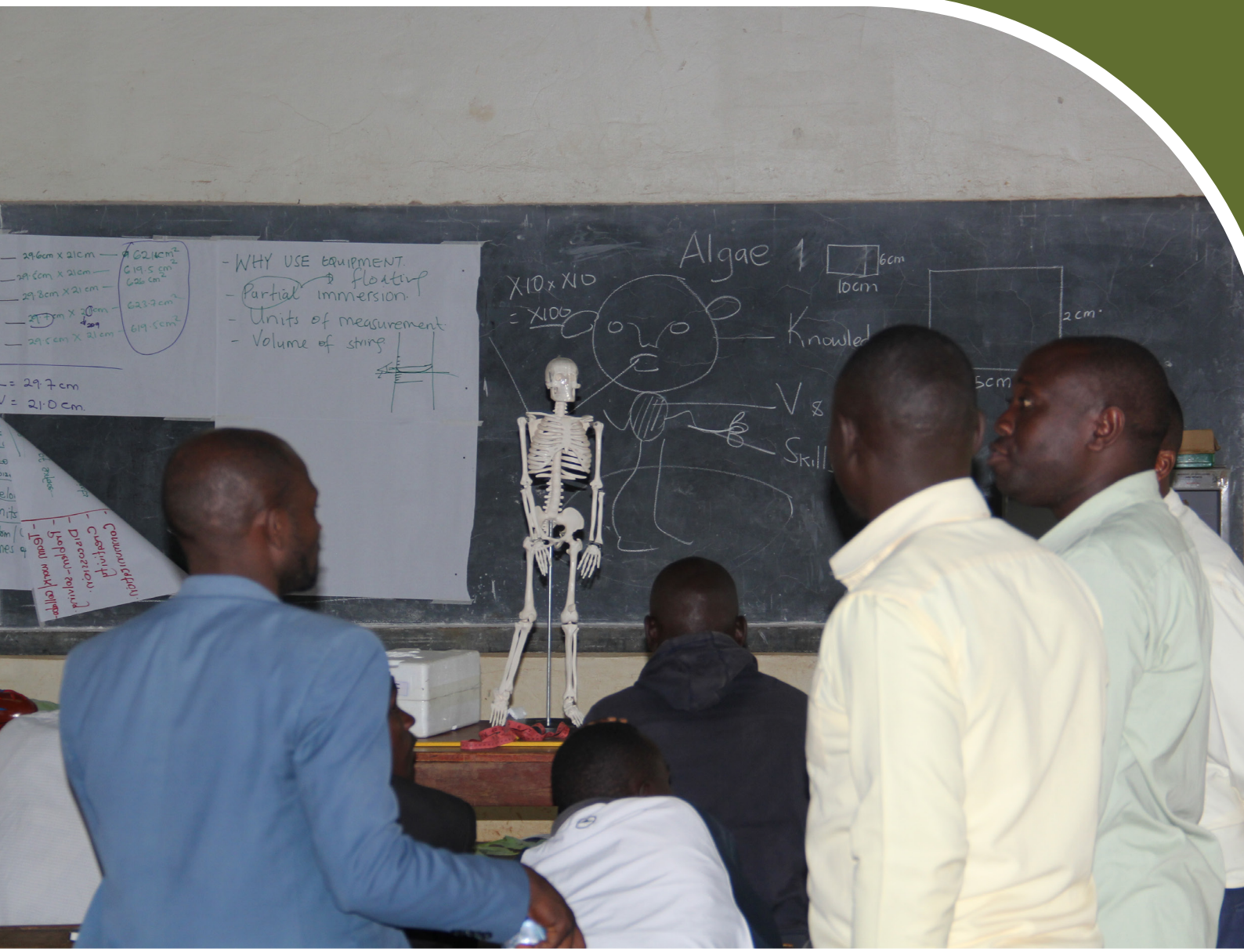
RIVER FLOW INTERNATIONAL
EDUCATIONISTS AND CONSULTANTS

TRAINING REPORT



KAGADI DISTRICT

April, 2025

SCIENCE TEACHERS TRAINED ON THE PRACTICAL USAGE OF COMPONENTS IN SCIENCE KIT TO PREPARE AND CONDUCT PRACTICAL SCIENCE LESSONS.

Background

Science education at the primary level in Uganda is undergoing a significant transformation, with a strong shift towards the hands-on, experiential learning.

In support of this shift, the Ministry of Education and Sports (MoES), in collaboration with River Flow International (RIFI), is implementing a program aimed at training primary science teachers in the effective use of the New Approach Primary Science Kit.

Figure 1: Mama Janet K Museveni launching science kit.

These science kits, considered mini-laboratories for primary schools, are designed to bring science lessons to life by enabling science teachers to demonstrate and facilitate practical experiments aligned with the national primary science curriculum.

As part of Phase III of the 2024 national science kit distribution, 20 selected primary schools in Kagadi District received these science kits. To ensure that these science kits are used effectively, a one-day intensive training was conducted on 05th June 2025 at Kagadi Model Primary School for science teachers from these beneficiary schools.

Figure 2: Mr. Abigaba giving opening remarks.

Training Details

The training brought together thirty eight (38) primary science teachers from 20 primary schools across Kagadi District.Among the participants, were 33 male and 05 female science teachers. The training was officially opened by Mr. Abigaba Emmanuel, Chairperson of Headteachers in Kagadi District who is also the headteacher of Kagadi models Primary School, representing the District Inspector of Schools, Mr. Alinda Julius.

In his opening remarks, Mr. Abigaba emphasized the importance of practical science education in equipping learners with skills for application of knowledge.

Training Objectives

- Equip science teachers with the skills to use the science kits effectively as mini-laboratories.
- Demonstrate alignment between kit contents and the national science curriculum.
- Build teacher confidence in delivering practical science lessons.
- Encourage learner-centered teaching practices through hands-on activities.
- Establish support networks for continuous professional development and experience sharing.

Training Methodology

The training adopted an interactive and teacher-centered methodology, emphasizing hands-on practice. Activities included:

- Demonstrations on kit usage.
- Group discussions and peer teaching.
- Practical assembly of science kit components.
- Role-play and classroom simulation exercises.
- Guided experimentation and question and answer sessions.

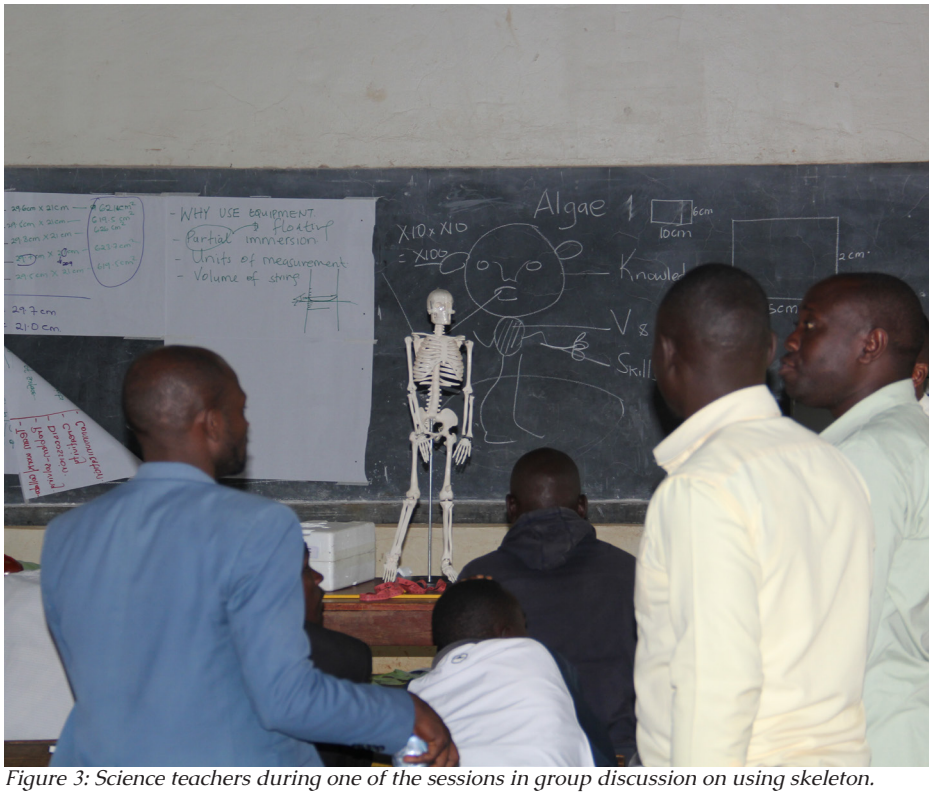


Figure 3: Science teachers during one of the sessions in group discussion on using skeleton.

Training Content

Teachers explored and practiced using the science kit components in thematic modules such as:

Measurement (P.5 topic): Science teachers practically used the items in the measurement section like beakers, measuring cylinders, eureka cans/overflow cans, thermometers, electronic weing scale, metre rule, and tape measures. to perform given tasks related to measuring;

- volume,
- mass,
- temperature,
- and length.

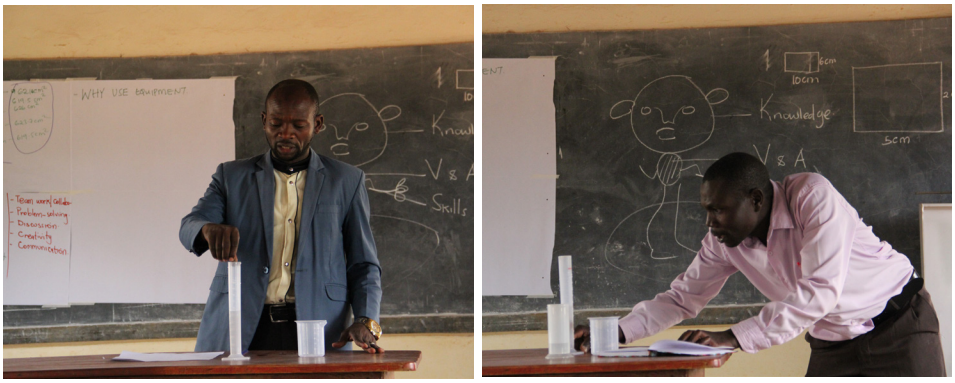


Figure 4: Group representatives demonstrating how their group measured volume of irregular object.

Human Body Organs: (P.4–P.7 topic): Science teachers practically assembled human body models like human skeleton and discussed in their individual groups on how they can be used to teach internal and external organs and their functions. Other organs and systems included; ear, digestive, kidney, skin, heart, circulatory, respiratory, and others.

Figure 5: Participants (science teachers) discussing and demonstrating how they can use a skeleton to teach a skeletal system in primary seven.

Other sections that were covered include;

- *Simple Machines:* where science teachers practically demonstrated how inclined planes, levers, and pulleys can be used in classroom scenarios as well as daily challenges.
- *First Aid:* In this session, science teachers applied emergency techniques using kit materials to simulate injury response.
- *Optics:* Used lenses and mirrors to explore light, reflection, and refraction.
- *Electricity and Magnetism:* Built simple circuits with batteries, switches, wires, and bulbs. Demonstrated magnetic properties and electric bell functionality.
- *Heat section:* Conducted experiments on heat transfer, expansion, and temperature variation.
- *Microscopy:* Practiced assembling microscopes and viewing plant cells.

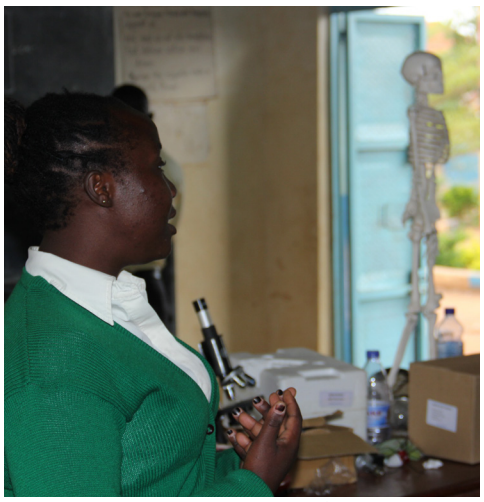


Figure 6: Demonstrating usage of microscope.

Observations and Outcomes

The training revealed several key outcomes:

- Teachers showed high engagement and willingness to adopt practical approaches.
- Many teachers handled science kits for the first time, gaining foundational skills.
- Peer collaboration enhanced understanding, especially in assembling complex items like microscopes and electric circuits.
- Participants recognized the science kit as an essential tool for transitioning from theoretical to practical teaching
- Increased confidence was observed in teachers' ability to integrate experiments into daily lessons.

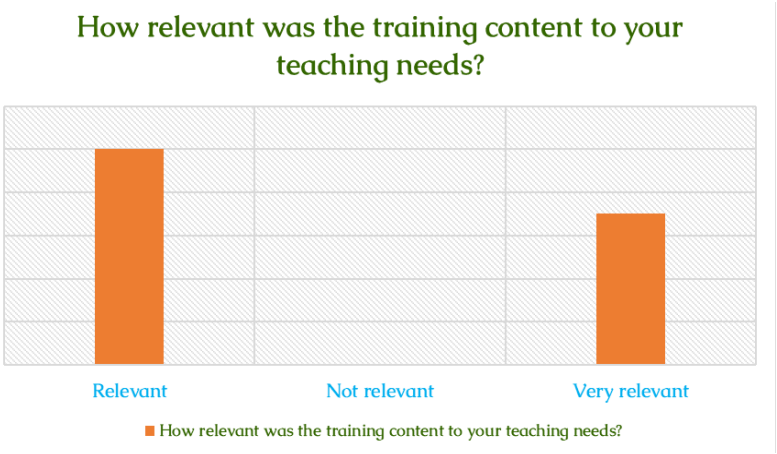
Teachers' Recommendations

- Organize regular refresher trainings to deepen understanding and address implementation challenges.
- Provide additional science kits to cater for large class sizes.
- Develop and distribute simplified user guides/ manuals for kit usage.
- Enrol teachers on online platforms (like WhatsApp groups) for teacher support and experience sharing.
- Encourage school leadership to facilitate internal CPD sessions for science instruction.

Feedback and Evaluation

At the end of the training, science teachers provided structured feedback through evaluation forms and open discussion. The feedback provided insight into their prior experiences, the effectiveness of the training, and their confidence in using the science kits in the classroom. The highlights of the feedback are summarized below:

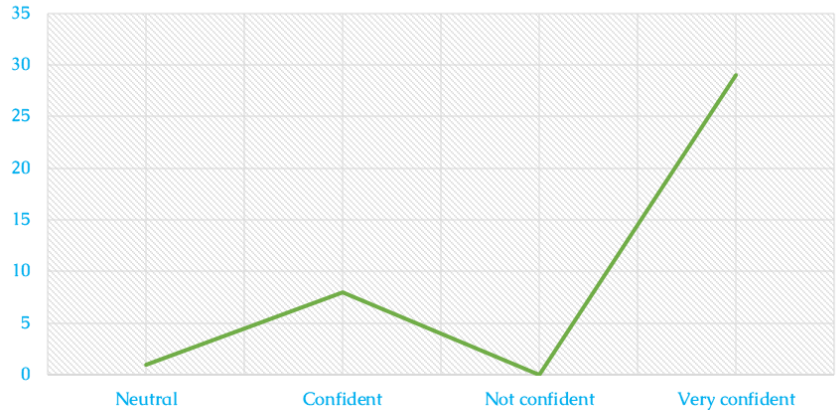
1. *How relevant was the training content to your teaching needs?*



The majority (87%) of participants found the training content to be highly aligned with their actual classroom needs. This indicates that the training effectively addressed the challenges and expectations teachers face when teaching science.

A smaller portion (13%) found the content generally useful, though perhaps not directly applicable to every aspect of their teaching. They may need more tailored content or support to see full applicability. No participants found the training content irrelevant, which underscores the overall success and appropriateness of the content provided. The training was extremely well received in terms of content relevance. With 100% of participants rating it as either "Very Relevant" or "Relevant"and none as "Irrelevant". This feedback validates that the training objectives and content were highly aligned with the actual instructional needs of science teachers.

2. *After the training, how confident do you feel using the science kit in your classroom?*



After the training, 8 out of 9 teachers (89%) reported feeling confident using the science kit in their classrooms, while 1 teacher (11%) felt neutral. None of the participants expressed a lack of confidence.

This indicates that the training was highly effective in boosting teacher confidence in using the science kits.

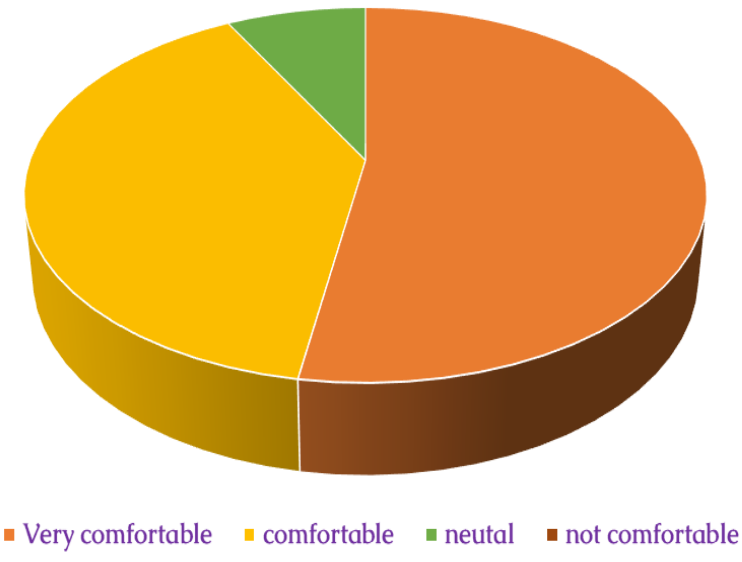
The single neutral response suggests a possible need for continued support or follow up coaching, but overall, the outcome reflects strong success in meeting the training's objective of building practical competence.

3. *After the training, how confident are you in assembling the items in science kit*

Over 92% of the teachers felt either very comfortable or comfortable assembling the science kit items, indicating a strong level of practical competence gained during the training.

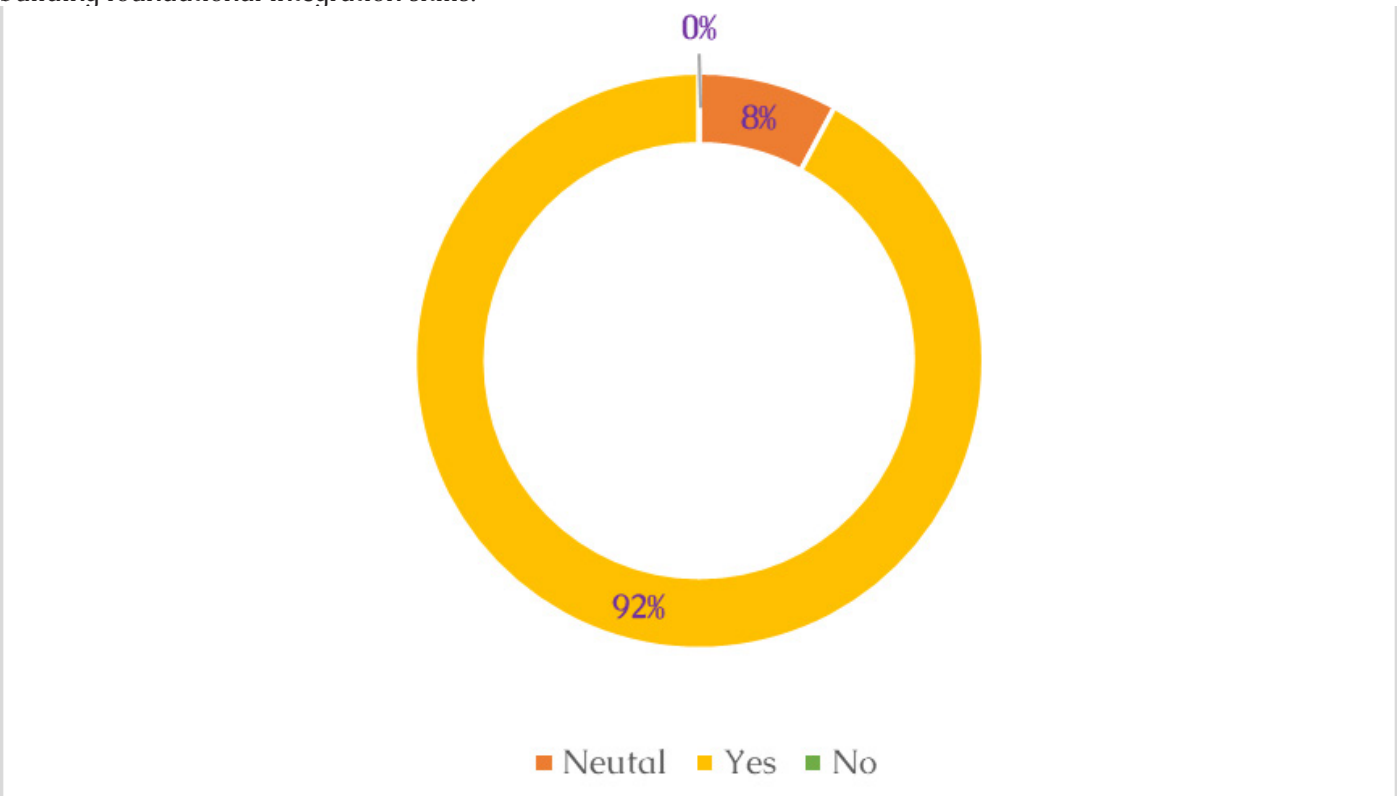
The 3 neutral responses suggest a small number of participants may require additional support or practice to build full confidence.

Importantly, no teacher felt uncomfortable, which confirms the training effectively addressed most initial fears or challenges with using and assembling the kit components. The training successfully equipped the majority of teachers with the hands-on skills needed to handle and assemble science kit items, fulfilling one of its core objectives. Further follow-up could help the remaining few move from neutral to confident usage.



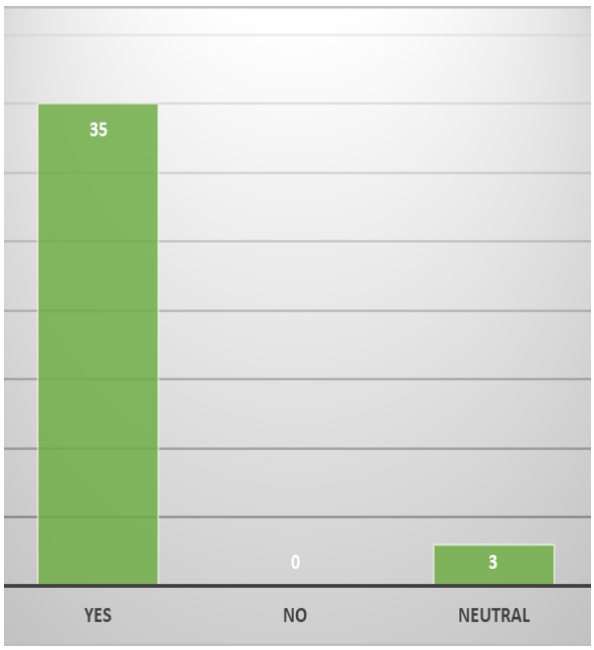
4. After training, do you feel confident integrating the science kit materials into your lesson plans?

A large majority (92.1%) of teachers felt confident in incorporating the science kit into their lesson planning, showing that the training effectively bridged the gap between hands-on tools and curriculum delivery. The 3 neutral responses indicate a small group that may still need guidance or mentoring to fully integrate the kit into structured lesson plans. The absence of any "No" responses is a strong indicator that the training was successful in building foundational integration skills.



The training achieved its goal of enabling teachers to confidently plan lessons using science kit materials. For full impact, a follow-up or peer-support initiative could help the few neutral respondents gain the clarity and assurance they need.

5. In your opinion, do you see the training helping you better facilitate hands-on and practical activities using items in the science kits?



35 out of 38 teachers (92.1%) affirmed that the training significantly improved their ability to conduct practical, hands-on science lessons using the kits.

The 3 neutral responses suggest that a small portion of participants may need additional practice, classroom experience, or mentorship to fully apply what they learned.

The absence of "No" responses indicates universal acknowledgment of the training's usefulness, with no participant rejecting its value.

The training was highly effective in empowering teachers to use the science kits for hands-on instruction. It instilled both confidence and practical strategies for facilitating learner-centered science activities. To ensure all teachers reach the same level of readiness, targeted support could help those still uncertain.

Conclusion

The one day science teachers' training in Kagadi District was a resounding success. It marked a vital step toward transforming science instruction in primary schools by equipping teachers with practical skills and tools. The science kits, as mini-laboratories, were well received and appreciated. Continued support through training, mentorship, and resource provision will ensure sustainable and impactful use of these kits in enhancing science learning.

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