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Application Form for the CMS 2016 Endowment Grants Competition

Deadline September 30

Title of Proposal

Unpossible NL's Math Circles of St. John's Pilot Project

Contact information

The one person and place to communicate with the applicant(s).

Name

E-mail

Telephone

Fax

Institution or department to administer grant funds

Name

Address

Contact

E-mail

Telephone

Fax

Summary

Less than 100 words

Total amount requested in this competition \$ 2500

Modelled on the Math Circles of Chicago, a groundbreaking and award-winning mathematics exploration program combining math education and social justice, Unpossible NL's Math Circles of St. John's will provide 5th to 8th graders opportunities to collaboratively explore challenging mathematics not commonly encountered in the school curriculum in order to increase their creative confidence, and to promote a lifelong love of mathematics.

The program will present mathematics as a social, collaborative and creative endeavour, and create a supportive environment in which learning is led by students and encouraged by the Circle leader. Circles will be strictly non-competitive.

Applicants

Put any specific information on the relevant experience or expertise of an applicant in "Other".

Name(s)	Yorck Sommerhäuser	Margarita Kondratieva	Sarah Smellie
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Position	Assistant Professor of Mathe	Associate Professor of Mathe	Board of Directors
Employer	Memorial University of Newfo	Memorial University of Newfo	Unpossible NL
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	St. John's, NL	St. John's, NL	A1C 3Y5
	A1B 1T5	A1B 1T5	
CMS Member #	021924		
Current grants			

What you propose to do*at most 40 lines*

Working with schools and community partners like the Boys and Girls Club, the Community Centre Alliance and the Native Friendship Centre, we will target students who don't normally identify themselves as "math kids," and students from gender and socioeconomic groups typically underrepresented in mathematics.

Circles will be free and will meet once a week for one hour. A complete term will consist of four sessions. This Pilot Project will comprise two terms of three Math Circles each and serve as a model for future years of Math Circles of St. John's. This project is a collaborative effort between Impossible NL and a group of faculty at the Memorial University of Newfoundland.

Circles will be led by undergraduate and graduate students in Mathematics and Mathematics Education at the Memorial University of Newfoundland and by members of the community with strong math backgrounds. An appointed research assistant will study the enrolment, methods and effectiveness of the program to help us develop a best practices framework for leading Circles.

Beginning in October 2016 we will develop the program and all related print materials, build the program's website, and set up regular information sessions for parents, teachers and students at schools and community centres across the city. We will also meet with Circle leaders to develop our session plans and strategies in collaboration with the research assistant.

We will host a test Circle for adults in November, focusing on math teachers and Circle leaders. We will use the session plans we have created and adjust them according to feedback from participants of this initial test Circle gathered by the research assistant.

Our first Math Circles term for students launches February 2017, consisting of three Math Circles, each of which is four sessions long. Two of these Circles will be for grades 5 and 6, and one of those will be for girls. The third Circle will be for students in grades 7 and 8.

After this term, we will review our plans and the feedback from students obtained by our research assistant and make changes. Then we will launch another Math Circles term in April 2017. This term will also comprise three Circles, each of which will be four sessions long. After this term, we will assess the success of the program and plan for the next academic year.

Part of our budget will go toward purchasing hands-on mathematical learning games like Lights Out! and those outlined in the booklet Learning Math with Interactive Experiments published by mathematikum, in Germany. We intend to build a collection of such exploratory games and toys.

Budget

Use Tab key to navigate

Description	Revenue		
Memorial University Office of Public Engagement	10,000	confirmed	
CMS Endowment Grant requested	2,500		
Total Revenue \$	12,500		
	Expenses		
Renumeration for Circle leaders	2,856		
Snacks and supplies for students, printing	1,244		
Research Assistant	1,500		
Design of website and print materials	2,450		
Sponsorship program development and outreach	2,450		
Learning and development materials such as hands-on	2,000		
Total Expenses \$	12,500		

Other *Funding, partners, revenue potential, information on applicants such as publications or awards, at most 20 lines.*

Unpossible NL is a non-profit organization in St. John's, NL, working to give people of all ages and all skill levels more opportunities to explore their creativity in unique, fun, supportive and meaningful ways. With a history of initiatives like the RPM Challenge, an annual province-wide challenge to record an album of music in February, Unpossible NL has a wide community network in the St. John's area.

Memorial's Department of Mathematics and Statistics has a long history of offering outreach activities for secondary school students such as Math League games, written math competitions, and math camps.

The Community Centre Alliance and Common Ground Coworking will provide free space for Math Circles.

Memorial University's Office of Public Engagement's Quick Start Fund granted us \$1,000 to bring Doug O'Roark, Executive Director of the Math Circles of Chicago to St. John's in July. He led a workshop on introducing community-building and inclusive practices into Math Circles.

The Office of Public Engagement then awarded us \$10,000 to launch this pilot project.

We have met with ExxonMobil about funding, and we will meet with various chapters of the Rotary Club of St. John's. We will also apply to the provincial government's Youth Initiatives Grants to fund Math Circles terms in Fall 2017 and Winter 2018.

Project start date

Finish date