GLOBAL GRANT APPLICATION TEMPLATE

The following pages outline the questions you will be asked on the online global grant application. You can use this document for planning purposes. Find the actual grant application at www.rotary.org/grants.

Step 1: Basic information

What's the name of your project?

An Innovative High School Mathematics Enrichment Programme: A Pilot Project based at Marrianridge Senior Secondary School, Durban, South Africa

What type of project are you planning? (humanitarian project, vocational training, scholarship)

All global grants support activities within Rotary's areas of focus.

Basic Education (Mathematics 8-12, instruction and enrichment through Saturday school with upper division and post-grade university student tutors supported by Rotary club and partners with a computing component)

Select the primary host and international contacts for this project.

The primary host contact lives in the country where the project, training, or study will take place. The primary international contact lives in another country. Both contacts will be responsible for all grant-related correspondence and reporting to The Rotary Foundation.

Martin Bucher, President, Rotary Club of Durban Umhlatuzana, Durban, South Africa (m.aaron.bucher@gmail.com)

Step 2: Committee members

The committee will include at least three members from the host sponsor and three members from the international sponsor.

Who will serve on the grant's host committee?

Martin Bucher, Preggie Naidoo, Thomas Konrad, (Rotary Club of Durban Umhlatuzana, South Africa) Dorina Bowes (Rotary Club of Pinetown, South Africa)

Who will serve on the grant's international committee?

Alison Pannell, Linda Hull (Rotary Club of Los Alamos, New Mexico, USA)

Do any of these committee members have potential conflicts of interest? If so, please briefly explain.

A conflict of interest is a relationship through which an individual involved in a program grant or award causes benefit for such individual or such individual's family, acquaintances, business interests, or an organization in which such individual is a trustee, director, or officer.

No

Step 3: Project overview

Tell us a little about your project. What are the main objectives of the project, and who will benefit from it?

We're only asking for a general idea of the project. Try to be as concise as possible here. We'll ask you for details later in the application.

The objective of this project is to bring Pure Mathematics education and computer skills to an underserved community outside of Durban, South Africa. The impact to the community will be increased acceptance at universities for further education, improved job opportunities, and economic improvement.

This project brings upper division and post-graduate students in the STEM subjects from the University of KwaZulu-Natal to a township school on Saturday mornings to deliver supplementary mathematics instruction to learners in grades 8 -12.

The project will also include a computing component, as computer literacy is essential to success at university and to success in many other careers.

Step 4: Area of focus

Which area of focus will this project support?

Select at least one area. Note that we'll ask you to set goals and answer questions for each area of focus you select.

☐ Peacebuilding and conflict prevention

☐ Disease prevention and treatment

☐ Water, sanitation, and hygiene

☐ Maternal and child health

☒ Basic education and literacy

☒ Community economic development

☐ Environment

Step 5: Measuring success

Which goals of this area of focus will your project support?

We'll ask you questions about the goals you choose, and at the end of the project, you'll report on your results for each goal. Each area of focus has its own set of goals. Select only the goals that your project will address.

Improve test scores and pass rates of each cohort by comparison to previous grades not having participated in this programme and to data from similarly situated school.

Increasing the fraction of learners opting for the more advanced "Pure Mathematics" track as opposed to the "Maths Literacy" track.

Increasing the fraction of the learners from the school continuing to university in STEM subjects.

Less measurable: Inspiring some of the tutors to choose high-school teaching subsequent to graduation rather than going into industry or academia.

Confidence building among high-school learners.

Increased awareness of future career options.

How will you measure your project's impact?

Use only measures that are clearly linked to your goals and will demonstrate the project's impact on participants' lives, knowledge, or health. Find tips and information on how to measure results in the Global Grant Monitoring and Evaluation Plan Supplement. You need to include at least one standardized measure from the drop-down menu as part of your application. (Add rows as needed.)

Measure	Collection Method	Frequency	Beneficiaries
Improvement in test scores at each grade level	Data provided by school. Comparison with similarly situated schools and with historical data.	Yearly	Learners taking part in the program
Pure Math vs Math Literacy enrollment			
Increased University enrollment numbers			

Do you know who will collect information for monitoring and evaluation?

If yes, please provide the name and contact information for that person or organization and briefly explain why this person or organization is qualified for this task. If no, please tell us how you plan to find a person or organization to complete this task.

The data will be provided by the school, represented by School Principal Mr Lucky Mtungwa. Academics at the University of KwaZulu-Natal and the Université Paris Cité will provide the statistical analysis and interpretation. Professors Martin Bucher and Thomas Konrad will carry out a statistical analysis of the data provided.

Step 6: Location and dates

Where and when will your project take place?

The project will continue the existing project at Mariannridge High School in 2022 (2 grades), 2023 (3 grades), 2024 (4 grades), 2025 (5 grades). The South African school year coincides with the calendar year. The Rotary Project will begin in July 2022. By 2025 the project will have expanded to take on all grades 8-12 and become self sustaining. This Global Grant deals with the first phase, from July 2022 through July 2023.

Step 7: Participants

Cooperating organizations (optional)

Provide the name, website and location of each cooperating organization.

A cooperating organization can be a nongovernmental organization, community group, or government entity. Please attach Rotary's memorandum of understanding that's signed by a representative of the organization. (Add rows as needed.)

Name	Website	Location
Umhlatuzana Education Fund, NPC	https://umhlatuzana-education-fund.org/	Durban, South Africa
Rotary Club of Pinetown		Pinetown, South Africa
Physics Department, University of KwaZulu-Natal		Westville, Durban, South Africa

Why did you choose to partner with this organization and what will its role be?

The Umhlatuzana Education Fund is a Non-Profit Company set up under the laws of South Africa and provides a formal legal structure for receiving funds and managing the finances of the project. An application is pending for Tax-Exempt Status and Section 18a Status (enabling donors to receive exemption from South African taxes). Four of the five directors are Rotarians, three from the Umhlatuzana Club and one from the Pinetown Club. Mariannridge Secondary School Principal Lucky Mtungwa is also a Director. The memorandum of incorporation the company provides for annual financial statements audited by an independent Registered Auditor/Chartered Accountant, and annual filings are submitted to CIPC (which oversees all South African companies) and SARS (South African Revenue Service). The Pinetown Club provides additional personpower, and other neighboring Rotary Clubs will be invited to take part in the course of the project.

UKZN is also a partner and serves to help recruit the tutors.

PARTNERS (OPTIONAL)

Partners may include other Rotary clubs, Rotaract clubs, Rotary Community Corps, or individuals.

List any other partners that will participate in this project.

We intend to organize the tutors to turn this project into a Club, likely a Rotaract Club, in the near future, so that they can contribute to defining the programme and take on part of the management of the project. While the Umhlatuzana Education Fund NPC will oversee the financial management of the project and carry out the fundraising, incentivized by the B-BBEE Social Development Credits for which this project qualifies, we see the UKZN students tutoring for this project as taking over the bulk of the responsibility for running the day-to-day operations and pedagogical direction of the project. The university professors involved with this project will continue to offer advice and resources and serve as a liaison with the university, which will assist in publicizing the project and providing access to university mailing lists for recruiting tutors.

ACADEMIC INSTITUTION

Provide the name and address of the academic institution.

UKZN is a partner and serves to help recruit the tutors.

ROTARIAN PARTICIPANTS

Describe the role that host Rotarians will have in this project.

The Durban Umhlatuzana Club has three academics among its members in the areas of Mathematics and Physics. These club members, drawing on other colleagues and professional educators whose participation will be enlisted, are presently recruiting the tutors and in close collaboration with the school leadership are defining and improving the programme. The Club has been arranging the transportation and ensuring that necessary records are kept. When funding becomes available, the Umhlatuzana Education Fund (UEF) will ensure that tutors are paid stipends. The UEF will engage in fundraising and publicity with a view toward ensuring the perennity of the project beyond this initial expansion/trial phase.

Describe the role that international Rotarians will have in this project.

International Rotarians will collaborate with the Host Rotary Club to coordinate financial oversight, balancing budgets and assist with the writing of the final report for the Rotary Foundation.

Step 8: Budget

What local currency are you using in your project's budget?

The currency you select should be what you use for a majority of the project's expenses.

ZAR (South African Rand)

What is the U.S. dollar (USD) exchange rate?

1 USD = 16 ZAR

What is the budget for this grant?

List each item in your project's budget. Remember that the project's total budget must equal its total funding, which will be calculated in step 9. Project budgets, including the World Fund match, must be at least $30,000. (Add rows as needed.)

Presently we have two budgets for the project, a less detailed four-year budget based on 150 ZAR per grade per year, and a more detailed budget for July 2022 – July 2023 where each item has been documented with quotations. The four-year budget is as follows:

2022	300 000 ZAR	(18 750 USD)
2023	450 000 ZAR	(28 125 USD)
2024	600 000 ZAR	(37 500 USD)
2025	750 000 ZAR	(46 875 USD)

Total budget: 2 100 000 ZAR   (131 250 USD)

The budget for this global grant covering the first phase is given in the table below.

#	Category*	Description	Supplier	Cost in local currency	Cost in USD
1	Travel	Transport (Durban - Mariannridge return, 3 vehicles July 2022 – Dec 20222	Taxi Company	42 900 ZAR	

2	Travel	Transport (Durban - Mariannridge return, 4 vehicles Jan 2023 – July 2023	Taxi Company	70 000 ZAR	
3	Travel	Transport (KwaNgezi-Mariannridge return) Jul 2022 - Jul 2023	Taxi Company	24 000 ZAR	
4	Personnel	Tutor stipends	Tutors recruited	200 000 ZAR	
5	Supplies	Books	Book wholesaler	90 000 ZAR	
6	Equipment	Outfitting computer lab (painting, security)	Bids	18 424 ZAR	
7	Equipment	(electrical, internet network)	Bids	40 697 ZAR	
8	Operations	Internet access	Internet provider	6 000 ZAR	
Total budget:				516 021 ZAR	32 251 USD

*Possible categories: Accommodations, Equipment, Monitoring/evaluation, Operations, Personnel, Project management, Publicity, Signage, Supplies, Training, Travel, Tuition

Supporting documents

Upload any documents, such as price bids or pro forma invoices, to substantiate the listed expenses.

Step 9: Funding

Tell us about the funding you've secured for your project.

We'll use the information you enter here to calculate your maximum possible funding match from the World Fund. List all of your funding, including cash contributions and District Designated Funds (DDF). (Add

rows as needed.)

#	Source	Details	Amount (USD)	Support*	Total
1	Rotary Club of Durban Umhlatuzana		1000		1000
2	Rotary District 9370 South Eastern South Africa and Lesotho		4500*1.8=8100		8100
3	Atisa Securities		9375		9375
4	Rotary Club of Los Alamos, NM		2500		2500
5	Rotary Club of Pinetown, KZN, South Africa		1000		1000

*Whenever cash is contributed to the Foundation to help fund a global grant project, an additional 5 percent is applied to help cover the cost of processing these funds. Clubs and districts can receive Paul Harris Fellow recognition points for the additional expense.

How much World Fund money would you like to use on this project?

We would like the DDF contributions to be matched at 80% as is the policy.

Step 10: Sustainability

Sustainable projects provide long-term solutions to community problems — solutions that community members themselves can support after grant funding ends. Your answers to the questions below will help us understand the components of your project that will make it sustainable.

HUMANITARIAN PROJECTS – PROJECT PLANNING

Describe the community needs that your project will address.

Our interviews confirmed the importance of improving mathematics education, and in particular enabling high school learners to access the Pure Maths track, which is a prerequisite for university admission in most subjects, for obtaining bursaries, and for access to other post-secondary school opportunities. The interviews also identified the lack of access to computing and the internet, and lack of computer education, as a major barrier.

How did your project team identify these needs?

For complete detail, please refer to the Community Assessment document attached at the end of this application.

Dorina Bowes and Martin Bucher carried out interviews with a number of persons to identify the needs of the community, in particular with:

*Elizabeth Arnold, recently retired math teacher at Mariannridge Primary School;

*Jennifer Boyce, Mariannridge Community Activist of the Mariann Co-Ordinating Committee;

*Sudan Hansraj, Professor of Mathematics UKZN, former professor of Mathematics Education and former high school teacher (to provide an overview of pre-University education in South Africa);

*Thomas Konrad, Professor of Physics, UKZN;

*Bazil Lawrence, Pastor of Kingdom Life Ministries whose church and creche is situated near the school;

*Lucky Mtungwa, Principal of Mariannridge Senior Secondary School;

*Petronella Renton, parent of children educated in Mariannridge;

*Sinenhlanhla "Precious" Sikhosana, former UKZN undergrad, postgrad student and tutor in this project in 2019 (also to provide evidence of challenges faced by Zulu learners entering University)

Interviews were recorded, transcribed, and edited, with highlights extracted in a summary Community Needs Assessment document. Questions covered the history and challenges of the Marriannridge community and similarly situated township communities, adequacy of educational opportunities and post-high school outcomes, what interventions would be most effective and needed, and state and importance of mathematics and computer education.

How were members of the benefiting community involved in finding solutions?

The school principal was a very active participant in defining this project. He is a board member of the non-profit company and regularly discusses the running of project with club members. A deputy vice-principal serves as liaison to the project. Jennifer Boyce was also involved in initial discussions. The tutors have periodically been asked to provide feedback and suggestions.

How were community members involved in planning the project?

(see above)

HUMANITARIAN PROJECTS – PROJECT IMPLEMENTATION

Summarize each step of your project's implementation.

Do not include steps related to fundraising, applying, or reporting. (Add rows as needed.)

The table below indicates the entire path until sustainability. This specific global grant deals with the time period 1.5 through 2.5 (July 2022 through July 2023).

#	Activity	Duration
1	Instruction to grades 8 and 9	2022
2	Instruction to grades 8, 9, and 10	2023
3	Instruction to grades 8, 9, 10, and 11	2024
4	Instruction to grades 8, 9, 10, 11, and 12	2025

Will you work in coordination with any related initiatives in the community? If yes, briefly describe the other initiatives and how they relate to this project. If no, please explain. Are local initiatives not addressing these needs? Or, if they are, why did you decide not to work with them?

There can be value in working with other groups including governments, nonprofit organizations, and private companies.

We will work informally with the University of KwaZulu-Natal academic departments in STEM subjects to publicize the project and to recruit tutors. Professor Thomas Konrad is well placed to carry out this function, as he has 16 years of experience in the Physics department where he is the currently Academic Leader. The Deans of the School of Chemistry and Physics and of the School of Mathematics, Computer Science and Statistics support this initiative and have allowed us to use official email lists for recruiting tutors.

We intend to organize a student group on campus to help support and define this activity, so that the students can take ownership of many parts of this project.

Please describe the training, community outreach, or educational programs this project will include.

How were these needs identified?

The idea for this project arose out of a zoom discussion between the Principal of Mariannridge Senior Secondary School and members of the Durban Umhlatuzana and Pinetown Rotary clubs in 2020. The Principal presented a long list of needs of the school, most of which were beyond the financial means of the Club. During this meeting the Principal was asked whether providing university student tutors to help out with math would be useful to the school. The principal responded positively to this offer. Student tutors were recruited to help out with the preparation for the 2020 Matric Examination in Maths Literacy. All but a small number of 12th grade learners at Mariannridge at that time were enrolled in the Maths Literacy

track, rather than the higher Pure Maths track (which is typical at disadvantaged schools). At the end of the year, the success of this programme was evaluated (in terms of increase in Matric pass rates) and an informal survey of the tutors and university members of the Umhlmatuzana RC was taken. There was unanimity that although highly successful, the effort was too much last minute and exam driven, and that better and more lasting outcomes would result from starting at an earlier age, with a view toward increasing contact time with the learners and also encouraging a larger fraction of the learners to opt for the Pure Maths track (a choice made at the end of grade 9). We consulted with the school leadership, sharing the results of this survey. The school leadership indicated strong agreement with starting earlier and proposed starting in grade 8. It was jointly decided to start with the grade 8 cohort in 2021 and follow this cohort through to grade 12, and to add one new cohort each year.

What incentives (for example, monetary compensation, awards, certification, or publicity), will you use, if any, to encourage community members to participate in the project?

Once adequate funding has been secured, we will provide the university students who provide tutoring a modest stipend to compensate them for their time and also to help them finance their studies at UKZN. To date the vast majority of the tutors recruited come from the same demographic as the learners at Mariannridge. The students at UKZN come from a diverse range of backgrounds, some with substantial financial help from their parents and others relying entirely on financial aid from UKZN, which most students without support from their parents must supplement with part-time employment. Although the tutors to date have worked on an entirely volunteer basis, we do not foresee being able to ramp up the program in scale without remuneration of some sort. Moreover, we believe helping students with the financing of their university studies a worthy cause in its own right. We also believe that one of the strengths in our programme is having the learners at Mariannridge receive instruction from those coming from a similar background.

List any community members or community groups that will oversee the continuation of the project after grant-funded activities conclude.

These may or may not be Rotary members or clubs.

The Umhlatuzana Education Fund has been set up as the formal structure for the financial management of the project. The formal structure will allow the project to receive corporate and international donations and grants as well as governmental grants. The Rotary Club of Durban Umhlatuzana sees itself as continuing to serve this project after the completion of the Global Grant project, enlisting the support of other Rotary Clubs in the area. However, we foresee allowing the project to take a life of its own, with the tutors organized into a club, likely in the form of a Rotaract Club, taking on the day-to-day management and the UEF taking on the financial management and fundraising side of the operation. We foresee relying on corporate support for recurrent funding incentivized by donations able to give donors B-BBEE Social Development Credits to improve their B-BBEE scorecards, which are of great importance to companies doing business in South Africa.

VOCATIONAL TRAINING TEAMS – PROJECT IMPLEMENTATION

Describe the training needs that the team will address.

How did your team identify these needs?

Describe the specific objectives of the training, including what you expect training participants to gain from the team's expertise.

How were members of the local community involved in planning the training?

Will you work in coordination with any related initiatives in the community? If yes, briefly describe the other initiatives and how they relate to this project. If no, please explain. Are local initiatives not addressing these needs? Or, if they are, why did you decide not to work with them?

What incentives (for example, monetary compensation, awards, certification, or promotion) will you use, if any, to encourage community members to participate in the training?

How will training recipients be supported after the training to keep the skills they acquire up-to-date?

List any community members or community groups that will oversee further training after the project ends.

SCHOLARSHIP** (SEE BELOW FOR SCHOLAR PROFILE QUESTIONS)

Describe the process your team used to select this candidate.

How do this candidate's background, studies, and future plans qualify them for a global grant under this area of focus?

BUDGET

Will you purchase budget items from local vendors? Explain the process you used to select vendors.

Transportation will be negotiated with local taxi companies. Computer equipment and textbooks will be purchased from South African suppliers and wholeslaers and several quotes will be obtained.

Did you use competitive bidding to select vendors? If no, please explain.

> For computer equipment and purchase of textbooks where feasible several quotations will be obtained.

Please provide an operating and maintenance plan for the equipment or materials you purchased for this project. This plan should include who will operate and maintain the equipment and how they will be trained.

> The computer equipment has a finite lifetime that needs to be taken into account. We intend to train a subset of the tutors with the necessary skills to provide basic maintenance.

Describe how community members will maintain the equipment after grant-funded activities conclude. Will replacement parts be available?

> We intend to recruit university IT support to assist with maintenance on a volunteer basis.

If the grant will be used to purchase any equipment, will the equipment be culturally appropriate and conform to the community's technology standards? If yes, please explain. If no, describe how the project team will help community members adopt the technology.

> Yes. We will provide the necessary training.

After the project is completed, who will own the items purchased by grant funds? No items may be owned by a Rotary district, club, or member.

> We will donate the computer equipment and books to the school.

FUNDING

Have you found a local funding source to sustain project outcomes for the long term? If yes, please describe this funding source.

> We have obtained a gift from a South African investment firm (Atisa Securities) at the level of 150 000 ZAR for 2022 and the company has expressed an intention to maintain a enduring relationship with the project in future years. The company will review their contribution on a yearly basis based on progress of the project, their future financial situation, and their BEE credit needs. The impetus to put together at non-project company with audited accounts and South African Revenue Service PBO (Public Benefit Orgnization) and Section 18a status came for discussions in early 2022 with the BEE consultant of Atisa Securities on what kind of a formal structure Atisa and similarly situated corporate donors would need in order to donate to our project. We are confident that with these structures in place (only the SARS approval is still pending), we will find other South African corporate donors willing to provide recurrent support to this project. We believe that South African technology companies are likely to find this kind of project well aligned with their focus.
>
> We also intend to pursue fundraising in the United States. The Rotary Club of Los Alamos, New Mexico has recently agreed that its 501(c)(3) "public charity" Foundation can receive donations to this project. In 2021 we received a gift of 60 000 ZAR from a donor in Delaware for the pilot project and he has promised to help with fundraising. An immigration attorney in Los Angeles has indicated she is willing to giving once the Los Alamos account is in place and she has also contacted other people who may be interested in giving.

Will any part of the project generate income for ongoing project funding? If yes, please explain.

No.

Is your economic and community development activity a microcredit project? If yes, upload your microcredit supplement file.

No.

**SCHOLAR APPLICANTS WILL ANSWER THE FOLLOWING QUESTIONS:

List the two educational institutions you have most recently attended:

Provide the following information about the academic program you plan to attend:

Matriculating educational institution (including city and country):

Language of instruction:

Website:

Academic program:

Academic program start date:

Academic program end date:

List the classes you plan to take and provide any relevant links to information about the program.

How does your educational, professional, or volunteer experience align with Rotary's goals in the selected area of focus?

What are your plans immediately after the scholarship period?

How do your long-term professional goals align with Rotary's goals in the selected area of focus?