

SITU

MAGAZINE

MR. MISHITA

Our First Ever **TEACHER**

TECHLOOM

*From Student Ideas
to Systems in Use*

INSIDE STORIES:

- *Alumni Corner with REGINA MLAY*
- *2026 Nobel Prizes in Science News*
- *Baba Wema's Story*
- *Students Voices*
 - *Our Time to Build
a Greater Africa*



WELCOME TO THE SECOND EDITION OF SITU MAGAZINE

Where Teachers Inspire, Students Innovate and Communities Grow



There is something special about looking back at where we began.

As we celebrate our second edition of SITU Magazine, we are reminded once again that Arusha Science is not simply a place where students come to learn. It is a place where people, ideas, dreams and possibilities come together.

This October issue comes at a particularly meaningful time. As we celebrated Teachers' Day on the 5th of October, we felt it was only fitting to turn our attention to someone who represents the very beginning of our journey: Mr. Mishita, our first ever teacher.



His story is a reminder that great institutions begin with people who believe in an idea, take a risk and are willing to build before the results are visible. His journey reflects the dedication of teachers everywhere who continue to inspire, guide and challenge their students to become more.

There is much to celebrate in this edition.

Techloom shows what happens when students move beyond learning concepts to creating solutions. Their work is a powerful example of our belief that knowledge should be put to use.

Our Student Voices section gives students the opportunity to share their ideas, experiences and dreams in their own words. Their reflections remind us that education is not only about what students learn, but also about how they think, question and see the world.

We also take a look at boarding life, from the moment students arrive and settle into their new environment to the routines and responsibilities that shape their days. These experiences help our students develop independence, discipline and a sense of responsibility.

Beyond academics, our sports activities remind us of the importance of health, teamwork and discovering talents outside the classroom. At Arusha Science, we want our students to grow intellectually, physically, socially and personally.

Our Alumni Corner features **Regina Mlay**, whose journey after Arusha Science makes us incredibly proud.

Today, she is a computer scientist, technology entrepreneur and youth leader, and through Mentora Tanzania and other initiatives, she is using technology to support teachers and create opportunities for young people. Her story is a wonderful reminder of the possibilities that begin within these school walls.



We also invite you to explore fascinating ideas in Science Explained, our Community Story session brings us closer to the people around our school. Through the story of Mr. Edison Leseiyo, we are reminded that Arusha Science is not separate from its community. We are part of it, and our growth creates opportunities, relationships and a shared sense of belonging.

As you read these pages, I hope you see more than stories. I hope you see the people, ideas and values that continue to shape Arusha Science.

Enjoy the edition.

Mary Brise
Head of School
Arusha Science School

CONTENT:

Innovation Spotlight (pg 01) | Student Voices (pg 02 - 03) | Campus Life (pg 04 - 05)
Mr. Mishita's Story (pg 06 - 07) | Alumni Corner (pg 08 - 09) | Science Explained (pg 10)
Science and Tech News (pg 11) | Our Community (pg 12 - 13)

INNOVATION SPORTLIGHT

Company Name: Techloom

Innovative Solutions.

CEO: Acclesiastes Korasa.

Industry: Software Development
& Digital Solutions

For the students behind Techloom Innovative Solutions, technology is not simply about writing code or creating something that looks impressive on a screen.

It is about finding problems that people actually face and building solutions that can make every day work easier, smarter and more efficient.

Techloom is a growing, student-led software development company created by young innovators with a shared interest in technology, entrepreneurship and problem solving. Its philosophy is simple: **technology should not only be innovative; it should be useful.**

That belief is already becoming a reality at Arusha Science. The team has developed digital systems that are now being used within the school, allowing students to experience something that goes beyond the classroom: seeing their ideas become working solutions that people can actually use.

One of the company's key solutions is **AssetHive**, a smart asset and inventory management platform designed to help schools and institutions manage their physical resources more efficiently.

Traditionally, keeping track of school assets can involve paperwork, spreadsheets and manual records. This can make it difficult to know where an item is, who is responsible for it, what condition it is in, or when it may require maintenance.



Meet Techloom

How a team of Arusha Science students is turning real problems into practical digital solutions.

AssetHive brings these processes together in one connected digital platform.

The system allows institutions to register, identify, locate, monitor, maintain and report on assets throughout their life cycle.

Features include QR-code identification, asset location and movement tracking, damage and loss reporting, maintenance management, check-out and reservation management, asset history, audit trails, reports, notifications and AI-assisted functions.

Its idea can be summed up simply: **“One System for Every Asset.”** But Techloom's ambition does not stop with one system.



The team is also developing solutions in other areas, including AgriConnect Pro, an agricultural technology platform designed to connect farmers with agricultural information, services, suppliers, veterinary support and market information.

Another project, Shop MS, explores digital commerce and how technology can make it easier for users, products and businesses to connect.

Together, these projects show what Techloom is about: identifying real challenges and asking, “Can we build something that helps?”

Behind the systems is a team of eight students with different skills in software development, design, research, business, innovation, testing and communication. They understand that great software is not created by coding alone. It requires teamwork, creativity, research and, most importantly, understanding the people who will use it.

What started as ideas and experiments is now becoming practical technology, with systems already being used at Arusha Science while the team continues developing new solutions.

For these young innovators, the classroom is not the finish line, it is the starting point. This is Science Into Use: taking knowledge, curiosity and skills beyond theory and turning them into solutions for the real world. And sometimes, innovation begins with one simple question: **“There must be a better way to do this.”**

Our Time to Build a Greater Africa

By - Ebeneza C. Seidimu.
Form V - 18yrs



Once upon a time, Mwalimu Julius Nyerere, Kwame Nkrumah, Patrice Lumumba, Jomo Kenyatta and many of our forefathers envisioned a new and greater Africa. They played their part, paving the way for us to achieve their visions together with ours. However, our core values are deteriorating because of ignorance and negligence.

Many of us are forgetting the driving forces that shaped the lives we have today.

I strongly believe there can be no development in our schools, regions, countries or continent without political stability, good structures and strong leadership. As current and future generations, it is our time to learn and participate in leadership at all levels. A wise man once said, **“The backwardness of Africa today should be taken as capital for young, brilliant minds to invest in and benefit tomorrow.”** To use this capital, we need confident, competent and brilliant leaders who can show the way, lead the way and follow the right path.

This will create a foundation for advancing science and technology in every sector.

As we take charge of ourselves, we must stand firm in protecting everyone’s wellbeing, dignity and prosperity. Our leadership should focus on building a better Africa for our children, so they can enjoy more than what we found.

We are the game changers of our own Africa. No one else will do it for us. It is our duty to uplift ourselves. We should not be afraid of what we see happening to leaders, including opposition figures such as Tundu Lissu and Kizza Besigye. With faith as small as a mustard seed and confidence, we can join forces to achieve a greater Africa.

At Arusha Science, I aim to graduate in 2028 as a new figure in society: confident, competent and excellent. I want to become a game changer in my own life and the lives of those around me, while fulfilling my forefathers’ visions together with my own. The challenges facing my society, region,

country and continent motivate me to strive every day.

When I wake up on cold mornings, I tell myself,

“It is my time, not to sleep, but to build the foundations and gain the weapons I need to fight for a better me, society, region, country and continent.”

Education is the greatest weapon for changing the future, but it must be excellent and competitive. Having education is one thing; knowing how to use it is another.

We need educated people who can use their knowledge to liberate themselves and their communities.

Arusha Science is a door to creating a generation of game changers.

Today we sit in classrooms, but tomorrow we will be in offices. We are tomorrow’s adults and leaders, and we must make a difference. Let us all **WORK HARD BUT SMART.**



When I First

Joined This School

By - Gladness Albert Mongi
Form II - 15yrs



My name is Gladness Albert Mongi, and today I would like to share with you how I joined this school. Before I joined Arusha Science, I was studying at Nalopa Primary School. At that time, I was looking for a school where I could start my secondary studies.

When I joined Arusha Science, it improved my knowledge and helped me develop my skills.

I first heard about this school through my parents. We searched for information about the school on social media, and after learning more about it, I became interested in joining. My parents and I then decided to apply. We visited the school and learned about the requirements and the different opportunities available to students. When I first came to this school, I felt very excited. Everything was new to me, the environment, the teachers, and the students. However, I gradually became comfortable and started to feel at home.

Since joining this school, I have learned many things. I have gained new knowledge, met new friends, and developed different skills. The teachers and other students have also helped me to feel like part of the school community.

What I like most about this school is the environment, the food, the students, and my subjects. I also appreciate the opportunities I have been given to learn and grow.

Joining Arusha Science has been an important experience for me. I am grateful for the opportunity to study here, and I hope to continue learning, improving myself, and achieving my goals.



How I Knew

About Gaming

And Ai.

By - Spencer Humphrey Mariki
Form V - 18yrs

"I remember this day like it was yesterday, the first time I was exposed to a PlayStation console. Before that day, I had never met a gaming console. After years of asking and begging my dad, he finally bought my sibling and me a PlayStation. I was shocked and nearly brought to tears!

It happened during the Easter holiday while I was in Form 2, when my mom, uncle and little sister came to pick me up from school. On the way home, we stopped at

our favorite breakfast spot, "The Break Point." After eating, my uncle told me Mom had brought us a surprise. I immediately guessed it could be a PlayStation 5. My little brother, however, thought it was probably shoes or shirts.

When we got home, Mom acted as if she had brought nothing. Later, she sent my little sister to get her suitcase of "gifts." As the bag was opened, I first saw a pair of Jordan 4 Black Cats. I looked at my uncle and said, "You see what I was talking about." He simply replied, "Wait for it."

Then Mom pulled out a white bag with Italian writing. Inside was a brand-new PlayStation 5!

I could not hold back my tears of joy. As I set it up, I became fascinated by the technology behind it. My uncle showed me its voice-command feature, and I said, "Open EAFC 24," and the AI did exactly what I asked.

That moment made me realize how fascinating science and technology can be. AI is already being used in so many different ways, while gaming itself brings together technology, creativity, design and problem solving. One day, I hope to use what I learn to design a great game of my own and see it featured on whatever version of the Play Store exists in the future.





CAMPUS LIFE

BOARDING FACILITIES

A HOME AWAY FROM HOME

By - Mr. Athumani Adinani
Patron and Business Study Teacher

At Arusha Science, boarding is more than having a place to sleep. It is a carefully structured environment designed to give students comfort, security, discipline and the space to grow together.

The school currently has two functioning boarding houses, one for boys and one for girls - with a third dormitory under construction to accommodate younger students. For added security and privacy, the boarding houses are separated by staff residences.

Students are also grouped according to their age and class, ensuring that younger students are not mixed with older ones and that each boarding house provides a safe, organized and age-appropriate environment.

A student's boarding experience begins from the moment they arrive. Each student is provided with a mattress, mosquito net, two bedsheets, a pillow and pillowcase. Boys receive blue bedding items, while girls receive pink. They are then shown to their allocated beds.



Each cubicle accommodates eight students, arranged across four double-decker beds. While every student has their own lockers to keep their personal belongings. It is a simple arrangement, but one that encourages students to take responsibility for their space and learn to live respectfully with others.



The boarding houses are also equipped with 24-hour running water and hot water for bathing. Power reliability is supported by three sources: solar power, TANESCO electricity and a backup generator, helping ensure that students have access to electricity throughout the year.

But what truly gives boarding life its character is the daily routine. Students wake up at 4 a.m., and by 5 a.m., they are already in class for morning preparation. From 6 to 7 a.m., they return to their dormitories to clean their spaces and prepare for the day before heading to their first breakfast.

Cleaning is part of the daily routine, followed by a general cleaning every Saturday, this is , giving students the opportunity to thoroughly clean and organise their shared living spaces.

“At first, waking up so early was not easy, but you get used to it. I like that we learn to keep our rooms clean and take care of our own things. It also teaches us to be responsible.”

— Jasmin Mvungi - F2 student

During the school day, students remain focused on their classes from 7:00 a.m. to 4:00 p.m. Once classes finish, they return to the boarding houses for two hours of personal preparation. This is their time to clean, shower, change out of their school uniforms and put on their shamba dress, the comfortable clothing students wear in the evening.

By 6 p.m., students are ready for dinner. At 6:40 p.m., they have 20 minutes dedicated to prayers within their respective dormitories before beginning evening preparation, which runs from 7 to 10 p.m, with boys and girls studying separately. By the end of the day, students return to their dormitories for a well-earned night's rest.

This rhythm of learning, responsibility, discipline and rest is an important part of the Arusha Science experience. Boarding life teaches students to manage their time, care for their belongings, respect shared spaces and grow into independent, responsible young people.



SPORTS

Nourishing Young Minds and Bodies, Everyday.

By - Mr. Omary Jalali
Geography Teacher / Sport Supervisor

Yes, we are a science school, but that does not mean our students spend all their time in the classroom or laboratory! At Arusha Science, sports are an important part of school life, allowing students to stay active, build teamwork, and enjoy healthy competition.

Our students participate in a variety of sports, including football, netball, basketball, volleyball, handball, track running and table tennis. We also have a Chess Club and Tag of War, giving students different ways to discover the activities they enjoy.



For O-Level students, sports take place every Wednesday, while A-Level students have their sports sessions on Fridays. Weekends also allow students to participate in sports voluntarily.

Football and basketball currently attract some of the largest numbers of students, but we continue to encourage everyone to get involved and stay active. One of the ways we do this is through

our Saturday Jogging Club, which starts at 6:00 a.m. Students take on a challenging run towards East African Road and back, covering a significant distance while building endurance, discipline, and fitness.

Competition is also a big part of our sports culture. Throughout the year, we hold Arusha Science Sports League competitions, as well as inter-school matches. Our recent inter-school competition saw us welcome Oljoro Secondary School to our grounds, while future competitions will allow our students to travel and compete away from home.

We also organise Sports Bonanzas during special days on the school calendar, such as the recent Nane Nane celebration. These events bring the whole school together for friendly competition across different sports. Students compete against one another, while teachers also take on students, and sometimes our teaching staff



competes against the non-teaching staff!

But school life is not only about competition. We also make time for entertainment and relaxation. On weekends, students can enjoy movie sessions, usually from 2:00 p.m. to 5:00 p.m., with action movies being a popular choice.



At Arusha Science, we believe that education should develop the whole student. In the classroom, we learn. In the laboratory, we experiment. On the field, we compete, connect, and grow.





MR. EZRA MICHAEL MISHITA

The teacher who believed in Arusha Science before the first student ever arrived.

We are truly honoured to feature our very own first teacher, Mr. Mishita. We asked him to walk us through his memories, a bittersweet journey of belief, sacrifice and the birth of Arusha Science.

1. Before we talk about Arusha Science, tell us a little about yourself. Who is Mr. Mishita beyond the classroom?

I am a teacher, family man and someone who believes in learning, responsibility and making a meaningful contribution to others.

2. Take us back to May 2020. What do you remember about the day you first came to Arusha Science?

May 2020 was the beginning of something. During COVID-19, schools were closed and private institutions were struggling. I left a secure permanent government position to join a private school that had not yet received its first student. My family worried, and even my employer hesitated to sign my resignation. I chose to believe in the vision.

When we arrived, we saw unfinished buildings, ongoing wiring and a place very different from today.

3. You joined Arusha Science before the first students ever arrived. What made you believe in the school when it was still just beginning?

Prof. Nuhu Hatibu's vision convinced me. He spoke about science, technology, practical learning and innovation, and his confidence gave me confidence. He also promised to care for my family, despite doubts

from others. He fulfilled those promises. I was not joining an established school; I was joining a dream. But also, eventually, Arusha Science became part of our family's life.

4. What was it about Arusha Science, that convinced you to take that first step?

I saw an opportunity to create a school with a different identity around science, technology, practical learning and innovation. As a Mathematics teacher, that attracted me. I wanted students to ask "Why?", "How?" and "What can I do with this knowledge?"

5. What was it like being one of the very first people at Arusha Science, before there were students, a full staff, or the school community we know today?



It was exciting and strange. There was no established formula, so we helped create one. Every standard, expectation and interaction mattered. We were working in the present while building for students we had not yet met.

6. Do you remember your first students?

I remember it deeply. Prof. Nuhu first contacted me in January 2020 and asked me to see his vision. After agreeing to join, I searched for students following the 2019 Form 4

results and scholarship plan: AAA 100%, AAB 75%, ABB 50% and BBB 25%. Some parents thought it was a scam, but we continued. In May, I arrived with my family.

On opening day, we waited near the Clock Tower, wondering if students would come. They did 28 students, 10 girls and 18 boys. It was the first Monday of July 2020, and I still remember the trip back to campus like it was yesterday.

7. Looking back, what has changed the most between the Arusha Science you joined in 2020 and the Arusha Science we have today?

The biggest change is that a vision became a living institution. We now have more buildings, staff, facilities, students, projects and achievements. Technology has grown from whiteboards and projectors to smart boards and ICT tools such as VR. We have also expanded from A-level to O-level. Most importantly, our question changed from "Can this work?" to "How can we make it better?"

8. You have watched this school grow from its very beginning. What moment or achievement has made you feel most proud to be part of its journey?

My greatest pride is seeing students become confident people who think, create, solve problems and take responsibility. I am proud when classroom knowledge becomes a project, solution or company. I am especially proud of the founding students, including Abdulrahim Malya and Raymond Mao, whose Chuolink Company has helped students access universities overseas.

9. What have you learned personally from being part of the growth of Arusha Science?

I have learned that big things can begin in ordinary circumstances, and that patience matters. Mr. Nuran Hatibu, the school Managing Director, encouraged me during difficult moments. I believe leadership is not always a title; sometimes it means quietly solving problems, taking responsibility and letting results speak. Most importantly, people, not buildings, create culture and identity.

10. What do you think makes Arusha Science different from other schools?

We connect academic knowledge with practical thinking. Our motto, which I was among those who helped create, is **"CONFIDENCE AND COMPETENCE FOR EXCELLENCE."** Science and Mathematics should help students understand problems and develop solutions. Our focus on technology, practical learning and innovation allows students to move from learning something to doing something with it.

11. What have you seen in our students that gives you hope for the future?

Their curiosity gives me hope. Students are asking difficult questions, designing, experimenting and thinking about how technology can solve ordinary problems. They are learning that knowledge is something to use. I hope they become Engineers, Doctors, Scientists, Entrepreneurs, Researchers, Innovators, Teachers, and Leaders who create opportunities for others.

12. Your children have been part of the school for the last 7 years, What does this community now mean to your family, since your wife also runs the school shop?

Arusha Science has become part of our family story. My children, Precious and Respicious, grew up within this community, while my wife, Angel, publicly known as Mama Mishita, became involved in running the school shop. We have shared difficult days, celebrations and uncertainty. The school is now connected to our family's memories and relationships forever.

13. If you could speak to the first students who joined Arusha Science and tell them what their school would become one day, what would you have told them?

I would tell them, "You may not realize it now, but you are not ordinary students; you are the beginning of a story." They were pioneers, and their discipline, projects, innovations, respect and hard work would become part of the school's identity. "One day, people will walk through these gates without knowing how this school started. You will know. You were there."



14. What is one memory from your early days at Arusha Science that you will never forget?

I remember the quiet campus, unfinished preparations and my family's temporary home in two small rooms. Eng. Hatibu Hassan and Madam Rukia brought double-decker beds and mattresses for us. Sometimes we walked towards Shimo la Mungu and met Maasai people.



Today I live in a beautiful bungalow, but I have never forgotten those two rooms and the beginning they represented.

15. What values have you tried to pass on to your students throughout your years at Arusha Science?

Discipline, integrity, curiosity, hard work, responsibility, respect and resilience. Talent without discipline can be wasted. I encourage students not to fear difficult problems and to understand that education should have a purpose beyond personal success. They should eventually ask, "How can what I know make somebody else's life better?"

16. What advice would you give to the students and the parents of Arusha Science today?

To students: do not waste your opportunity. Learn to think, solve problems, communicate, work with others and develop discipline. Do not fear failure; learn from it and try again. To parents: work with the school, not against it. Marks matter, but so do responsibility, confidence, creativity, discipline and problem-solving.

17. Finally, after all these years, if you had to describe your journey at Arusha Science in just a few words, what would you say?

I would call it a journey of **faith, sacrifice, growth and fulfilment.** What began as a risk became a journey of faith. What began as an unfinished building became a school, and what began as a workplace became part of my family's life and my identity. For that, I will always be grateful.



ALUMNI CORNER

REGINA MLAY

From Curious Student to Technology Builder

There is something special about returning to the place where your journey began.

For Regina Mlay, Arusha Science is more than the school where she completed her A-level education. It is part of the foundation that helped shape the person she is today.

Today, Regina is a Computer Scientist, tech entrepreneur and youth leader, passionate about using technology to solve real-world problems. She is the CEO and Co-Founder of Mentora Tanzania, an AI-powered EdTech platform supporting teachers and improving learning outcomes.

She is also the project lead for Mavuno Sasa, an Agritech platform for smallholder farmers, and Akili Tulivu, a digital platform supporting youth well-being.

She also works with young people and girls in technology through communities such as Women Techmakers and Google Developer Groups.

But before all of this, she was simply a student at Arusha Science, and a great one indeed.

Regina joined Arusha Science with excitement, curiosity and a little nervousness, unaware of just how much the school would influence her future. She graduated in 2023, studying PCM: Physics, Chemistry and Mathematics.

As a student, she describes herself as curious, hardworking and ambitious. She enjoyed trying new things and learning beyond what was required in class. Her favourite memories include friendships, practical sessions, school activities, competitions, late nights working on projects, winning science competitions and attending conferences as the **school's Head Girl**.

But some of the experiences that influenced her most happened outside the traditional classroom. One of them was the **AIDIM community project**, where students taught children in local schools digital literacy, robotics, English and mathematics.

She also explored 3D printing for smart agriculture and worked on the CNC plotter machine project, which she remembers as particularly challenging.

These experiences taught her that difficult problems can become some of the greatest learning opportunities when you are willing to experiment, fail, learn and try again. Her interest in Computer Science developed gradually.

"Arusha Science gave me a strong foundation in science and problem-solving"

but her passion grew further as she was exposed to programming and technology beyond school.

What fascinated her was the ability to take a problem, design a solution and actually build something that people could use. That was when technology became more than a subject. It became a tool for impact.

After graduating, Regina went on to study Computer Science at Arusha Technical College. Alongside her studies, she became involved in technology communities, youth leadership, innovation and development initiatives. The experiences she gained at Arusha Science continued to influence the direction she was taking.

The AIDIM project, for example, gave her a strong foundation in using STEM to work with children, which later supported her work with Arusha Readers Club. Her school projects also became part of the professional background that helped her serve as a UN Youth Fellow under UNA Tanzania. Over time, her interests developed into technology leadership, entrepreneurship and youth development.

Today, her work connects technology with education, agriculture and social impact, areas she believes matter because they affect everyday lives.

Through Mentora, Regina is exploring how AI can support education.

Through Mavuno Sasa, she is working around the needs of smallholder farmers, while Akili Tulivu focuses on digital solutions for youth well-being.

For Regina, technology is most meaningful when it improves education, strengthens livelihoods, creates opportunities and helps solve problems within communities.



Her work has taken her into AI, STEM, food systems, digital skills, girls in technology and youth leadership. She has been involved with UNDP as a Student Ambassador and worked with Google Developer Groups, giving her opportunities to participate in conversations around technology, innovation, youth development and policy.

She is particularly proud of building Mentora, contributing to Mavuno Sasa, leading youth initiatives, facilitating technology and AI training, and creating spaces that encourage more girls and young people to explore technology.

The journey, however, has not always been easy. One of her biggest challenges has been balancing many opportunities while continuing to grow and learn. She has managed this by staying focused on her purpose, continuing to learn and surrounding herself with people who challenge and support her.



And then there is Arusha Science. Since graduating, Regina has returned to the school **three times**, working with students and teachers through activities involving technology, AI, digital skills, innovation and mentorship.

Her first visit back as an alumna was, in her words, “surreal.” She was walking through the same school as a professional and standing in front of students where she had once sat. It gave her a chance to stop and reflect on how far she had come. When she looks at today’s students, she sometimes sees her younger self, their curiosity, uncertainty, ambition and potential. Sometimes she thinks, **“That could have been me.”** She Said.

The moments that stay with her most are when a student approaches her after a session and says they now see themselves pursuing technology. For Regina, those moments are deeply meaningful. They remind her that returning to the school is not simply about sharing what she knows; it is about helping another student imagine what might be possible for them.

Looking back, Regina believes Arusha Science gave her a strong scientific foundation, discipline, confidence and a problem-solving mindset.

The values she developed here, discipline, consistency, curiosity, teamwork and perseverance, continue to guide her.

SITU and hands-on learning also taught her that knowledge becomes more powerful when it can be applied. It is a mindset she still follows today: **Learn. Build. Test. Improve.**

As a young woman in Computer Science and technology, Regina has also learned that you do not have to wait for permission to belong.

“My message to girls who love science and technology is simple: You belong.”

You do not need to know everything before you start. Be curious. Ask questions. Build things. Make mistakes. Keep going.

Looking ahead, Regina is excited about a future where Africans are building solutions for African challenges.

If she could speak to her younger self, her advice would be simple: “Dream bigger, start earlier, and don’t be afraid of not having everything figured out. Your journey will make sense as you go.”

To today’s Arusha Science students, she encourages them to learn beyond the classroom, build digital skills, explore AI and technology, communicate well, work with others and experiment, but above all, learn how to solve problems.



And to the teachers who helped shape her journey, she says: **“Thank you for believing in us, challenging us, and giving us the foundation to become who we are today. Your impact goes much further than the classroom.”**

Today, Regina is proud to call herself an Arusha Science alumna. She is proud of the scientific foundation she received and of a school that continues to nurture young people with the potential to shape Tanzania’s future.

Quick Fire

Early bird or night owl? – **Night owl.**

Your most-used emoji? –



If you had one superpower, what would it be? – **Teleporting**

What is the title of the last book you read? – **“Leaders Eat last” by Simmon Sinnek**

If you could have dinner with any female scientist in history, who would it be? – **Marie Curie.**

If you could create an app to solve one problem in Tanzania, what would it do? – **I’d build a fintech app that centralizes all payments in one place at completely no cost or very low cost**

If you were not a Computer Scientist, what would you be? – **An engineer or entrepreneur.**

What is your hidden talent? – **I am a very good cook.**

One thing you definitely DON’T miss about being a student? – **Exams!**



WHY CAN YOU SEE YOUR BREATH ON A COLD MORNING?

Have you ever breathed out on a cold morning and seen a little white cloud?

It may look like smoke, but it isn't. The air you breathe out is warm and contains water vapour. When it meets cold air, the vapour cools and condenses into tiny water droplets that become visible. You produce water vapour every time you breathe, you just normally can't see it.

So when you see your breath:
You are watching invisible water vapour become visible.

WHY DOES A MIRROR REVERSE LEFT AND RIGHT, BUT NOT UP AND DOWN?

Stand in front of a mirror and raise your right hand. Your reflection appears to raise its left hand.

But surprisingly, a mirror doesn't actually reverse left and right. It reverses front and back. Your reflection appears to be standing behind the mirror, facing you, which makes its left and right seem opposite to yours. That's why words on a shirt also appear backwards in a mirror.

So the mirror isn't choosing to swap your left and right.
Your brain is interpreting a front-to-back reversal as left and right.



WHY DO WE GET "GOOSEBUMPS"?



Have you ever suddenly felt cold and noticed tiny bumps appearing on your skin?

Those are goosebumps, and they are actually an ancient survival response.

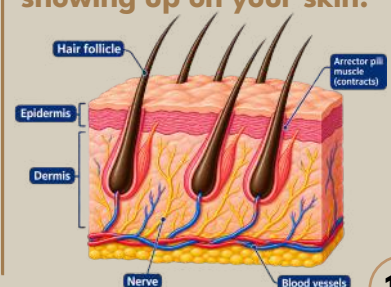
When you are cold or frightened, your nervous system can cause tiny muscles attached to your hair follicles to contract. This makes the hairs on your skin stand upright.

For furry animals, this can be useful. Raised fur can trap a layer of warm air close to the skin and can also make an animal appear larger when threatened.

Humans have much less body hair, so the warming effect is tiny. Yet the response remains.

That means the goosebumps you get when you are cold, frightened, or sometimes even when you hear powerful music, are a reminder that your body still carries some very old biological systems.

Your goosebumps are a tiny piece of human evolutionary history showing up on your skin.



SCIENCE NEWS & TECHNOLOGY

No. 1 - Scientists Can Now Control Brain Cells With Light



What if scientists could switch individual brain cells on and off using light? That sounds like science fiction, but it is already a real scientific technique, and it has just received the 2026 Nobel Prize in Physiology or Medicine.

The technique uses light-sensitive proteins to control nerve cells with carefully timed pulses of light. This allows scientists to study how the brain controls movement, behaviour, memories and emotions with remarkable precision.

The technique is mainly a research tool today, but scientists are exploring its future medical potential. It all began with the discovery of a tiny light-sensitive protein in an alga, which eventually helped transform how we study the human brain.

The big question:

If we can control individual brain cells with light, how much more of the brain will we eventually understand?

No. 2 - What If We Could “See” the Universe With Ghost Particles?



What if we could study the Universe using particles that pass straight through the Earth?

Scientists are doing just that with neutrinos, tiny particles that pass through our bodies and the Earth almost undetected.

On October 6, Francis Halzen was awarded the 2026 Nobel Prize in Physics for his contributions to the IceCube Neutrino Observatory and the discovery of high-energy neutrinos from space. Buried deep beneath the ice at the South Pole, IceCube uses thousands of light sensors to detect the tiny flashes produced when neutrinos occasionally interact with matter. This has opened a new way of studying the Universe: neutrino astronomy, allowing scientists to investigate some of the most powerful events in deep space.

Where we are: What could we discover by studying particles that can travel through almost anything?

No. 3 – Four Astronauts Reached the Space Station in Just Eight Hours



How quickly could humans travel from Earth to the International Space Station?

In October, NASA's SpaceX Crew-13 mission demonstrated just how fast modern crewed spacecraft can travel.

The four astronauts reached the International Space Station in approximately eight hours, making it the fastest U.S. crewed flight to the station so far.

The crew included geologist and former Mars rover scientist Jessica Watkins, who became the first Black woman to command a space crew.



The mission is more than just a fast journey. Astronauts aboard the ISS conduct experiments in microgravity that cannot be performed in quite the same way on Earth. These experiments help scientists understand how living organisms, materials and physical processes behave in space.

As humanity prepares for longer missions, including future journeys to the Moon and eventually Mars, how efficiently we can transport people and equipment will become increasingly important.

The big question:

If eight hours can take astronauts from Earth to the Space Station, how will future technology change the journey to the Moon, and eventually Mars?

OUR COMMUNITY GROWING TOGETHER

How Arusha Science's farming and livestock projects are benefiting the community around the school



Long before Arusha Science became the school it is today, the land around it was home to families, farms and communities. Today, that same land is producing something new: food, jobs, opportunities and a growing connection between the school and its neighbours.

At Arusha Science, farming and livestock keeping are more than school projects. They have become part of school life while creating employment and opportunities for people living around the school.

The school began its livestock project in 2020, while its gardens have grown to include vegetable fields and several greenhouses. Today, Arusha Science produces more than 80% of the vegetables and fruits used at the school, including avocados, papayas, bananas, spinach, cabbage, Chinese cabbage, tomatoes, carrots, green peppers and eggplants.

But the farm is not run by the school alone. Local community members are employed to help care for the gardens and livestock, creating opportunities for people who live just outside the school gates.

One of those people is Mr. Edison Leseiyo, widely known in the community as **Baba Wema**.

His connection to Arusha Science goes back to before the school had students, classrooms or even its first brick. His father was the original landowners who sold land to the school's owners.

At the time, Edison worked as a tractor driver, taking seasonal jobs clearing farms. During the low season, he began working at the school while construction was underway in 2016.

His family lived just outside the school grounds, and his 7 children grew up watching the school take shape.

Today, Edison is a full-time livestock keeper at Arusha Science. From watching the first stages of construction to caring for the animals that contribute to feeding hundreds of students, he has witnessed the transformation of the area first-hand. For him, however, the story is much bigger than farming.



He has seen the school create employment for young people in the surrounding communities. Some work directly at the school, while others have found casual and seasonal opportunities. He believes this has helped reduce unemployment and, importantly, allowed many people to find work without having to leave their communities.

The school's growth has also created opportunities for small businesses.

As more people have moved into the area, shops and other community businesses have begun to develop. The availability of essential services such as water and electricity has further encouraged people to build, settle and invest in the surrounding area.

Edison also points to something even more fundamental: the value of land.

The establishment and continued growth of the school has increased the value of land belonging to original landowners, allowing families to benefit from the development taking place around them.

Perhaps one of the most important changes, however, has been infrastructure. The construction of a bridge has made it easier and safer for members of the community, especially women and children - to cross an area that was once dangerous during heavy rains.

Edison also remembers a time when the school's gardens produced more vegetables than the young school could consume. With fewer students, harvests could reach around 80 kilograms of vegetables in a week. Rather than allowing the excess to go to waste, the school sold the produce to neighboring families.

For a community in the relatively dry area of Laroi, having a reliable source of fresh vegetables nearby was a welcome benefit. ***"It felt like we had our own community garden right here at the school."*** Says Edison.

Over the years, that relationship has continued to grow.



***"THIS HAS BEEN OUR LAND FOR YEARS
AND YEARS IT FEELS GOOD TO HAVE
SUCH AN INSTITUTION THAT CAME
IN AND SAID, WE ARE PART OF YOU,
AND OUR DOORS ARE OPEN."***

MR. EDISON LESEIYO
SCHOOL LIVESTOCK KEEPER/FARMER

For Edison, what makes Arusha Science different is not only what it produces, but how it relates to the people living around it.

"Arusha Science is an institution that does not discriminate against the neighbouring community. We live like a family here."

He remembers that even before the school officially opened its doors, there were already signs of the relationship that would develop. Madam Rukia, the founder's daughter, taught Maasai children and other neighbouring children how to read and write without asking them to pay.

For him, that spirit has continued.

The school has become a place where local people can find work, businesses can grow, farmers can sell produce, and the wider community can benefit from infrastructure and opportunities created by the school's expansion.

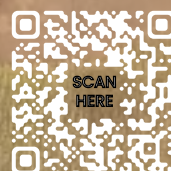
***"Everyone who now works or
has ever worked here has
changed,"*** Edison says, reflecting on what employment at the school has meant for people around him. ***"Once you work here, you grow mentally, and you are never the same intellectually."***

Perhaps that is the greatest story behind Arusha Science's farming and livestock projects.

They are growing food, but they are also growing relationships.

They are creating employment, but also creating opportunities.

And they are developing a school while, at the same time, becoming part of the community that surrounds it.



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