

STEMpathy Hub Africa
Sharing, Helping & Innovating for New Experiences

ANNUAL NEWSLETTER · 2026

A Year of Curious Minds & Open Books

Maths camps, reading rooms, soap-making chemistry labs and teachers shaping AI: how STEMpathy Hub Africa and its partners spent 2026.

108
learners at the 4th Nyarongi Community Maths Camp

600+
books donated to the Nyarongi Reading Room by 3 library partners

9
Kakamega schools engaged in the Chemical Microfactory Lab

~27
teachers & practitioners co-designing AI with Anthropic

WELCOME

Learning that starts where children are

In 2026 we kept asking one question: what does great STEM learning look like when there is no lab, no internet and no guarantee of books? Our answer came from communities and partners. In Nyarongi, children solved puzzles with masking tape, plates and floor tiles, and now gather to read donated books. In Kakamega, secondary learners turned seeds and fats into soap and learned the chemistry behind it. Across Kenya, teachers from our 2025 sprint helped shape how AI should serve classrooms.

Thank you to every volunteer, teacher, parent and partner who made this year possible.

Samuel Okoth Ogalo
Co-Founder & Executive Director, STEMpathy Hub Africa

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Five days of puzzles, games and offline maths

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Donated books reach rural readers

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Our priorities, and how to get involved

HOMA BAY COUNTY · 10–14 AUGUST

The 4th Nyarongi Community Maths Camp

With **AMI, SAMI and INNODEMS**, we supported the fourth annual camp at Nyarongi SDA Church in Ndhiwa. Learners explored game theory, number theory, probability, graph theory, modelling and programming through puzzles such as the Crossing Bridge, the Prisoners' Hat and the Sword of Josephus.

A week before camp the venue changed, so facilitators redesigned every session to run **fully offline**, using masking tape, plates, pipe cleaners and floor tiles.

108
learners, Playgroup to Grade 12

41
girls among the 71 older learners

6
Caltech student volunteers, plus 3 international volunteers

> ***"The lessons were so engaging that [I] found myself loving everything."***
>
> Learner journal, Day 3

> ***"I liked [the daily puzzle] because I was able to do the puzzle alone without anyone helping me."***
>
> Learner journal, Day 5



Learners act out a maths puzzle at Nyarongi SDA Church.



Pipe-cleaner shapes from the Funky Footballers session.



A volunteer works one-to-one with a young learner.

NEW IN 2026

Books for Nyarongi's young readers

Our book drive brought in **more than 600 books** from three library partners: **Kongoni Community Library (Kakamega)**, the **Riley Orton Foundation (Kisumu)** and **Just Be a Child (JBAC)**. More books have been pledged.

In November, families and volunteers gathered for the handover, and the reading began straight away. Children in Nyarongi now have storybooks of their own to explore.

Can you help? Book donations, especially early readers, help the Reading Room grow.







Children in Nyarongi with their new books, November 2026.

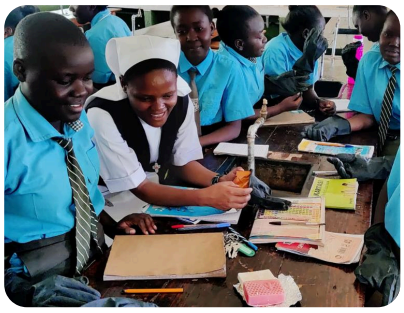
KAKAMEGA COUNTY · WITH MMUST, STEMPOWER & CWRU

Chemical Microfactory Lab: from seed to soap

With the **MMUST STEM Centre**, **STEMpower Global Inc.** and **Case Western Reserve University**, we brought the Chemical Microfactory model to secondary schools as part of our DiscoverSTEM programme.

Learners act as process engineers. They render fats, extract plant oils and make herbal soap, learning about saponification, molecular polarity, stoichiometry and yield along the way. Then they cost, brand and present their products.

- **6 curriculum modules**, with lessons that pair hands-on lab work with free PhET simulations
- **9 schools** engaged across Kakamega County, including Kakamega Muslim Secondary School
- Learner worksheets show students using chemistry to fix failed batches and calculate percentage yields
- Lessons shared with a teacher course on PhET simulations and sustainability



St. Joseph's Girls



Learner-made herbal soap



Ebwambwa



Kakamega Muslim Secondary School

SHINE FELLOWSHIP

With the MMUST STEM Centre, we launched the first **SHINE Student Fellowship**, which trains university students as STEM mentors for the Mini STEM Centre and for outreach to schools. **12 students** applied in the first round.

ONE YEAR ON FROM OUR EDTECH TEACHER CO-CREATION SPRINT

Teachers shaping AI, not just using it

In 2025, 40 teachers from across Kenya joined our 8-week sprint with EdTech East Africa. In 2026, that work fed into AI design.

On **6 October 2026**, **EdTech East Africa, Anthropic and Teach For Kenya** brought about **27 teachers and education practitioners** together for a full-day Innovator and Educator Co-Design workshop, and sprint teachers were in the room. A co-design session for heads of institutions and education officers followed.

We also shared the **TIDA Checker**, a free tool built with EdTech East Africa that helps teachers check the evidence behind a classroom idea before they try it.

> ***"Innovation doesn't always begin with big tech or fancy tools. Sometimes it begins with a teacher who dares to imagine better for their learners."***
>
> Tr Janet Nyaboke, Nakuru, 2025 sprint teacher

Try the TIDA Checker:
stempathy-africa.odoo.com/the-tida-checker

LOOKING AHEAD

Our priorities for 2027

01

5th Nyarongi Maths Camp

Better-scaffolded and differentiated activities, a more flexible schedule, learner materials, and maths clubs during school terms.

02

Grow the Reading Room

Grow beyond 600 books with pledged donations, and build a sustained community reading and numeracy programme with our library partners.

03

Scale the Microfactory

Move from pilot to multiple cohorts across Kakamega schools, train teachers on the PhET-linked modules and gather evidence of learning.

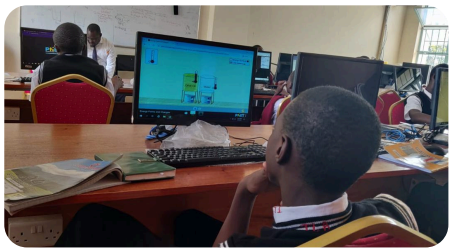
04

Grow our volunteers

Run the first SHINE Fellows cohort and connect university, local and international volunteers to our programmes.







GET INVOLVED

Volunteer

Facilitate at the 5th Nyarongi Maths Camp in August 2027, or mentor through DiscoverSTEM.

Donate books & kits

Storybooks, maths games and simple lab materials go a long way in rural classrooms.

Partner with us

Universities, libraries, funders and EdTech teams: let's design with teachers and communities.

Thank you to our 2026 partners

AMI · SAMI · INNODEMS · Caltech volunteers · International volunteers · Nyarongi community & Nyarongi SDA Church · Kongoni Community Library · Riley Orton Foundation · Just Be a Child (JBAC) · MMUST STEM Centre · STEMpower Global Inc. · Case Western Reserve University · EdTech East Africa · Teach For Kenya · Anthropic · mEducation Alliance · STEMtastic Global Network

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