

Global Math and Science Lesson - 10th October 2023

“Beltway Round The World – Outer Rims”



Figure: Participants simulate the beltway

Introduction

The Global Maths & Science lesson is a collaboration between the Global Teacher Empowerment Network (GTEN), Bubbly Math and AIMSSEC who provide professional development in Mathematics for teachers in developing countries. AIMSSEC started off in South Africa and expanded to other African countries and now runs the GTEN programme online with teachers from South Africa, Kenya, Uganda, Jamaica, other Caribbean countries and many more.

Every year we have a Global Math Week which is organized by the Global Math Project. In 2023, the 30 - Minute global math and science lesson was about “**Beltway Round The World – Outer Rims**”

We had 65 students from St. Mary's Shihome Girls' High School who took part in the Global Math and Science lesson 2023 activity with the help of 3 facilitators (Lucian Talu Mayabi, Samuel Okoth and Feleria Adinda) and 5 teachers from the school (Ndagwe Samson, Musonye Augustus and 3 others).

Main Activity

The session started with a warm up activity from the Virtual Math Camp Card deck as a follow up of our previous session with the students. The "Beltway Round The World – Outer Rims" lesson conducted on October 10, 2023, offered a dynamic exploration of mathematical concepts within a 30-minute timeframe. Students engaged in a hands-on activity that involved measuring the perimeter of squares drawn on the ground using string and creating slightly larger squares by adding an extra meter of length to the string. The central message of the session was clear: the width of the path remained consistent, regardless of the size of the field, emphasizing the fundamental concept of perimeter. This hands-on exercise not only enhanced students' understanding of perimeter but also honed their problem-solving skills, encouraging them to apply mathematical knowledge in a real-life context. The session also introduced students to the mathematical term "perimeter," cleverly connecting it to the term "rim" to facilitate better retention and understanding.

The structured lesson was thoughtfully prepared with all necessary materials in place. From chalk and rulers to measuring tapes and string, students had everything they needed to dive into the activities. The lesson was divided into three key activities, starting with an introduction that framed the global math and science lesson as a worldwide engagement opportunity. The main activity involved students actively measuring and discussing the perimeter of squares, fostering critical thinking and problem-solving. The lesson concluded with an extension activity that encouraged students to apply their newfound knowledge to hypothetical scenarios, making mathematics come alive in creative and imaginative ways. Ultimately, the lesson successfully achieved its objectives, offering an engaging and interactive approach to mathematics education.



Fig: Start of the activity



Fig: Experiment 1, using a square field

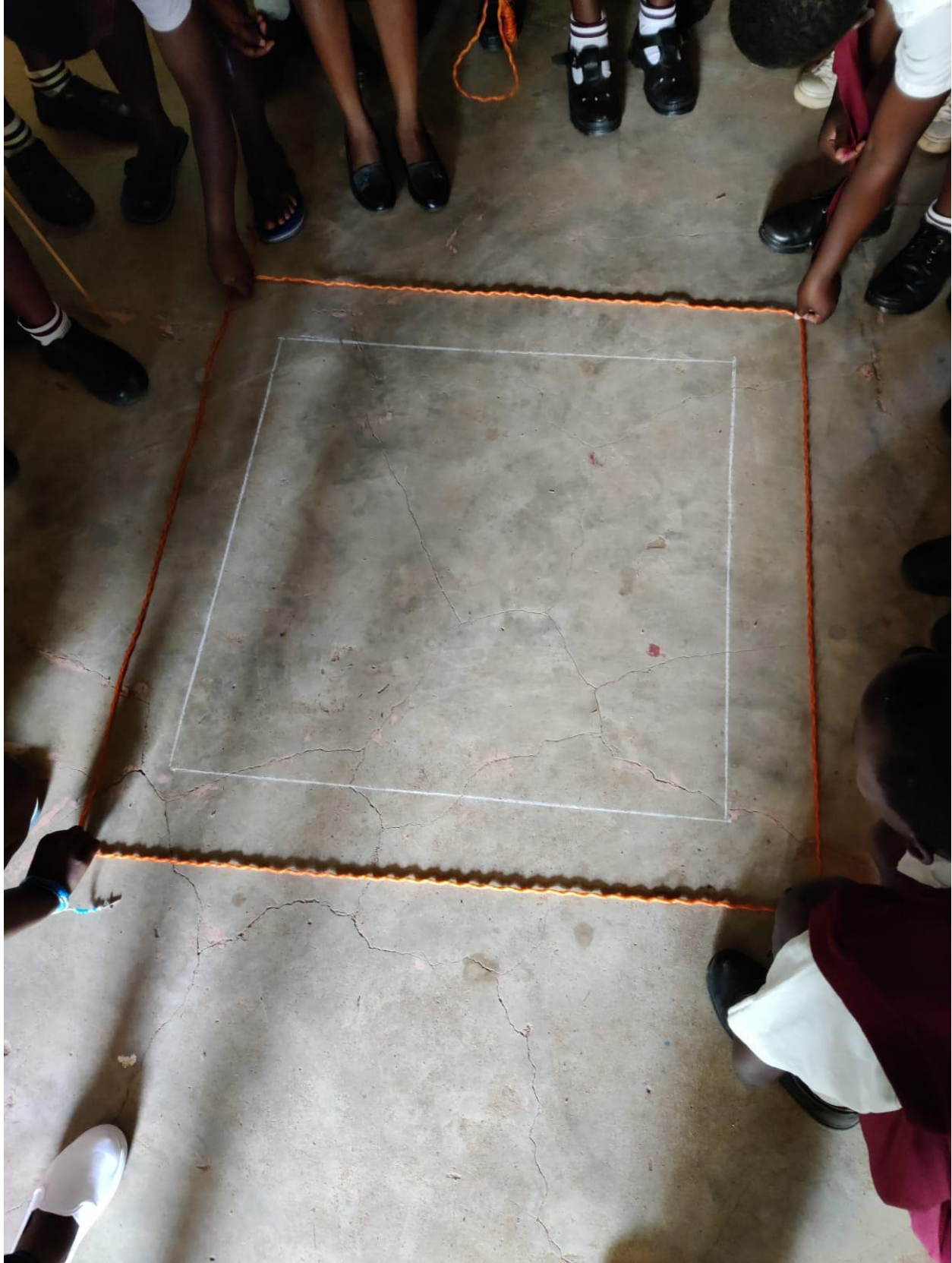


Fig: Students participation in experiment 1



Fig: Outdoor activity Using a rectangular field



Fig: Facilitator helping students do the activity



Fig: Session wrap up



Fig: Participants

Conclusion

This session effectively introduced students to the concept of perimeter in a practical and engaging way. By using string-fences and squares, students could visualize and understand how the perimeter of a shape relates to its surroundings. The activity fostered collaboration, problem-solving, and real-world application of mathematical knowledge.

The session demonstrated the effectiveness of hands-on activities in teaching mathematical concepts and encouraging students to think critically. It also highlighted the importance of relating mathematical terms to real-world scenarios, making learning more relatable and memorable for students. The extension activities further stimulated curiosity and critical thinking, paving the way for deeper exploration of mathematical concepts in the future.