored specifically to address Sofia's learning styles, strengths, and interests identified through the formal strength assessment. Sofia's project consisted of writing a book about Ancient Egypt using Book Creator's program. Before beginning the book creation process, Sofia spent some time researching Ancient Egypt using a PowerPoint provided by Dr. Birlean. This book describes Upper and Lower Egypt, Egyptian mythology, and Ancient Egyptian society. About halfway through the enrichment program, Sofia needed a reminder about effective use of time (self-regulation strategies). During each session, Sofia set a learning goal and was required to either complete this goal during the enrichment session or complete it as homework. After this reminder, Sofia was successful in using her time more effectively. Sofia created a slideshow for her final presentation and presented her work at the EMSB knowledge fair. Sofia's book has been printed, and a copy will be given to the Dunrae Garden Library for display.

Skills Sofia gained from this program.

- **Using Book Creator.** Sofia uses the program Book Creator confidently and independently.
- **Writing.** Sofia wrote and edited (with assistance) paragraphs in Book Creator using proper grammar, punctuation, spelling, sentence structure, etc.
- **Researching and locating credible sources.** Sofia practiced finding credible sources online or in the library. Sofia practiced summarizing and deciding which information to add to her book written in her own words.
- **Organization of ideas.** Sofia began to plan how to structure her book and implement her ideas and information (Egyptian Mythology, Egyptian Society, etc.)
- **Knowledge of Ancient Egypt.** Sofia has gained knowledge of the Ancient Egyptians, including society, mythology, and the Nile River.

Future recommendations for Sofia.

- Learning centers within the classroom in areas she excels.
- Embarking in another individual alternative program in an area of her interests, such as creating another book or exploring a history/ ancient cultures program within a group of other knowledgeable students.
- Public Speaking and debate
- Future Problem Solving – Global Issues

Areas in which Sofia can be challenged.

- **Research and Critical Thinking.** Sofia can benefit from deepening her knowledge of researching credible sources and practicing summarizing in her own words.
- **Reading in English.** Sofia can benefit from reading chapter books in English to help her feel more confident while reading in English.
- **Planning.** Sofia can be challenged to plan more extensive projects, reflect, and present effectively on her learning journey. The use of graphic organizers and a calendar may be beneficial for Sofia.
- **Writing in English.** Sofia can be challenged to write longer paragraphs, practice summarising information in her own words, and deepen her knowledge in editing (punctuation, grammar, etc.)
- **Public speaking.** Sofia can be challenged to practice speaking and reading out loud confidently and writing a script for future presentations.
- **Typing.** Sofia could benefit from a typing course to help her type faster and more effectively.

Nathan Tsagarakis, Grade 5 – Scratch Programming

Nathan's need for an enrichment program was brought to Dr. Birlean's attention by the school resource teacher and school principal also supported by teacher's interview data. Nathan benefited from a weekly formal alternative program facilitated by Sarah Lubbe in collaboration with Dr. Birlean. The program was designed by Dr. Birlean and tailored specifically to address Nathan's learning styles, strengths, and interests identified through the formal strength

assessment. Nathan's project consisted of creating games and animations through the program Scratch. Nathan worked alongside a peer. Initially, the students tried to work collaboratively on a Bee game, but as both were advancing at different competency levels using Scratch, the students decided to each create their own game. Nathan then began working on developing small games such as a clicker game, a catch game, and a basketball game using the program Scratch. About halfway through the enrichment program, Nathan was not completing his goals or homework. Dr. Birlean addressed this with Nathan's school team, who consistently reported that Nathan struggled to complete tasks, stay on track in other subjects, and have time to do all his homework. Dr. Birlean initiated a meeting with Mrs. Sudds (Nathan's mother) to update her on Nathan's progress and on the plan for success. Ms. Lubbe shared the plan with Nathan (i.e., create learning goals for each session, small steps that were achievable within the time frame allocated). During each session, Nathan identified two learning objectives, which if not complete became homework. Nathan was also made aware that he could take breaks from the enrichment program as it was supplemental to his learning, but he persisted and at the end of the program, Nathan created a slideshow for his final presentation and presented his work at the EMSB knowledge fair.

Skills Nathan gained from this program.

- **Planning.** Nathan began setting goals at the start of each session. He began planning how to create video games using worksheets and visual organizers provided by Ms. Lubbe
- **Creativity** - Nathan began creating individualized sprites in Scratch, using his creative side to create characters in his video games.
- **Animation** - Creating animations and games using code "blocks" on Scratch
- **Introduced to the engineering design process.** Nathan was introduced to engineering design process to help with creating and working on new games.
- **Trial and Error.** Nathan knows how to work through glitches and bugs in his Scratch games. He knows first to try moving different Scratch blocks, how to search up tutorials, and ask for help

Future recommendations for Nathan.

- Learning centers within the classroom in areas he excels.
- Nathan seems to enjoy creating his characters in Scratch and may benefit from spending more of his free time exploring Scratch and joining a program that focuses on digital drawing and design.
- He can continue using visual organizers such as a calendar, file folders for each subject, graphic organizers, and goal-setting worksheets to help Nathan stay on track with his workload.
- Working collaboratively. Nathan seemed to enjoy working with his peer and may benefit from more group projects.

Areas in which Nathan can be challenged.

- **Planning.** Nathan can be challenged to be more independent while working on projects alone. The use of graphic organizers and a calendar may be beneficial.
- **Public speaking.** Nathan can be challenged to practice speaking and reading out loud confidently and writing a script for future presentations.

- **Design Process.** Nathan can be challenged to embark on more projects practicing planning, executing, recording, and improving on his original design ideas.

Bradley Perrault – Scratch Programming

Bradley benefited from a weekly formal alternative program facilitated by Sarah Lubbe in collaboration with Dr. Birlean. The program was designed by Dr. Birlean and tailored specifically to address Bradley's learning styles, strengths, and interests identified through the formal strength assessment. Bradley's project consisted of creating games through the program Scratch. Bradley worked alongside another student. Initially, the students tried to work collaboratively on a Bee game, but as both were at different competency levels using Scratch, the students decided to create different games. Bradley then began working on developing games such as a clicker game, a stick fight game, and a laser tag game using the program Scratch. Bradley worked very independently and spent extra time working on his projects during his lunchtime on Wednesday. Bradley also participated in the Public Speaking and Debate Program. Bradley created a slideshow for his final presentation and presented his work at the EMSB knowledge fair.

Skills Bradley gained from this program.

- **Planning.** Bradley began planning how to create video games using worksheets and visual organizers provided by Ms. Lubbe
- **Creativity** - Using his creative side to create characters and 'remixes' of games using Scratch.
- **Animation** – Bradley is familiar with creating animations using code "blocks" on Scratch. He works independently and confidently.
- **Introduced to the engineering design process.** Bradley was introduced to engineering design process to help with creating and working on new games.

Future recommendations for Bradley.

Bradley would **greatly benefit** from future alternative programs such as

- Learning centers within the classroom in areas he excels.
- Embarking in another individual alternative program in an area of his interests, such as creating video games (using Scratch or an alternative program), learning code (Bradley's choice), embarking on a robotics program, and/or making a website.
- Tour or meet with a video game designer/web designer
- Future Problem Solving – Global Issues
- Debate and Public Speaking program

Areas in which Bradley can be challenged.

- **Planning.** Bradley can be challenged to create larger projects (websites or larger games) using more complicated codes and programs. The use of graphic organizers and a calendar may be beneficial.
- **Public speaking.** Bradley can be challenged to practice speaking confidently and writing a script for future presentations.
- **Design Process.** Nathan can be challenged to embark on a longer project complete with planning, executing, recording, and improving on his original design ideas.

Report Completed

Date: August 30, 2022

By: Camelia Birlean

Camelia Birlean, M.Ed., PhD
Consultant, Gifted and Exceptional Learners
English Montreal School Board
Tel: 514-483-7200 / EXT: 7615
Fax: 514-483-7460
Email: cbirlean@emsb.qc.ca