BREAKING BARRIERS
30 AND UNDER: WOMEN IN STEM

As part of Africa Science Week-Kenya (ASW-Kenya) 2019, we are celebrating Kenyan women who are 30 and under, and breaking barriers as young, female, scientists. Our Breaking Barriers women are using science, technology, and innovation for socio-economic development and have already shown demonstrable success in their young careers. These six scientists are equally notable for their scientific and technical accomplishments as they are for the priority they place on mentorship and leadership.

MEET GRACE NZIVO
A civil engineer and STEM ambassador who wants to inspire young girls in rural Kenya to dream big.

When civil engineer Grace Nzivo was a young girl living in her village of Kakindu in Embu County, she heard a story about a woman named Florence. Florence had left their village to become a civil engineer and had returned, bringing her community a working water supply system. At the time, Grace had never even heard of the discipline of engineering. Neither was it common to talk about the ways in which women were contributing to their communities in such integral ways. For these reasons, this story, for Grace who was already quite curious about the sciences, made her aspire to be like Florence; an engineer who could give back to her own community.

Nowadays, Grace works as a Project Coordinator at Steel Structures Kenya Ltd, the leading steel supplier in East Africa, where she manages structural steel projects from inception to completion. As much as she loves her job, she is even more excited by the possibility of a future in which there are more female engineers and women in Science, Technology, Engineering, and Maths (STEM) in general. Remembering how life-changing it was for her to hear Florence’s story as a young girl, Grace now runs a program that educates school girls around rural Kenya about opportunities in STEM.

STEM Wahandisi La Femme is a collaborative initiative whose mission is to empower young African girls to seek careers in STEM. Her leadership at the initiative earned her an African Union International Centre for Girls and Women Education in Africa (AU-CIEFFA) award as a STEM ambassador. The AU-CIEFFA advocates for instituting national legal frameworks that support women and girls in academia, ensuring that curricula are gender-responsive, and increasing girls’ retention in schools. The opportunity took her to Tunis, Tunisia where she joined a cohort of like-minded individuals from all around the continent in trainings centred on topics like how to foster relationships with potential collaborators, how to deal sensitively with disadvantaged women, and issues relating to STEM. The confidence and new communication skills that Grace gained from the experience have encouraged her on her path of STEM outreach for girls.

While the award was a positive consequence of her work, for Grace, the real satisfaction comes from realizing she has helped somebody completely change their viewpoint. Speaking to girls who range in age from as young as nine years-old to their late teens, the content and medium of STEM Wahindisi La Femme may vary, but the message remains the same: to teach the girls to imagine their lives more complexly. To consider that not only is it possible to do well in the sciences as a girl, but for it to also be a means in which they can create lasting impact in their communities. Grace has realised that sometimes the message is simply to impart on the girls a level of agency. That they can have some control over what happens next in their lives.

“For example, when we go to Narok [county], it can be like we are starting from scratch. Sometimes you are educating people to have a dream. Some don’t even have a dream.” The ability for young girls to dream and picture themselves as women succeeding and contributing in STEM is perhaps the single biggest motivator for Grace. But her motivation is more than just a feel-good issue. “I strongly believe in the power of STEM since more than 10 SDGs [Sustainable Development Goals] rely on having more STEM practitioners. Even Kenya’s Big Four agenda and Vision 2030, is highly dependent on STEM professionals.”

Encouraging women’s participation in STEM, then, is also about building our human capacity to problem solve towards the attainment of a more equitable and sustainable world.