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Khushi Bajaria: Academy student awarded IB grant for eco-friendly microscope

Khushi Bajaria, age 16 and a Diploma Programme 1 student, is the first student from the Aga Khan Academy Mombasa to receive the International Baccalaureate (IB) Middle Years Programme (MYP) Student Innovator’s grant for her project on developing sustainable microscopes.

Entitled “Innovation in Practice”, Khushi’s project focuses on creating five eco-friendly microscopes. Using recycled materials like cardboard, pipes and nylon tiles, the project aims to collaborate with five local public schools in Tanzania and Kenya to develop sustainable microscopes, to improve learning experiences for students.

“I chose to use recycled materials to build the microscopes because I wanted to develop something that could be the future of microscopes,” Khushi said. “The body of a microscope is majorly made up of metal, which doesn’t decompose easily thus causing pollution. My innovation allows for the use of affordable materials that do not harm the environment, while also encouraging the production of more eco-friendly microscopes that can be used in schools.”
Khushi’s innovation is made of affordable, recycled materials that do not harm the environment.

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The International Baccalaureate Student Innovator’s grant provides an opportunity for students to build vital skills that will lead them to become innovators, entrepreneurs and socially conscious leaders. As one of the finalists selected across 21 IB schools in 13 countries, Khushi was awarded a grant worth US$ 2,000 to start and expand her project. Through the platform and grant, Khushi can collaborate with other student finalists and will receive guidance from a career-level or industry expert.

Since receiving the grant, Khushi has gained more confidence in ensuring the fruition of her project. Using some of the money awarded to her from the grant and guidance from her Academy teachers, Khushi began working with one of the five selected public schools that are part of her project.

“During my first session I worked with 49 students and a science teacher at Medi Primary School in my home country of Tanzania. I was able to teach the students about the basics of a microscope and how to handle it, which made it easier for them to understand why and how the parts we were going to make would contribute to the microscope’s overall function.”

Upon completing the microscope with Medi Primary School, Khushi visited a laboratory in Tanzania to certify her scientific invention and receive feedback on how best to improve it. As she received the green light that the eco-friendly microscope is suitable to use, Khushi will deliver the microscope back to Medi Primary School once it is back in session.
“Working with large groups of students was quite challenging so I felt accomplished when I was able to teach them how to make the microscope,” Khushi said. “I showed the students the steps to make the microscope and equipped them with the necessary skills to build more on their own if they choose to do so.”

As she continues expanding her project, Khushi has identified one more school in Tanzania and three others in Mombasa, Kenya where she will continue to work with students and teachers to make more microscopes for their schools.

“When Khushi first shared her idea with me, I knew she was determined to make it a reality,” said Godfrey Kokeyo, Khushi’s project supervisor at the Aga Khan Academy Mombasa. “With the vast knowledge she’s learnt at the Academy in science, her understanding of the challenges faced by students back in her home country and her passion, Khushi independently put together her ideas to create an affordable microscope... I am glad she identified a problem that affects people in society and was able to focus on coming up with a solution.”