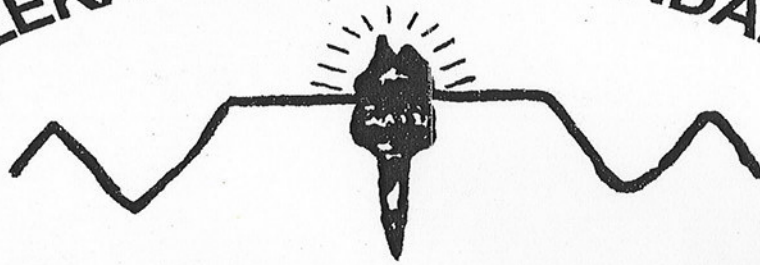


FEZEKA SENIOR SECONDARY



Aut primus aut cum primis

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EMAIL: admin@fezeka.wcape.school.za

Dr. Rahael Jalan
Research Associate, Aboriginal Education
Pacific Institute for the Mathematical Sciences
University of British Columbia
Vancouver, BC, Canada

November 3, 2009

Dear Rahael

I am very pleased to note that the mathematics project which you have implemented at Fezeka High School has been a great success with our learners and teachers. I would like to thank you for inspiring our teachers and learners with your approach to teaching and learning mathematics. The support provided by The Pacific Institute for the Mathematical Sciences and Education without Borders is very much appreciated.

Your workbooks have opened new ideas and methods for math education. I have observed that the learners who participated in this project have shown tremendous dedication and improvement in their basic understanding of mathematics. It was a pleasure to see so many learners come to mathematics classes after school for close 3 hours each day for 6 weeks.

I look forward to continuing to work with you to include the workbooks, "The Language of Mathematics" as part of our regular curriculum for Grade 10 and 11 for the 2010 year. From 2011 onwards we look forward to using the 5 math workbooks during the first term in Grade 10.

Sincerely,

Bobo Zinzile
Principal

Fezeka Sen. Sec. School

P. O. Box 13, Gugulethu 7750
Principal

Tel: 021 638 7295 Fax: 021 637 5690
Cell: 072 947 2194

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30 October 2009

The education Head
WCED
Parliament Street
Cape Town

Dear Sir/Madam

RE: Maths Intervention

Fezeka Secondary School is a Dinaledi School and as such is expected to produce very good result in Maths and Physics Science. It is unfortunate that the school has not been successful to realise the necessary standard a Dinaledi School so requires.

It is with this background that the school welcomed the Maths Intervention programme by Dr Rahael Jalan, Pacific Institute Mathematical Sciences and the NGO, Education without Borders (EWB) in grade 9 in 2009. Dr Jalan holds extra Maths classes from Monday to Friday at 15H00 to 17H30.

The programme uses 5 workbooks titled Language of Mathematics by Rahael Jalan. Dr Jalan is also a tutor in these classes together with other highly capable facilitators. The Maths teachers at the school also help in these classes. One fortunate part is that all Maths teachers were first taken to training at Stellenbosch University before the starting of the program.

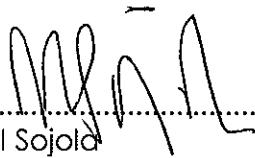
Ever since he program started there has been a marked improvement in the understanding of Maths. The teachers and the facilitators are highly impressed by their understanding of Maths. The learners no more run to the calculator for everything Mathematical. The program has opened space for our learner to think

independently. The parents have been informed about the program and all of them put their signatures in the letters written to them. To all the stakeholders mentioned it has become evidently clear where the short comings of our learners lie. The improvement can be seen where they have to apply knowledge gained to their CTA's.

The request of the school is that the program should continue in grade 9 in 2010. The second request is that this Maths program should be introduced in the grade 8. The school proposes that let the first 2 books by Dr Rahael Jalan be infused into the regular curriculum in 2010. All this could be done with the tight monitoring by the Maths Advisor in the District.

I am confident that this approach will go a long way in raising the standard of Maths in the school. With all the appeal I also wish to thank you in advance for considering this request.

Yours in Education

A handwritten signature in black ink, appearing to read 'M.I. Sojola', written over a horizontal dotted line.

M.I Sojola
(Deputy Principal)

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October 29, 2009

Dear Rahael

I was very excited when I was told by my Head of Department, Ms. Yolisa Mathe, about this mathematics project. I even made a comment to one of my colleagues that this was long overdue. This project has made a great impact in the learners as far as understanding and love of learning of the area is concerned. It has changed many of our learners; they are no longer having that negative attitude towards the subject, which was the biggest contribution towards learners' failure of the subject.

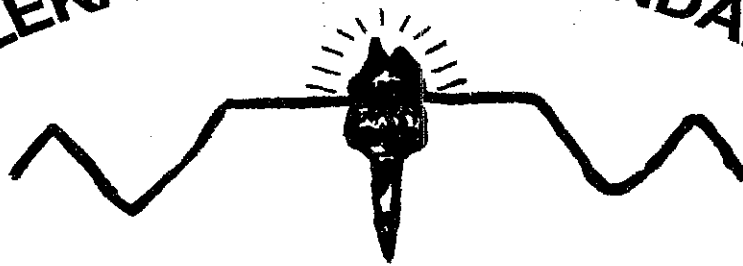
I strongly believe if it was introduced earlier in the year it would have made a bigger progress in the results of mathematics. If it can be introduced earlier next year, it can bring about a greater improvement in our school's overall results, because if we analyze the results, you will notice that mathematics is the cause of high failure rate.

I strongly believe in three years to come the matric results in our school will progress by 50%.

Sincerely,

Nombulelo Somdaka
Mathematics Teacher
Fezeka Secondary School

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November 5, 2009

To whom it may concern

I Francina, an educator at Fezeka Secondary School wish to thank Rahael about the one week workshop for the educators which outlines the plans for the project and expectations and also for the program Rahael provided for our learners. It was great working with Laura and Rahael.

As educators at Fezeka, we really needed the additional support to address the low levels of achievement in mathematics and to build the mathematics foundation for the learners and to encourage them about Maths education. As far as I am concerned the program did wonders for our kids.

The learners wrote the first Advisory test on the Friday before the first week and they failed. As they were working with the first book and wrote the test at the end of the first week, I found that the learners were improving. It was really a challenge for them working without the use of a calculator. We saw the problem...the learners did not have the foundation in maths. They did not know how to add, subtract, multiply and divide; the basic operations.

They enjoyed coming to the math sessions. Even we were surprised to see many learners attending everyday after school for three hours to do maths. They committed themselves to the program till the last day of it. They were so enthusiastic, working hard and competing with each other. Now that they have mastered the basic operations, they are so confident to finish up all the books, with understanding of course.

There were 5 workbooks in all. Those books opened our eyes as educators because some of us were not familiar with the other methods used in the books. Rahael wrote the books

so as for the learners to find it easy to understand. She really made it very clear and easy for the learners to understand.

I would like us to continue with the program and to also to develop us, the educators. We really need the professional development.

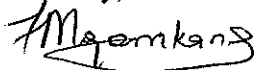
I suggest that the Songese group should continue with the program on that side of the campus. Let us continue with the program at Fezeka. I think that we should also develop the educators and learners in the neighbouring schools that feed Fezeka High School.

I think the program will definitely improve our results if we continue with it, working with Rahael and Laura.

This project will definitely give our learners a solid foundation in maths. These books covered the curriculum from Grade 7 to Grade 11.

As educators we are prepared to continue with the project next year for our learners and to improve our results.

Sincerely,

A handwritten signature in black ink, appearing to read 'Francina Mqamkana', written in a cursive style.

Francina Mqamkana
Mathematics Teacher
Fezeka Secondary School

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To whom it may concern

November 5, 2009

**Re: MATH-YES WE CAN; a program implemented at Fezeka High School
By Dr. Rahael Koshy Jalan**

The School was introduced to Rahael Jalan from the Pacific Institute for the Mathematical Sciences by Cecil and Ruth Hershler of Education without Borders (EwB), an NGO that is supporting the school through fund-raising in Canada. Rahael introduced the program, "MATH-YES WE CAN", to the Maths Department and provided an outline of the program on her arrival at the school. The outline is as follows:

- (Sept 7-11) Week 1: Teacher training on use of workbooks (Part I – Part V) in class.
150 learners wrote Advisory test on Sept. 11, 2009.
- (Sept 14-18) Week 2: Learners dealt with Part I workbook – The Language of Mathematics
(Oct. 4 -9) Week 3 &4: The language of Mathematics Part II– Fractions and Decimals
(Oct. 12 -16) Week 5 & 6: The language of Mathematics Part III – Ratio, Rate & Proportion
(Oct. 19 -23) Week 7: The language of Mathematics Part IV – Exponents & Radicals (to do)
- The program was conducted over seven weeks: September 7, 2009 to November 6, 2009.

Learners were expected to start their afternoon classes at 15H00 and finish at 17H30 (two and one half hours per day) for the 6 weeks with the 5 master teachers and 2 tutor teachers from Fezeka and tutors organized by Laura Egdorf, Volunteer Coordinator, EwB and Masibulele Falo, Volunteer Tutor. The learners were offered snacks, drinks and a fruit on each day.

During the first week, educators were exposed to strategies and methods of teaching mathematics that were proven to be successful, by Rahael. We were presented with a historic background of mathematics, number systems and Vedic mathematics. On Friday of the first week, a randomly selected group of 150 Grade 9 learners assembled at the school hall and were briefed with the plans for the project, expectations, namely, regular attendance, regular testing and that they would receive assistance from the educators, tutors and the entire team. Then they wrote an advisory test which was used to divide the sample into 6 groups of 25 learners.

The results of the test (37% being the highest score) showed that the learners are struggling with basic operations in maths with several misconceptions. Learners started with great enthusiasm in the first week. Regular testing and feedback allowed them to deal with work even at home as the books use language that they can understand and deal with. By the end of the first week, one learner scored 100%. In the weeks thereafter, there was an increase in the numbers of those who scored 90% and above. The improvement of learner achievements indicated that they have grasped a lot of their basics.

More than 100 learners have been motivated throughout the program and were eager to attend and showed interest in pursuing their studies in Maths so as to achieve their dreams for their future of becoming doctors, engineers etc.

I personally realized that the main reason for our learners not achieving good results in the Matric Examination is due to the poor background in the basics of Mathematics. In the past, we continued to spend more time with the learners, engaging them in extra classes without getting improvement in performance. Now, I have gained a better insight that the building blocks of Maths are what we should be focused on, as we have been doing in this program.

Our learners believed that getting into technology by using calculators was the best option to master mathematics. As educators, we took so much for granted. The program revealed that we need to reinforce basics at all levels in the FET phase (Grade 10-12)

We managed to complete Parts I-III of the workbooks with success and hope to continue with the remaining parts next year starting in January. We hope that we will manage to sustain the program, not only with the pilot group but also engage all Maths learners in a well organized manner.

We realized the saying, "Where there is a will, there is a way", is really true and the slogan of the United States President, "YES WE CAN", is not a far fetched dream but reality.

We wish to get sponsorship to ensure that the books written by Rahael Jalan, which we are using, can continue to be resources of a lifetime.

I least expected that I would manage and monitor a program of this magnitude to success and I never thought that teachers in my Department would support each other in this manner. I hope that the motivation we witnessed from Rahael, Laura and the tutors would contribute tremendously in the improvement of the results in the Math Department.

I wish to express my sincere gratitude to you, Rahael, for the motivation, sacrifice, patience and dedication you showed us as a team of Math learners. Keep up the good work!

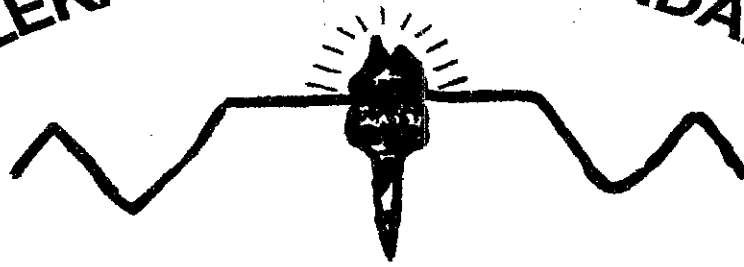
Sincerely,



Yolisa Mathe

Head of Department, Mathematics
Fezeka Secondary School

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November 3, 2009

To whomsoever it may concern

**Re: MATH-YES WE CAN; a program implemented at Fezeka High School
By Dr. Rahael Koshy Jalan**

I am a Maths teacher at Fezeka High School. I am writing regarding the program that has been implemented by Dr. Rahael Jalan, Pacific Institute or the Mathematical Sciences and Education without Borders.

When she first arrived I had no idea about what was going to happen. In the first week of her arrival she gave us all, five mathematics workbooks that she had written. She trained us briefly on what we were supposed to do.

Our training/workshop was conducted over a one week period. Then we started the afternoon classes with the Grade 9 learners. The workbooks that were used in the program are written in such a way that when you are through with them you'll possess enormous math skills.

The workbooks concentrate on the basics of mathematics; Numbers, Multiplication, Division, Addition, Subtraction, Fractions, Decimals, History of Mathematics and a number of other topics that the senior Grade 10,11 and 12 learners have not been taught. These are topics that they are expected to know.

I have worked very hard in the past weeks to make sure that I give the learners the best I can. The learners appreciate these classes. They are dedicated to the program and most of them are doing very well.

It appears that the learners won't complete all five workbooks because some of the topics are very challenging and confusing to them such as fractions and decimals but they are determined to work through them.

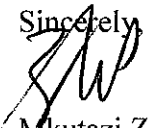
I have learned a lot from Rahael and her work. I have noticed that there is a big difference between the textbooks and Rahael's books. Rahael always makes sure that there are enough exercises and that there are explanations for understanding the concepts, in her books. The emphasis in her books is on practice, practice and practice with understanding. I also think that practice with understanding is the key.

The learners have shown a lot of improvement and I believe that they have acquired all basic skills of maths that will take them to the top.

I believe that the learners that are in the project now must complete the remaining books in January next year. The other Grade 10 learners who did not attend this year's training should do the course when the school opens in January 2010. Books 1-3 covers Grade 10 Term 1 curriculum. The learners can be given the tests from the workbooks and from the textbooks. Grade 11 learners should also be taught what is in the workbooks in the first term of next year.

This basic foundation in mathematics should help improve the math matric results at Fezeka High School.

Sincerely,



Mkutazi Zihlangu
Mathematics Teacher
Fezeka Secondary School