

PART 1 : DISTRICT GRANT APPLICATION

DISTRICT	9370
DATE OF QUALIFICATION	March 2022 (club member Richard Naidoo attended POETS)
NAME OF ROTARY CLUB	Durban Umhlatuzana
PROJECT TITLE	Maths Enrichment Pilot Project
AREA OF FOCUS COVERED	Mathematics Education – Grades 8 & 9
GRANT APPLICATION AREA OF FOCUS-(CHOOSE FROM BELOW)	Basic Education and Literacy

- Peace Building and conflict Prevention
- Disease Prevention and Treatment
- Water, Sanitation and Hygiene
- Maternal and Child Health
- Basic Education and literacy
- Community Economic Development
- Support the Environment

Application:

1. Provide full details of the proposed / actual project on a separate attachment covering the following :

Community Impact

- 1.1 What community needs have been identified?
- 1.2 How are these needs currently being addressed?
- 1.3 Briefly summarise the proposed project including the need it will address, the intended beneficiary / beneficiaries and the potential benefits to the community.
- 1.4 Has the benefitting community confirmed that it would like the activity (ies) to take place?
- 1.5 Describe how the benefitting community will be involved in the project
- 1.6 Details and role of any cooperating organization.

Rotarian Involvement

- 1.7 How many Rotarians will participate in the project?
- 1.8 Details of proposed participation.
- 1.9 Describe how all parties involved will act to ensure the sustainability of the project.
- 1.10 Proposed start date:(must be within the upcoming Rotary Year starting 1 July.)
- 1.11 Proposed completion date:
- 1.12 Provide an estimate of project income and expenditure below (use actual figures and retain vouchers for all receipts and expenditure for final report)

1. Provide **full** details of the proposed / actual project.

This project will bring tutors from the University of KwaZulu-Natal (UKZN) in STEM subjects at third-year Bachelor's, honours (fourth-year), and postgraduate levels to a nearby township school (Mariannridge Senior Secondary School) on Saturdays to provide in-person tutoring in mathematics to learners at the eighth and ninth grade levels. This tutoring programme aims to enrich the existing mathematics instruction in order to inspire learners' interest in mathematics and in STEM fields more generally.

At present the majority of the learners at Mariannridge (as in other township schools) opt for the less ambitious "Maths Literacy" track, leading to the Maths Literacy matric exam in place of the Pure Maths matric exam. The division into the two tracks takes place at grade 10. Since the Pure Maths Matric exam is mandatory for university admission in a STEM field or in medicine, this choice severely limits the career options of learners from non-elite South African secondary schools, thus perpetuating the legacy of apartheid. Beyond the issue of university admission, many of the students from disadvantaged backgrounds struggle at University due to inadequate preparation, leading to a substantial attrition rate.

At Mariannridge, for example only 15% of the learners in the final year attempt the Pure Maths Matric exam, whereas in the traditionally white and Indian secondary schools, the learners opting for the Maths Literacy track are a minority. Two factors explain this state of affairs. Most township schools lack qualified maths teachers in sufficient numbers. There is an overall scarcity of qualified math teachers, with the result that many of the best maths teachers opt to teach at more privileged schools. Secondly, there is also a lack of role models who have succeeded in mathematics or other STEM fields. Consequently, many of the learners upon being faced, in consultation with their families, with deciding whether to follow the Maths Literacy track or the Pure Maths track, simply do not believe that choosing the Pure Maths track is a viable option. We would like to change this situation.

The project this year builds on the previous year's project in which instruction was provided to the 2021 8th cohort. This year we want to double the programme in size, serving the new 2022 8th grade cohort in addition to continuing with last year's 8th grade cohort, now in grade 9. This project began in 2020 mid-year when our Club recruited five tutors to offer supplementary instruction to 12th grade learners with the aim of improving their performance on the Maths Literacy Matric Exam. At the time, and

especially in light of the Covid-19 situation, the school leadership was extremely concerned with the lack of preparation of many of the final year learners for the upcoming Matric exam. Supplementary classes were held Saturday mornings. In addition to recruiting the tutors (made possible by the fact that three of our club members are on the UKZN faculty), the club provided transportation for the tutors, learning materials, and coordination with the school leadership. As a result of this effort, the matric pass rate of the 2020 cohort in Maths literacy was raised to 89% compared to 66% for the previous year. In early 2021, following on feedback from the tutors, the school leadership, and others, our Club decided that we wanted to modify the programme to target learners at an earlier age and also to emphasize the Pure Maths option. We felt that we could make more of a difference by starting at an earlier age. We also felt that our tutors would be able to provide a more unique contribution for the Pure Maths effort.

For the moment we are providing only transportation, some learning materials, coordination, and a few perks (e.g., refreshments for the tutors and learners). The operations last year were financed in part by a Rotary District grant (for R 5 500) supplemented by some other gifts that will allow us to continue through mid-2022. We are currently fundraising with the plan to obtain corporate and international funding, and to be end we have registered a non-profit company called the Umhlatuzana Educational Fund, for which the SARS tax exemption and section 18a authorization is pending. Putting this structure in place will allow us to satisfy the requirements of the targeted donors, who will in many cases be motivated by BEE credits and tax deduction of their gifts. In the future---that is, in 2022 and onward, we plan to expand this programme, each year taking on another cohort at Mariannridge, so that in 2022 the effort will double in size taking on 8th and 9th grade, and in 2023 8th, 9th, and 10th grades. We believe that gifts from such larger donors are the best path to the sustainability and longevity of this project. However, we need bridge funding, and this District grant will be of great help for allowing the project to continue and expand in 2022.

We also plan to apply for a global grant this year (around July 2022). The budget here suffices to continue with a bare bones budget. We believe that in order to scale up the programme, taking on an additional grade each year, we will have to provide the tutors with some modest remuneration, because many struggle to support their university studies and need to work to supplement their bursaries. Moreover, we would like to provide the learners with books and other pedagogical materials, emphasizing the enrichment aspect of this programme. The global grant and other fundraising will address these needs.

Community Impact

1.1 What community needs have been identified?

As is the case with many other township schools, the vast majority of high school learners opt for the Maths Literacy track rather than the Pure Maths track, which is at a lower level. There is a need to provide quality supplementary instruction in mathematics.

1.2 How are these needs currently being addressed?

Mariannridge has a number of qualified maths teachers. The principal specializes in mathematics instruction. But there is not a sufficient number of qualified teachers to serve all grade levels and both tracks.

1.3 Briefly summarise the proposed project including the need it will address, the intended beneficiary(ies) and the potential benefits to the community.

The inequality in education in South Africa has hardly been diminished in the post-apartheid era. This is especially true in the STEM fields for which a quality education in mathematics serves as a foundation. Bringing highly-qualified inspiring tutors from UKZN to Mariannridge will provide quality instruction in mathematics as well as badly needed role models.

1.4 Has the benefitting community confirmed that it would like the activity (ies) to take place?

This programme follows on a pilot programme at Mariannridge in 2020 described above. The proposed actions have been defined in collaboration with the school leadership, which has emphasized the impact of the 2020 effort on the matric exam scores.

1.5 Describe how the benefitting community will be involved in the project

Mariannridge Senior Secondary School will provide classrooms for the Saturday tuition and will organize the selection of students etc. We are regularly in contact with Mr Lucky Mtungwa, the Principal of the school, and additionally he has set up a two-person liaison committee condition of Deputy Principal Naidoo and Senior Maths Teacher Patrick Thomas.

1.6 Details and role of any cooperating organization

The University of KwaZulu-Natal School of Mathematics, Statistics, and Computer Science and School of Physics and Chemistry are helping us recruit tutors and may provide additional other support in the future. The Deans of both Schools have expressed strong support of this initiative emphasizing its alignment with the outreach mission of the University.

Rotarian Involvement

1.7 How many Rotarians will participate in the project?

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1.8 Details of proposed participation.

Rotarians will recruit the UKZN tutors, arrange their transportation to and from the school on Saturdays, providing training, liaise with the school, and provide pedagogical materials chosen in collaboration with the school leadership. Rotarians will also work on further fundraising to ensure sustainability.

1.9 Describe how all parties involved will act to ensure the sustainability of the project.

As described above, a non-profit company has been registered and fundraising from corporate and international donors is underway. Before this programme can begin in earnest,

1.10 Proposed start date:(must be within the upcoming Rotary Year starting 1 July.)

1 July 2022

1.11 Proposed completion date:

31 Dec 2022

1.12 Provide an estimate of project income and expenditure below (use actual figures and retain vouchers for all receipts and expenditure for final report)

Provide an itemised statement detailing how grant funds are to be/were expended on this project from its implementation through to completion. Use the following chart as a guide

INCOME	R 43 000
DISTRICT GRANT	R 10 000
OTHER INCOME: PLEASE ITEMISE ANY OTHER INCOME	
TOTAL INCOME	

EXPENDITURE	
1 transportation for approx. 30 tutors per week	R1750 per week for 30 weeks = R45 000
2 a) refreshments for 30 tutors, b) basic stationery to start	a) R200 per week for 30 wks b) R2 000.00 p.a. = R8 000
TOTAL EXPENDITURE	=R53000.00

By signing this report, I confirm that District Grant funds of R_____ will be spent in accordance with Trustee approved guidelines and the Memorandum of Agreement entered into between the Rotary Club of Durban Umhlatuzana and District 9370 and that all of the information contained herein is true and accurate.

Receipts for all expenses must please be retained for at least five years as required as per the Rotary Club's Memorandum of Understanding

BANKING DETAILS

2. Please complete your Clubs Grant banking details here.

Account in the name of: Rotary Club Rotary Umhlatuzana

Name of Bank: Standard Bank

Branch Code: 051001

Account Number: 251644359

Please note that any changes to your proposed plan for your District Grant must be reported to the District Chair for approval.