NEWSLETTER
November, 2024

Voices from the participants

Stories of impact

STIA
Research, Innovations & Science Education

A learner from Kibirige Memorial Primary School observes through a microscope during the Practical Teaching Challenge

Dear Reader,

Greetings! Welcome to the October 2024 edition of the **River Flow International Newsletter**. In this issue, we highlight our efforts in capacity building for Primary and Secondary school teachers and our strategic commitment to promoting science education through a practical teaching approach across Africa. Additionally, we discuss our initiatives aimed at improving the quality of education.

We hope you find this edition insightful and engaging.

Enjoy your reading!

National Practical Teaching Challenge

The National Practical Teaching Challenge (PTC), held on 21 August 2024 at the Pope Paul Memorial Hotel in Rubaga, marked a significant milestone in advancing science education in Uganda. Science Teaching and Innovations Africa (STIA), in collaboration with River Flow International (RIFI), organized the event, which brought together educators, policymakers, and stakeholders from across the country to celebrate and recognize outstanding practical teaching methodologies in science education.

The Practical Teaching Challenge (PTC) was developed as a campaign to engage science teachers in primary and secondary schools, focusing on how they use items from the primary science kit and activities from the laboratory instruction manuals.

Read More on our website

Immaculate Tayebwa, Head of Physics at STIA, explains how an electric circuit works during the Practical Teaching Challenge

The national Practical Teaching Challenge (PTC) ran from June 1st to July 1st, 2024, engaging numerous primary and secondary science teachers. Participants submitted videos, which were evaluated by experts. This initiative significantly enhanced the visibility of Science Teaching and Innovations Africa (STIA).

The PTC focuses on equipping science teachers with practical teaching approaches using RIFI-STIA materials. It also highlighted the effectiveness of primary science kits and Laboratory Instruction Manuals in improving practical science education in schools.

Mr. Ochan Simon Peter, teacher at Wakiso School of the deaf

"Innovative teaching involves using appropriate materials to make lessons engaging and interesting for learners. When resources are unavailable, we design and improvise learning materials to meet the unique needs of our students, including those with special needs."

Read more on our website

Additionally, the PTC has broadened the global reach and visibility of RIFI-STIA's work, showcasing their impact and commitment to advancing science education worldwide.

Learners conduct an experiment on spring balance

Learners and teachers demonstrate a water filtration practical exercise

Regarding this challenge, learners are well-prepared, having diligently studied day and night. Their determination is rooted in the desire to prove that disability does not equate to inability.

This initiative is a landmark occasion in our country, as few organizations have launched programs focused on enhancing science education through practical, innovative approaches. Science education is pivotal for development, and we appreciate the organization's commitment to engaging learners in hands-on scientific exploration.

Mr. William Agaba, Science Teacher
at Aggrey Memorial Secondary School

"The shift in education is also revitalizing for teachers. We have transitioned from lecturing at the front of the classroom to guiding learners through immersive, hands-on experiences that spark curiosity and foster critical thinking.
This experiential learning approach has empowered teachers with innovative ways to inspire learners and cultivate confidence in the subject. A Biology teacher noted, "It's remarkable how engaged learners become when they personally dissect a flower, compared to simply viewing images."

Implementing this curriculum has not been without its challenges. Numerous schools, particularly in rural areas, still face shortages of adequate laboratory resources. Moreover, some teachers trained under the traditional system struggle to fully adopt this innovative approach.

Without practical materials, science classes risk reverting to outdated teaching methods, hindering learners' engagement in meaningful experiments. Fortunately, organizations like River Flow International have helped bridge this gap.

Through **Science Teaching and Innovations Africa, River Flow International**, in collaboration with the Ministry of Education and Sports, has provided schools with essential practical teaching resources, including Laboratory Instruction Manuals (LIM). This support enables learners to experience science hands-on and empowers teachers to effectively implement the curriculum."

Aggrey Memorial Secondary School learners attending the PT Challenge held at Pope Paul Primary School in Rubaga

Tr. Agaba William and learners attending the PTC

The Mini-Labarotory kits for primary schools

Retooling of teachers

In August 2024, Science Teaching and Innovations Africa, in partnership with Fields of Life, conducted a teacher training program. A team of experienced educators trained fellow teachers on conducting lessons using the Primary Science Kits' practical approach. This training took place in Fields of Life-supported schools across four districts: Mubende, Luwero, Buteleja, and Mukono.

The training aimed to retool science teachers with the knowledge and skills necessary to effectively utilize the New Approach Primary Integrated Science Kit. The goal was to enhance the delivery of practical science lessons and boost learner engagement in primary integrated science.

The training program commenced with Fields of Life (FoL) officially presenting the science kit to Jehovah Jireh Nakawuka Modern Primary School's administration. The comprehensive training agenda included: Participants' introductions, Overview of RIFI-STIA's initiatives promoting practical teaching, Introduction to practical teaching methodologies, Science kit components and hands-on training for teachers and learners, facilitated by experts and demonstrators, plus Interactive experiments and activities

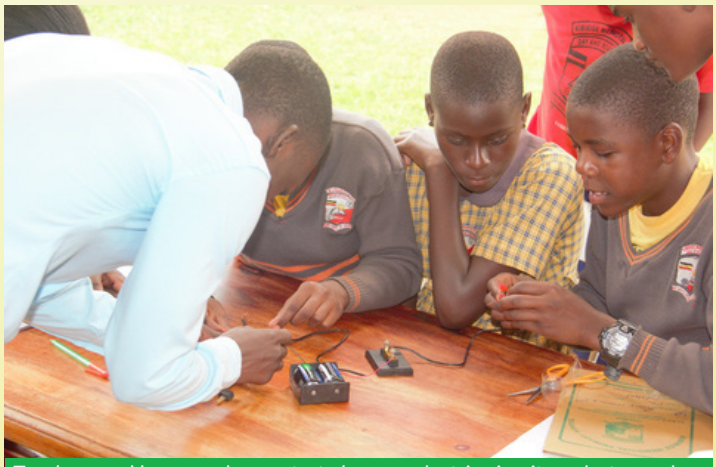
Upon completion, teachers demonstrated: enhanced confidence in utilizing science kits for practical lessons, improved understanding of the alignment between the science syllabus and the new approach to primary integrated science, increased ability to develop lesson plans integrating science kit activities and heightened enthusiasm for teaching science in their schools.

Teachers and learners observe models from the science kit

Training Science Teachers and learners of Kibirige Memorial Primary School on the use of Science kit items

In September, STIA's Capacity Building Project conducted a training session for teachers and learners of Kibirige Memorial Primary School on utilizing Science Kit items.

The training served as a testament to empowering teachers with practical teaching methods, enhancing science education.
This training enhanced teaching and learning of science in their school, equipping science teachers with knowledge and skills to effectively utilize items in the New Approach Primary Integrated Science Kit.



Teachers and learners demonstrate how an electric circuit works to produce electricity during a teacher training session at Kibirige Memorial P/S

Retooling of teachers in South Sudan

STI-Sudan team after a 12-day workshop

In October, the Science Teachers' Initiative - South Sudan hosted a 12-day training workshop at its country office in Munuki Block A, opposite Midan Munuki Central, Equatorial Juba.
The workshop, held from September 23rd to October 7th, 2024, brought together development partners operating in South Sudan, including National and International Non-governmental Organizations (NGOs) and donors.

Attendees comprised education and child protection technical program teams from various National and International NGOs, who gathered to learn about the Science Teachers' Initiative's innovative approaches to education and child protection.

The Science Teachers' Initiative (STI) showcased its exceptional approaches to improving the quality of inclusive education and child protection.

STI's tailored practical and psychosocial support instructional materials include: ECD Literacy and Numeracy Kit, New Approach Primary Science Kit (Mini-Laboratory for Primary Schools), Psychosocial Support Kit, Competence-Based Secondary Science Kit, Child Protection and Participation Reading Materials for Lifelong Learning.

Primary science kits

ECD expert Miss Lydia explains the uses and applications of ECD materials to partners during a mini-exhibition at the RIFI-STIA office

Message from our Early Childhood Development expert

Statistics reveal that many learners struggle to comprehend and retain content from previous classes due to ineffective teaching methodologies employed in their early learning stages. To address this, RIFI-STIA has adopted the Practical Learning through Play methodology, a proven approach to establishing a solid foundation in content analysis and comprehension. When utilized effectively, this methodology enables learners

Miss Lydia Nabacwa, ECD expert

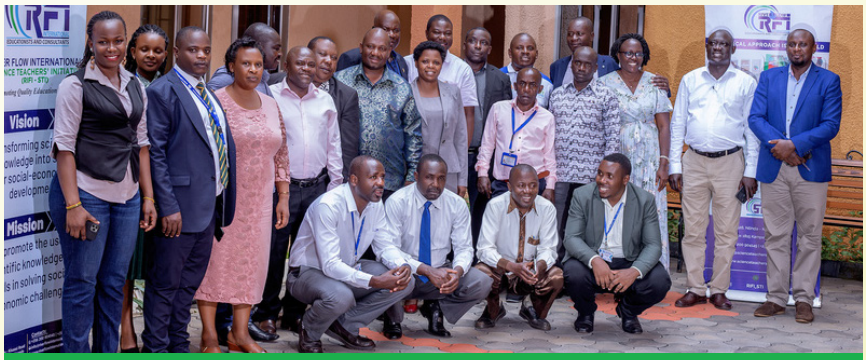
to master, understand, and apply content by relating it to real-life situations, thereby fostering a positive attitude toward the teaching and learning process.

This achievement is attributed to the development of practical, child-friendly literacy and numeracy materials, accompanied by engaging learning games. These resources cater to diverse individual needs, ensuring inclusivity. To ensure the effectiveness of these materials, we provide comprehensive training for educators.

Message from Workshop with Inspectors of School

Seventeen district school inspectors attended a workshop with the Science Teaching and Innovation Africa (STIA) team at the National Curriculum Development Center (NCDC). This workshop, held as part of STIA's commitment to fostering science education excellence, targeted Regional School Inspectors, providing specialized training to enhance their expertise. This training session focused on equipping inspectors with updated tools, insights, and strategies to support effective teaching and administrative practices in schools across the region.

Dr. Bernadette Nambi Karuhanga, Deputy Director of the National Curriculum Development Center (NCDC) in charge of Curriculum

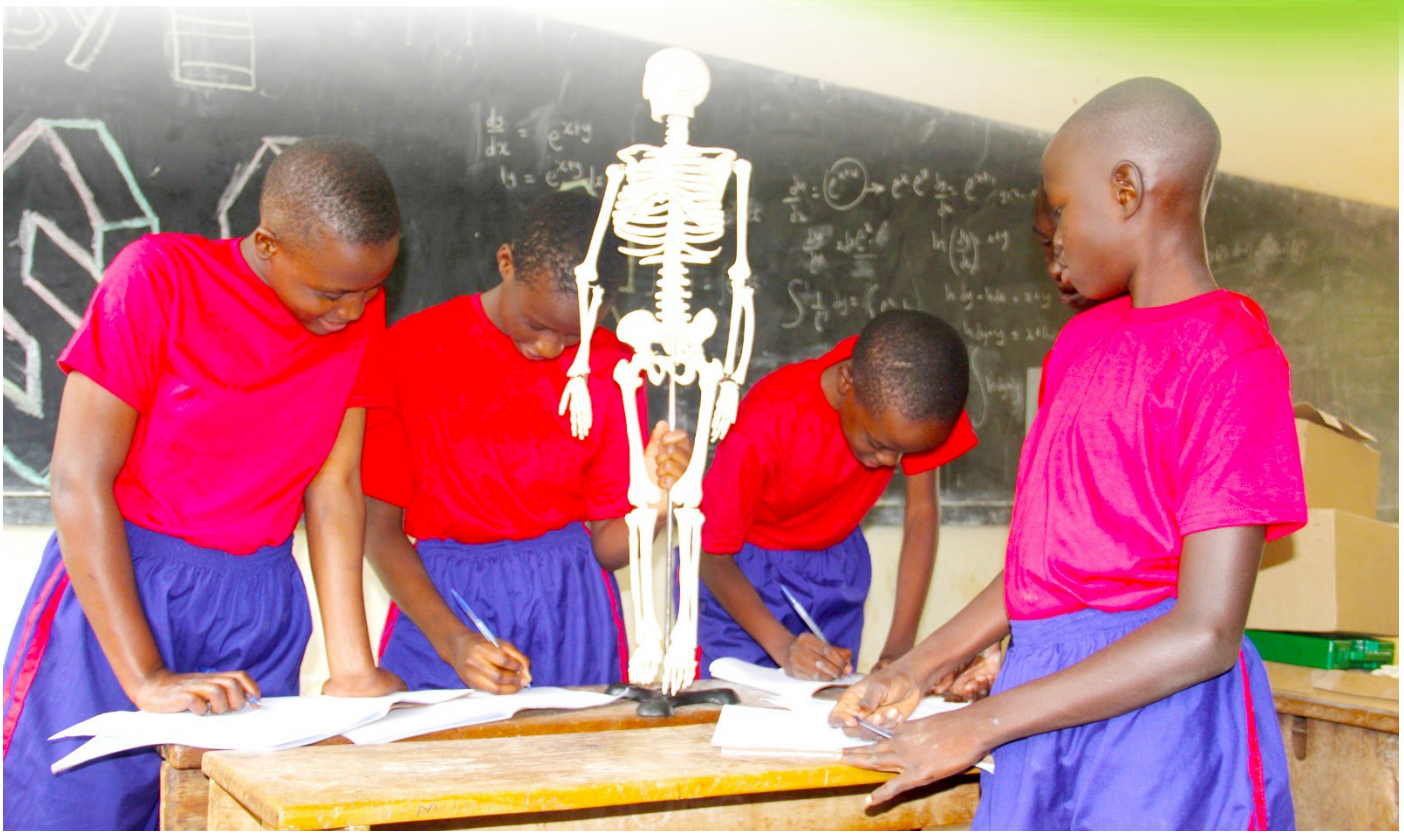


MD RIFI-STIA, Mr. Simuka Mohammed (second from left), Chairperson UNISA, Madam Kellen Ayebazibwe (third from left), with staff of STIA and school inspectors after a stakeholder engagement workshop at NCDC

and Instructional Materials, emphasized the critical role inspectors play in implementing the curriculum. "You are the ones who go out there and see what is being implemented," she said. "You determine whether what is being done aligns with what is supposed to be done."

Dr. Karuhanga noted that while materials, curriculum, and teachers are essential, inspectors are equally vital. "If you're not there, some schools may not maintain standards," she cautioned. "We've found instances where head teachers are absent, children are playing in the field instead of being in class, and teachers are nowhere to be found. Your presence ensures accountability.

Join us in making science practicals easier to learn, promoting quality science education.



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