

St Jude's News



Meet the Innovators: The winners of the 2024 St Jude's Science Day.



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Igniting Young Minds

The 13th edition of St Jude's Science Day showcases solutions for sustainability, efficiency, and environmental awareness.



It's a chilly April morning at St Jude's Smith Campus. There are no classes today. Instead, the campus transformed into a vibrant hub of innovation, the halls filled with tables displaying a huge variety of incredible work from the students. Over in the school's dining hall, visitors, staff, students, guests, and even a local news station gather for the official opening of St Jude's 13th Annual Science Day.

"Today is a special day that brings together our entire community to celebrate innovation and creativity," says Mr Tsingay, St Jude's Secondary School Headmaster in his opening speech. "Over 50% of our secondary school students are pursuing science subjects. Today, we will see first-hand how they turn their ideas into solutions," he adds.

Following the opening ceremony, Mr Tsingay invited everyone to explore the diverse projects and engage with the innovators. Projects included generating electricity out of potatoes, an automatic earthquake sensor, a solar-powered mower, a vacuum cleaner, and even a clever mouse trap from St Jude's primary school students.

"What do you do with your bar of soap when it gets too small?" asks Marko, pitching his soap recycling prototype. "The most common solution is to simply throw it away. But we have developed a soap recycling machine that could save you on resources and money while conserving the environment," he adds.

Marko then proceeds to demonstrate how his prototype works, which involves grinding the soap leftovers, followed by boiling, chemical disinfection, and eventually cooling the final product into a 'new' bar of soap. Since the first Science Day 13 years ago, students have set the bar higher and higher, coming up with innovative and creative solutions to challenges that they or their communities encounter in real life.

At this year's Science Day, students have capitalised on the rise of technology, particularly Artificial Intelligence (AI) to develop customised and highly efficient prototypes.

One such project is the "Bean Sorting Machine" designed to reduce workload for farmers by automating the painstaking process of sorting and cleaning crops.

"One of the biggest challenges for farmers is maintaining the quality of their products through an efficient and consistent sorting process," says Veronica, one of the innovators of the project. To address the challenge, Veronica and her team designed and built a machine that could efficiently sort up to 150 kilograms in an hour.

"Potential updates to our machine include incorporating AI and laser technology to improve its efficiency in removing impurities," explains Veronica.

Another highlight at the day was the creative application of art in conserving the environment through the recycling and reusing of waste products. Students turned discarded plastics, worn-out clothes, and even wood scraps into decorative items in a beautiful "trash-to-treasure" display.



Step by Step: Marko demonstrates how his soap recycling machine works.



Rhino-seum: A life-sized rhinoceros made from recycled tires standing guard at the Science Day.

The Science Day is a platform from which our students demonstrate their keen understanding of science principles to address problems they see around them, and we have seen outstanding ideas emerge from this school event over the years.

This year's Science Day was partly sponsored by Edgar, an award-winning St Jude alum and founder of a start-up that recycles plastic waste into useful construction materials. Edgar showcased his prototype of plastic bricks at a St Jude's Science Day as a student and continued to refine his idea to eventually launch his own company.

"When we started the Science Day competition 13 years ago, most projects were just made out of wood and glass" reflects Mr Mcharo, St Jude's Academic Senior Manager. "Today, our students are demonstrating working models and turning their ideas to businesses. It's a testament to the power of innovation and the opportunities brought alive by St Jude's holistic approach to education," he adds proudly.

St Jude's provides an environment for students to cultivate their creativity to develop solutions. **Donate Today.**

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From the Basketball Court to the World Stage

St Jude's alum, Judith balances academic excellence with a flourishing career in basketball.



Balancing academics and athletics isn't easy, but Judith, a St Jude's alum and university scholar, is excelling at both. She is currently one of the top-performing students in her university, with an impressive GPA of 3.8 out of 4, and an ace basketball player who has won national and international awards on multiple occasions. Despite her rising stardom and flourishing career opportunities, Judith still remembers where it all began.

"It was at St Jude's that I was first exposed to a lot of sports and opportunities that laid a foundation for my academic and basketball journey," reflects Judith.

A novice player when she joined St Jude's, Judith became an instant sensation on the basketball court and quickly rose through the ranks, participating in national and international competitions. Her dedication to sports and impressive academic track record earned her an international scholarship at the United States International University -Africa (USIU) in neighbouring Kenya.

"While at university, I wasted no time and joined the basketball team which was already making waves in the highly competitive Kenya Division One league," says Judith.

She quickly became a regular starter and key player on the team. Within two years, Judith helped her team win the Division One championship, secure a promotion to the Kenyan Premier League, and qualify for the world university championships.

"Qualifying for the world university championships was huge as it's one of the highest university sports competitions in the world," explains Judith. "Playing basketball on the world stage was a dream come true for me and it wasn't long before scouts began taking notice of my talent," she adds.



Judith was recruited by Equity Bank basketball club, a Kenyan Premier League powerhouse making her the team's youngest player. In her first season, Judith played at the Africa Women's Basketball League (AWBL), one of the highest club competitions for African teams.

"One of my great moments during the competition was when I scored a threepointer at the buzzer, earning my team a crucial win in a game that was tied at 73 with only five seconds to go!" says Judith. "I was also the top scorer of the game with 24 points, 13 rebounds, and four assists," she adds proudly.

As of 2024, Judith is currently the Most Valuable Player (MVP) of the Kenya Universities Sports Association (KUSA) competitions, solidifying her promising basketball career. Despite her success on the basketball court, Judith continues to excel at her academics. She maintains an impressive academic record and has been on the Dean's List (students with outstanding GPAs) since her enrolment at the university.

"Out of almost 40 Tanzanian scholarship recipients at her university, Judith consistently ranks number one academically, followed by Agnes, also a St Jude's alum," says Vivian, St Jude's Special Programs Senior Manager, who looks after the Beyond St Jude's Scholarship program. "She is a great example to students back at St Jude's that they too can excel at both sports and academics," she adds.

Judith is also a proud ambassador of St Jude's wherever she goes and a great example of the school's motto: challenge yourself. Her dedication, hard work and incredible discipline leaves behind a legacy for many aspiring students to follow her trail.



Excelling at Both: Judith strikes a perfect balance between her academics and pursuing a basketball career.

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Your support opens up opportunities for students to nurture their talents and explore different career paths. Sponsor Today.

Supporter Highlight: TechnologyOne

St Jude's partners with Australian software company, TechnologyOne, to enhance ICT literacy, nurture STEM pathways and careers for students, and simplify its operations.



Over the past decade, the TechnologyOne Foundation, has been an avid supporter of St Jude's, fuelling the interest and skills of our students in technology and lending their expertise to streamline office systems. Additionally, TechnologyOne staff have actively participated in various charity and fundraising activities for St Jude's through the years.

Powering connectivity

Our school's robust IT infrastructure is made possible through TechnologyOne's donation, as well as our internet connectivity, IT infrastructure, and licensing for various eLearning programs for the students across all our campuses.

Technology support

TechnologyOne donates software programs that assist St Jude's with budgeting, forecasting, database management, and supply chain management. Their staff also closely collaborates with our Corporate Applications and IT departments in customising technology to meet the school's specific needs.

Supporting STEM learning

TechnologyOne provides ICT and software support that enhances teaching effectiveness in our school and nurtures our students' digital literacy. In March, TechOne also offered career and study advice for our students, giving them perspectives on the range of career pathways available in the STEM fields and further generating interest in STEM learning at St Jude's.

Feel free to speak about St Jude's to your organisation, company, community, school, Rotary Club and church. We have resources and support to get you started. **Spread the Word Today.**

Q & A with Jackline

A science teacher and club mentor at St Jude's Girls' Secondary School shares her experience and insights on girls' science education.



Mentoring Scientists: Jackline is one of the female science teachers and club mentors at St Jude's.

What do you do at St Jude's?

I teach physics and chemistry at St Jude's Girls' Secondary School and mentor 40 students in the Science and Innovation Club.

Why did you pursue a career in science education?

I love sharing my passion for science and inspiring others to explore the wonders of the natural world. As a teacher, I get to see my students achieve their dreams just like I did and that brings me a lot of joy and fulfilment.

What do you do as a club mentor?

I help students bring their creative ideas to life! We have a special focus on solutionbased projects that use innovation to tackle challenges within the community. The students are very clever and mentoring them is truly an honour.

What are some projects currently in development at the club?

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We have a few interesting projects. One of the prototypes from the Innovation Club, an automatic stamping machine, won the overall second place at the recent Science Day at St Jude's. Another one, a clothesdrying machine, won first place in the physics category.

What do you hope for Tanzania's science and tech future?

I hope to see more girls getting into STEMrelated fields. Technology and innovation have the potential to revolutionise many industries in the future and it would be great to have more females leading that change.

Your support enables St Jude's to create programs and find resources that nurture our students' passion for STEM and innovation. **Donate Today**.