

SITU

MAGAZINE

MARY MBISE.

Head Of School

WELCOME TO OUR WORLD

MEET THE CYCLO TEAM

One Man's Trash is a
Student's Innovation.

INSIDE STORIES:

- *Alumni Corner*
- *Science News*
- *Students Voices*
- *Meet The Teacher*

+ *Our Community Story
& Why You Should Learn
how to Play Chess.*



ARUSHA
SCIENCE

THE OFFICIAL MAGAZINE
OF ARUSHA SCIENCE SCHOOL

OUR COVER STORY

WELCOME TO OUR WORLD



Welcome to SITU Magazine our new monthly window into life at Arusha Science.

This magazine is about more than school activities. It is about the people, ideas, experiences and everyday moments that make this school what it is. Through these pages, please meet the teachers and staff who work with our students every day, discover our clubs and projects, hear directly from our students, reconnect with our alumni, and learn more about the journey that has shaped Arusha Science.

Most importantly, we want our students to have a voice. SITU Magazine gives our students a platform to write, question, create, share their opinions and express themselves. Their ideas and perspectives matter, and we want them to know that their voices deserve to be heard.

You will also see another important part of who we are: Science in to Use. We believe learning should not stop when a lesson ends. Students should be able to take what they learn in the classroom and use it to understand the world around them, solve real-life problems, and create something useful. Our students are already doing this, from building technology solutions to exploring agriculture, sustainability and innovation.

Nevertheless, let's not forget that the world is changing quickly. Artificial intelligence, robotics,

biotechnology, climate change and new discoveries are reshaping the way we live and work.

We want our students to understand not only what is changing, but why it matters and how they can be part of it. Each month, our Science & Technology News section will bring some of those stories closer to home.

But this magazine is also about the things that make school life special: the laughter, the challenges, the friendships, the achievements, the lessons outside the classroom and the people behind it all.

Arusha Science has grown tremendously since we opened our doors in 2020. Yet our purpose remains simple: to help young people become confident, capable and curious enough to build their own future.

We hope the pages help you understand a little more about who we are, what we believe in and what happens here every day.

And, perhaps, as you read, you will discover something you didn't know about your child's school.

So, welcome to our world. We have many stories to tell, and this is only the beginning.

Sincerely,
Mary Mbise
Head of School



Every day at Arusha Science, something is happening. A student is building an idea. A teacher is trying a new way of explaining something. A club is coming together. A project is taking shape. Someone is asking a difficult question. Someone is discovering something for the first time.

With so much happening around us, we realized that there is a lot about our school that you may never get to see.

So, we decided to tell our story.

CONTENT: Innovation Spotlight (pg 01) | Student Voices (pg 02 - 03) | Campus Life (pg 04 - 05) | Meet The Teacher (pg 06 - 07) | Alumni Corner (pg 08 - 09) | Science Explained (pg 10) | Science and Tech News (pg 11) | Our Community (pg 12)

INNOVATION SPORTLIGHT



Meet Cyclo - the student-built platform turning recyclable waste into opportunity.

What if the waste we throw away every day could become a source of income, while helping create a cleaner environment?

That question inspired a group of Arusha Science students to build Cyclo, a digital recycling platform designed to connect people with recyclable waste to collectors and recyclers who can put it to use.

The idea is simple. A user lists recyclable materials through the platform, gets connected with a nearby collector, and can receive payment while tracking the environmental impact of their contribution. Cyclo also introduces smarter collection routes, helping reduce unnecessary fuel use during transportation.

But perhaps the most exciting part of Cyclo is where it started.

It began as an idea in a Form Five classroom. There were no outside funders or adults building the solution for the students. They explored the problem, developed the concept and worked together

Another Student's Innovation.



to create a digital platform aimed at solving a real challenge in their community.

Their approach has attracted attention beyond the school gates. Cyclo has been featured by The Citizen, Mwananchi, Wasafi Media and CIO Bulletin, where the project was highlighted as an example of African students using technology to connect environmental sustainability with economic opportunity.

The students' ambition goes beyond building an app. They want to change the way people think about waste.



"Waste is not simply garbage. It can be a resource. It can create income. It can create jobs. And, with the right ideas, it can become an opportunity for innovation." - Shawn Marealle, Cyclo CEO.

Cyclo is a powerful example of what happens when students are encouraged to move beyond learning about problems and start building solutions for them.

This is exactly what Science Into Use is about: taking knowledge from the classroom and turning it into something that can make a difference in the real world.

**Six students. One idea.
A problem worth solving.
And a solution built from scratch.**

Want to connect with the Cyclo team?
Email: wecycloteam@gmail.com
Instagram: [@cyclo.io](https://www.instagram.com/cyclo.io)

WHY I LOVE FOOTBALL

By - Janson Didier
Form II - 13yrs



I am a Form 2 student at Arusha Science, and I have a number of hobbies, but my favorite hobby is playing and following football. Football is my favorite sport, and I love it.

My dream is to be one of the smartest footballers in the world, using science, technology, and my knowledge to play better and become number one. You might be asking yourself, "When did he realize that he wanted to be a footballer?" Well, here is the story:

It was in 2017, and I was about five years old. I was in the dining room eating dinner, while my dad and older sister were in the living room watching a football match. After I had finished eating, I went into the living room to join them.

It was my first time watching football, so I was confused. The match was Manchester City against Liverpool, and Liverpool were leading 2-0. Then Manchester City attacked, and Sergio Aguero

shot towards the goal and missed. I expected him to be sad or angry, but he was smiling. My dad explained that it was only the 50th minute, so there was still time to turn the match around.

I had no expectations that they could do it, but Manchester City fought back and took the lead. I thought the Manchester City players would be angry, but they were incredibly happy. I was confused until my dad explained that, because Manchester City had won the first match 2-0, they had won 5-4 overall and advanced.

That moment changed everything for me. Since that day, I have supported Manchester City because they inspired me to never give up, even when the odds are against me.

THE WORLD TODAY...

By - Brenda Edingston
Form I - 13yrs



The world was never designed for perfection, Yet the Creator of the universe gave us direction.

They call it dictatorship, but what makes democracy different, When it can wear a smile while hiding what lies beneath it?

They call it peace, yet the silence seems to say, That perhaps true peace has never found its way.

People do not always live; sometimes they just survive, While children face questions before they even learn to thrive. Every day, people complain about the lives they live, Not seeing that someone else is praying for what they have to give.

We are quick to judge, but slow to understand, And compromise is forgotten when winning is in our hands. Why negotiate when everyone wants the prize? Pride can blind us, even when the truth is before our eyes.

Commitment has become a struggle too, People make promises before the Almighty, then forget what they once knew.

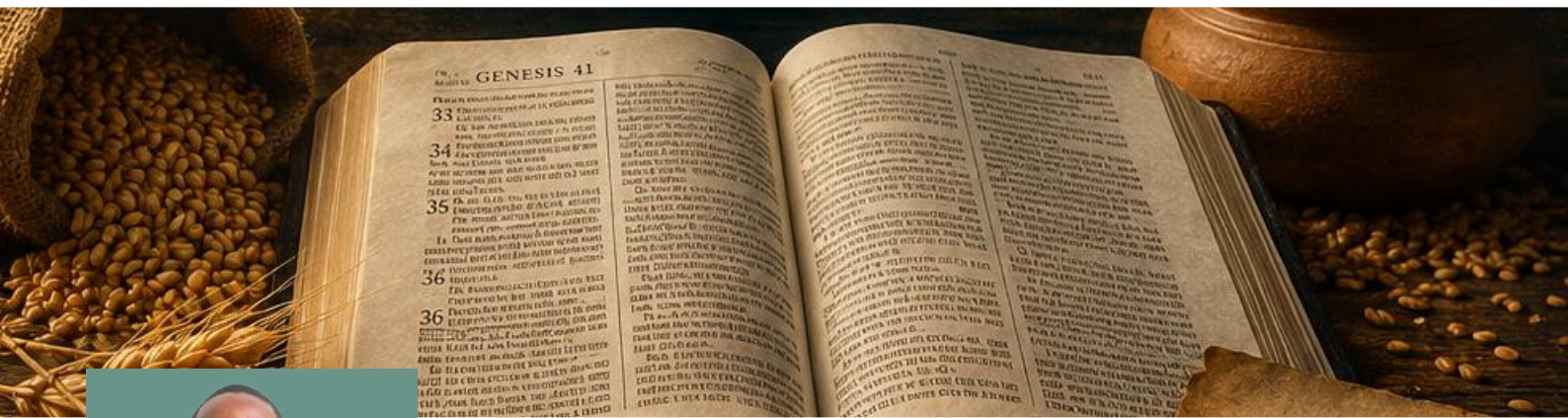
And girls are still married while they are children, Before they can go to school, dream, or decide what they will become. Tell me, how can we speak of commitment and choice, When a girl is never given the chance to find her own voice?

I consider myself lucky to go to school, dream and choose my way, But I still wonder why every girl cannot have the same chance someday. We are just as smart, with dreams just as bright, When a boy dreams big, it is normal; for a girl, it is called ambition overnight.

Social media likes seem more valuable than a person's heart, And consistency now feels like obsession from the very start. A heart today, a notification next week - We chase attention while forgetting what we truly seek.

The world of today makes me want to look deeper and see, How social media shapes the people we are becoming to be. Behind every screen, every post and every plea, Is a person searching to be heard, accepted and free.

**Maybe the world isn't perfect,
and maybe it never will be,
But change begins when we
open our eyes and choose what
we want to see.**



BEYOND FAITH: SCIENCE HIDDEN IN THE BIBLE

By - Millard N. Mushi
Form V - 17yrs

Is the Bible only a book of faith and spiritual teaching, or does it also contain knowledge that connects with science, engineering, and even the future?

Many readers approach Scripture purely as a moral and spiritual guide, yet a closer look reveals principles that align remarkably with agricultural science, biology, and engineering, long before these became formal fields of study.

A striking example is found in the account of Joseph and Egypt's seven years of famine.

According to the bible, after interpreting Pharaoh's dream, Joseph advised Egypt to store grain during seven years of abundance to survive the seven years of famine that would follow (Genesis 41:33–36). This single strategy quietly integrates three distinct fields of knowledge:

- **Agricultural Science** - Joseph's plan depended on understanding crop production and seasonal cycles, recognizing that surplus harvests during good years could be systematically collected and preserved for future use.

- **Biology** - Preserving grain over several years required an understanding of how to protect it from spoilage caused by pests and microorganisms. This challenge is still central to food science today.

- **Engineering** - Storing large food reserves (Genesis 41:35) required the design and construction of storage facilities capable of protecting grain on a large scale, an early form of infrastructure planning.

Remarkably, these same principles still guide modern agriculture. Grain silos, post-harvest storage technologies, irrigation systems, food preservation methods, and national food security programmes all reflect Joseph's ancient solution, helping nations withstand droughts and disasters, just as it helped Egypt thousands of years ago.

MY THOUGHTS

What strikes me most is that Joseph was not a scientist or engineer by training, yet his plan reflects sound reasoning that modern experts would recognize as good practice. This makes me wonder how many other “ordinary” Bible narratives quietly contain insights into science, systems, and even glimpses of the future, waiting for us to look beyond the surface of faith and ask deeper questions.

As a student at Arusha Science, I have also seen how these ideas connect to real life. I have observed how food can be grown, stored, and preserved for future use, and how farming requires planning beyond the present season. We also learn the importance of preparing and saving for the coming year. This has helped me understand Joseph's story in a different way. His idea was not only about surviving a famine; it was also about planning wisely, using available resources, and preparing today for the challenges of tomorrow.



CAMPUS LIFE

SCHOOL DINING EXPERIENCE

Nourishing Young Minds and Bodies, Everyday.



At Arusha Science, food is more than something placed on a plate. It is part of how we care for our students.

One of the comments we hear most often from parents is how much their children seem to grow and change after joining the school. We take pride in knowing that behind that growth is a carefully planned dining experience built around nutritious, balanced meals, fresh produce, cleanliness, and consistency.

Since the school opened its doors in July 2020, our kitchen has been at the heart of daily school life. In fact, our kitchen staff were preparing meals for staff even before our first students arrived. What began with just 45 students and a small number of staff has grown into a kitchen serving approximately 333 students and more than 50 staff members every day, managed by just five hardworking kitchen staff. Their numbers may be small, but the work is anything but.

On a typical day, they can prepare around 90 kilograms of rice per meal, up to 45 kilograms of maize flour when ugali is served, and as much as 26 kilograms of beans. Breakfast is served in two sittings, 7 am and 10 am, with menus rotating among maandazi, bread, eggs, and nuts. Lunch is served at 1:00 p.m. and dinner at 6:00 p.m., and at Arusha Science, being even one minute late is considered a delay. Punctuality is part of the standard.



Our meals are planned to provide a balance of carbohydrates, proteins, vegetables, fruits, and other important nutrients. A plate of ugali and chicken, for example, is accompanied by vegetables such as cabbage, Chinese greens, or spinach, together with a piece of fruit. Rice and pilau provide energy, while meat, beans, eggs, and milk provide protein. Vegetables contribute vitamins, minerals, and fiber, while fruits add further vitamins, minerals, and natural nutrients.

We are also fortunate to produce much of our own food. Around 80% of the vegetables and fruits we use are grown at school, including bananas, avocados, pawpaw, tomatoes, carrots, green peppers, and eggplants.



When seasonal fruits are unavailable, we supplement them with options such as oranges and watermelon. The school is also producing its own beef, chicken and eggs. Some meals require around 50 chickens, while breakfast can use up to 15 trays of eggs.

Then there is pilau! Served every Monday, Friday, and Sunday, with around 45 kilograms of meat per meal alongside vegetables and fruit, it is undoubtedly a student favorite. So yes, we love our pilau!



Cleanliness is equally important. Our open kitchen is cleaned before, during, and after food preparation, while students take turns cleaning the dining hall and washing their own plates. On Sundays, students can enjoy Chai Maziwa, with approximately 50–60 liters of milk used.

Provisions are also made for students with known food allergies and dietary concerns. After eating, responsibility continues beyond the kitchen. Students help care for their dining environment; fresh, purified water is available to drink, and the school shop provides additional snack options.



From the farm to the kitchen, from the kitchen to the dining table, every meal represents something bigger than food. It is nourishment, discipline, responsibility, and care, served every day.

CHESS CLUB

By - Shawn Marealle
Form VI - Club Chairman

Clubs are also part of our school life, and among the many clubs we have at Arusha Science, the Chess Club is doing amazingly well.

The Chess Club officially started in the first term of 2026, with the aim of teaching students how to play chess, helping them understand its benefits, and creating opportunities for students to compete and challenge themselves.

Actually, the interest in chess started even before we officially had the club. Mr. Msangi (Chemistry Teacher) used to lend his chessboard to Form Ones and Form Fives, and sometimes we would borrow it to play. That small opportunity helped many of us discover how interesting the game can be.



Today, we have 3 chessboards and more than 30 club members. Most of our members are Form Ones, with a few Form Fives and Form Sixes, and currently only one student from Form 2.



Our club welcomes everyone, students who already know and enjoy chess, as well as those who have never played before but want to learn.

For me, chess is much more than just moving pieces across a board. Chess teaches you to think before you act. You have to look at the position, consider different possibilities, anticipate what your opponent might do, and then decide on your next move.

Sometimes you make the wrong move, lose the game and have to start again. That teaches you patience, resilience and how to learn from your mistakes.

These skills can help us beyond the chessboard. Chess can improve concentration, memory, logical thinking, decision-making, problem solving and strategic thinking. It encourages us to slow down, analyze situations carefully and avoid making decisions based only on emotion or pressure. These habits can also support us in our academic work because learning is not only about remembering information, it also about understanding, analyzing and finding solutions.



That is why I would encourage more students to join us.

You do not have to be good at chess to join the Chess Club. You just need to be willing to learn.

We are also looking forward to our first friendly interaction with Turkish Maarif School in Arusha, where we hope to meet and play with other young chess players. We are also planning to hold our first chess tournament in the last term of 2026.

Our hope is to continue growing the club and bring in even more students. Chess gives us a chance to refresh our minds, have fun and build skills that can help us both inside and outside the classroom.

And to parents, I would say this: encourage your children to play chess. Sometimes, helping a child build a better mindset starts with simply giving them a chessboard and letting them learn to think for themselves.

So, if you have never played before, come and learn. If you already know how to play, come and challenge us. Either way, there is always another move to discover.

MEET THE TEACHER

SARA ZUWENA NYANGASA
***Curiosity, Chemistry &
The Heart of a Teacher***



What makes a great science teacher?

Is it simply knowing the subject, or is it the ability to make students curious enough to keep asking why?

For Sara Zuwena Nyangasa, it is both, and much more. A Chemistry teacher, Laboratory Technician, mentor, and proud woman in STEM, she believes science is best experienced rather than simply memorized.

Meet the person behind the laboratory coat, and discover the journey, values and inspiration that shape her teaching.

1. Tell us a little about yourself. Who is Sara Zuwena beyond the classroom?

Beyond the classroom, I'm someone who loves learning, spending time with family, and finding joy in the simple things in life. I'm naturally curious, which is probably why I love science so much. I also enjoy encouraging young people to believe in themselves and never stop asking questions.

2. What inspired you to become a teacher, and why Chemistry?

I have always been fascinated by how things work, and Chemistry gave me answers to so many everyday questions.

Along the way, I realised I enjoyed explaining those ideas to others just as much as learning them myself. Becoming a teacher felt like the perfect way to combine my passion for science with my desire to make a difference in young people's lives.

3. Was there a teacher or mentor who inspired your journey?

Yes. I was blessed to have a teacher who believed in me even when I doubted myself, my Mathematics teacher, Mr. Denis Njuu. He challenged me to work

“Science becomes unforgettable when students experience it themselves.”

hard, encouraged me to stay curious, and showed me that a great teacher doesn't just teach a subject; they inspire confidence. I've carried those lessons with me throughout my career.

4. What do you enjoy most about teaching at Arusha Science?

What I enjoy most is the energy and curiosity of the students, as well as the environment and technology facilities that help me improve my skills every day. Every day brings new questions, discoveries and opportunities to help both my students and me grow. It's incredibly rewarding to see a student finally understand a concept they once thought was impossible.

5. Many students find Chemistry challenging. What advice would you give them?

Don't let the subject intimidate you. Chemistry is like learning a new language, it takes patience and practice. Ask questions, don't be afraid to make mistakes, and remember that every expert was once a beginner.

If you stay consistent, you'll be surprised by how much you can achieve.



6. As both a Chemistry teacher and Laboratory Technician, what excites you most about practical science?

I love that practical work transforms theory into something students can actually see and experience. There's something special about watching a student's face light up when an experiment works exactly as they predicted, or even when it surprises them. Those are the moments that make science unforgettable.

7. Can you share one experiment that never fails to amaze students?

The Elephant Toothpaste experiment is always a favourite. The excitement in the room when the colourful foam suddenly erupts is priceless. It's fun, memorable, and a great reminder that Chemistry can be both educational and exciting.

8. What is one misconception students usually have about Chemistry?

Many students think Chemistry is all about memorising formulas and equations. I always tell them that Chemistry is really about understanding patterns and solving problems. Once they begin to see the logic behind it, everything starts to make much more sense.



9. As a woman working in science, what message would you like to share with young girls who dream of becoming scientists?

Never let anyone make you believe that science isn't for you. Your ideas, creativity and determination matter. Believe in yourself, work hard, and don't be afraid to dream big. The world needs more women in science, and you can absolutely be one of them.

10. What challenges have you faced throughout your journey, and how did you overcome them?

Like many people, I've faced moments of self-doubt and challenges that tested my determination. What kept me going was my faith, the support of people who believed in me, and the decision to keep moving forward one step at a time. Every challenge taught me something valuable and made me stronger.

11. What does success mean to you?

Success isn't just about achievements or titles. For me, it's about making a positive impact on others, staying true to my values, and knowing that I've helped someone become a better version of themselves.

12. As a Muslim woman, has your faith influenced the way you teach, lead, or interact with your students?



Very much so. My faith reminds me to treat everyone with kindness, patience, honesty and fairness. I try to create a classroom where every student feels respected, encouraged and valued, because I believe learning happens best in an environment built on trust and compassion.

13. What values do you hope every student carries with them long after they leave Arusha Science?

I hope they leave with integrity, discipline, curiosity and resilience. I also hope they understand that learning doesn't end when they graduate. If they remain curious and never stop growing, they'll be prepared for whatever life brings.

A LITTLE MORE ABOUT SARA

Tea or coffee?

- **Definitely tea!**

If you weren't a Chemistry teacher, what career would you choose?

- **I'd probably work as a researcher or an industrial laboratory technician.**

Which scientist would you love to have dinner with?

- **Marie Curie. I'd love to hear about her journey, the challenges she overcame, and what kept her motivated to keep pushing the boundaries of science.**

Three words your students would use to describe you?

- **Charming. Supportive. Dedicated.**

One fun fact students may not know?

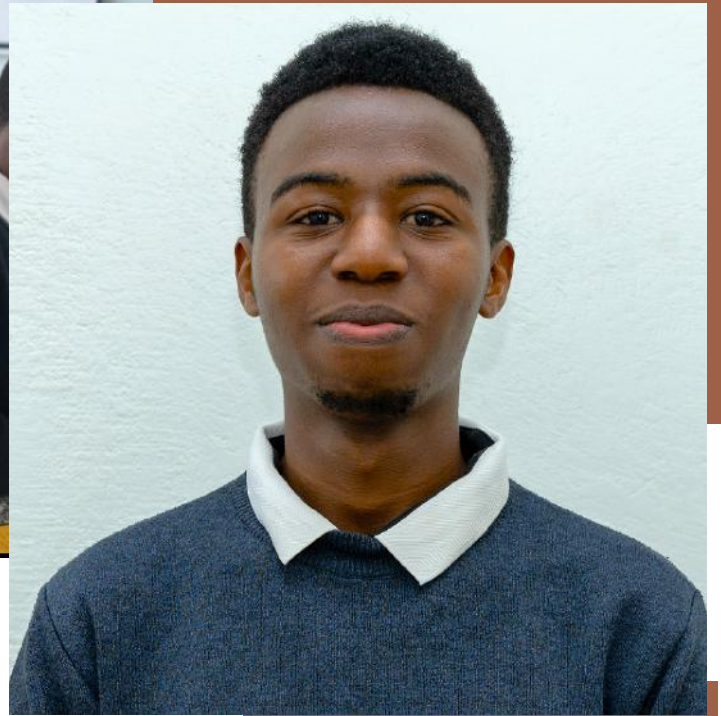
- **I still get excited whenever I learn a new laboratory technique or discover a new scientific fact.**

Your favourite quote?

- **"Education is the most powerful weapon which you can use to change the world."**
- Nelson Mandela

Complete the sentence: "At Arusha Science, we don't just teach..."

- **"...we inspire curiosity, nurture confidence, and prepare young people to become problem-solvers, innovators, and leaders for tomorrow."**



DIONIS LENGA

From Pioneer Student to Technology Mentor

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

For Dionis Lenga, Arusha Science is more than the school he attended. He was part of its very first graduating class, one of the students who helped shape the early culture, standards and identity of a young school with a big vision.

Today, he has returned not as a student, but as a STEM Facilitator, SITU Assistant and Computer Programming Facilitator, helping today's students explore the same world of possibilities that once inspired him.

An IT graduate and educator passionate about technology, innovation and continuous learning, Dionis enjoys building digital solutions, exploring Artificial Intelligence and helping others develop their skills. His goal is simple but ambitious: to use

technology to solve real-world problems and make a meaningful impact. When Dionis first joined Arusha Science, the experience was different from what he had known at O-Level. The timetable included an evening rest period from 4:00pm to 5:00pm, while SITU sessions introduced students to new ideas and skills almost every day.

At first, he admits, it felt like a lot. Eventually, however, he grew to love it.

“The food was good and every meal was accompanied by some fruits,” he recalls. “Life was actually amazing.”

Some of his favourite memories remain remarkably simple. Saturday mornings were spent working in the school's vegetable gardens with Mr. Msangi. On Sundays, students would wake up early for jogging.

There were also Sunday Masses and the boys' choir, “Holy Brothers,” where Dionis remembers singing with great enjoyment.

Then there were the SITU sessions with Madam Rukia, which taught him valuable lessons in confidence, creativity and teamwork. Those experiences clearly stayed with him.

Dionis never imagined that he would one day become a member of the Arusha Science staff. During university holidays, however, he would occasionally return as an alumnus to help with activities, particularly within SITU.

That connection eventually became something much bigger. What brought him back was the opportunity to do what he loves: innovation, technology and problem-solving. Today, he gets to explore and teach areas such as 3D printing, Virtual Reality, Robotics, Artificial Intelligence, computer programming

and computer applications, while helping young people understand how technology can be used to solve real problems.

Dionis' day can begin with teaching classes, but his work does not stop when the lesson ends.

He facilitates SITU sessions, supports student projects and helps students explore different technologies. As a technology resource at the school, he is also there whenever a student or staff member encounters a technical challenge.



integrated into Arusha Science, creating a cashless system within the school while allowing parents to monitor the money their children spend.

For Dionis, practical learning is essential because students should leave school with more than a certificate. They should leave with skills they can use in everyday life.

Knowing the theory behind something is not always enough, he explains. Students need practical experience to become competent, troubleshoot problems and confidently apply what they have learned.

It is also why he believes Arusha Science has an important role to play in preparing students for the future.

Dionis encourages today's students to start learning automation early. As more tasks become automated, he believes students have an opportunity to become experts in the technologies shaping that future.

If he could return to his own Form Five classroom, his advice would be simple: use the time well. He would invest more time in practicals, understand his future career goals and align them with the rapid growth of technology.

Dionis' work extends beyond the school. During his free time, he freelances through Upwork, Mercor

and Outlier. He is also the Lead Developer at **OLAM TECHNOLOGIES** and runs his own company, **LENGAZ**.

Both companies focus on creating digital solutions for different sectors, including businesses, vendors, schools and offices. His journey is therefore continuing to grow, but Arusha Science remains part of it.

He believes what makes the school different is its combination of resources, from classroom technology to laboratory equipment, exposure to emerging technologies and preparation for the Fourth Industrial Revolution.

Students are also introduced to basic computer literacy through ICDL, while the school places strong emphasis on building the confidence to express ideas and emotions without fear.

Quick Fire

Favorite programming language?

- **JAVA**

Coffee or tea?

- **Coffee**

Windows, Mac or Linux?

- **Linux**

One app you cannot live without.

- **ChatGPT**

One technology you think will change the world.

- **Autonomous Robotics**

One word that describes Arusha Science.

- **Innovative**

Finish this sentence:

"The future belongs to those **who never stop learning and building.**"

There is something particularly meaningful about helping the teachers who once taught him. **"Most are my teachers who taught me, so I always feel good helping them,"** he says. **"It's like I'm returning what they planted in me."** With students, his role extends beyond technology. He describes himself as both a brother and a mentor. Students visit his office to discuss everything from personal issues and ideas they want to implement to simply seeking guidance. His role, he says, is to listen and guide them.

What excites Dionis most about his work at Arusha Science, is seeing students use technology to create solutions for African challenges, rather than simply following global trends.

One project that has particularly impressed him is E-Money, developed by students who were in Pre-Form Five and have now joined the school as Form Five students. Dionis is helping them explore how the project can eventually be



WHY DOES A COLD DRINK “SWEAT”?

A cold bottle does not actually sweat. The water droplets on the outside come from the air.

Air contains invisible water vapor. When warm, moist air touches the cold surface of a bottle, it cools down. Cold air cannot hold as much water vapor, so some of it changes from gas into liquid droplets on the bottle. This process is called condensation.

So that “sweat” on your cold drink?
It was water hiding in the air all along.

WHY DOES HOT FOOD TASTE DIFFERENT FROM COLD FOOD?

What we call “taste” is actually a combination of our taste buds and sense of smell. When food is warm, heat helps release more aroma molecules into the air. These molecules travel to your nose, where they combine with signals from your taste buds to create the flavor you experience.

Very hot or very cold food can also temporarily affect how strongly your taste buds detect certain flavors. Therefore, when hot food smells and tastes better, there is science behind it: Your nose, tongue and brain are working together to create flavor.



WHY DOES A METAL SPOON FEEL COLDER THAN A WOODEN ONE?



Have you ever touched a metal spoon and a wooden spoon that have been sitting in the same room and thought, “The metal one is colder”?

Surprisingly, they are usually the same temperature.

So why does the metal feel colder?
The answer is heat transfer. Your hand is warmer than the spoon. When you touch either object, heat moves from your hand into the object. Metal is an excellent conductor of heat, so it quickly carries heat away from your skin. Wood, however, is a poor conductor.

It does not take heat away from your hand nearly as quickly. Your brain interprets the rapid loss of heat from your skin as “cold.” So the metal isn’t necessarily colder.

It is simply better at stealing your heat. And this is why a metal chair can feel freezing in the morning, while a wooden chair sitting right beside it feels much warmer, even though both have been exposed to exactly the same air.

The surprising part:

You don’t actually feel temperature directly. You feel the movement of heat.

SCIENCE NEWS & TECHNOLOGY

No. 1 – China's robots are beginning to run faster than humans



At the 2026 World Humanoid Robot Games in Beijing, a Chinese humanoid robot called Tiangong Ultra ran 100 metres in 8.64 seconds, faster than Usain Bolt's 9.58-second human world record.

More than 2,000 humanoid robots competed in events including sprinting, football, boxing, table tennis and practical tasks such as making beds and shelving objects.

The fascinating part is not really that a robot can run fast. It is that scientists are now trying to teach robots to operate in the physical world.

The bigger question: When does a robot stop being a machine that follows instructions and become a machine that can understand and act in the real world?



No. 2 – Cancer Vaccines Made just for You



Scientists are developing a new kind of cancer treatment: vaccines designed for an individual patient's cancer.

Doctors take a sample of a person's tumor, identify

what makes that cancer unique, and create an mRNA vaccine that teaches the immune system to recognize and attack those cancer cells.

In August 2026, Moderna and Merck reported promising results from a late-stage trial in melanoma, showing that their personalized vaccine could reduce the risk of the cancer returning or spreading. It is not yet a cure, and other cancer-vaccine trials have also faced setbacks.

Where we are: We are moving toward a future where cancer treatment could be designed specifically for each patient.

No. 3 – The Farm Is Becoming Smarter



Farmers already use drones, satellites and sensors to monitor their crops. Now AI can analyze that information, spot problems and help decide what plants need.

In 2026, the next step is robots. Researchers are developing machines that can move through fields, identify sick plants or weeds, and deliver water or treatment exactly where it is needed. It's not a fully automated farm yet, but the direction is clear: Machines can see. AI can understand. Robots are learning to act.

Where we are: Farming is moving from machines that simply do the work to machines that can see a problem and decide what to do about it.

No. 4 – NASA's New Telescope Will Help Us See the Universe Like Never Before



NASA has launched a powerful new space telescope that can see huge areas of the universe at once. It will help scientists study how galaxies formed, search for planets around other

stars, and investigate some of the biggest mysteries in space. One of its most exciting abilities is to block the bright light from stars, making it easier to see planets that are normally hidden in their glare.

The telescope will also help scientists study dark matter and dark energy, invisible things that appear to shape how the universe behaves.

Where we are: We can now look farther, see more of the universe at once, and get a better look at worlds beyond our solar system.

The big question: What will we discover when we can finally see parts of the universe we've never been able to see before?

OUR COMMUNITY

MORE THAN WATER

How Arusha Science turned a water challenge into a sustainable solution for its school and community.



Story By Mr. Ally Bashiri Msangi
Chemistry / SITU Teacher

When Arusha Science was still a young school, water was not always available. The school depended on the village pipeline, which supplied limited water and not every day.

With only 45 students at the time and fewer staff members, the school managed, but as the school grew, so did the challenge.

To be honest, the solution was ambitious: a dedicated pipeline from Bondeni City to Arusha Science, nearly seven kilometres long. The project required official permission to cross a military area, while the school took responsibility for financing excavation, pipe installation and plumbing. Despite the challenges, the pipeline was completed, giving the school a more reliable water supply.

However, the vision did not stop there. A comprehensive rainwater harvesting system now includes four underground collection tanks and two main storage tanks, with a combined capacity of approximately **4 million litres**.

When full, the large storage tank can provide water for students and staff for more than three weeks, even when external supply is interrupted.

to make every drop count. Three of approximately five proposed water projects are already in use, including a wastewater recycling system that treats water from kitchens and bathrooms for irrigation. The system allows the school to reuse approximately 60% of its water.

And perhaps the greatest impact is beyond the school gates. As neighboring communities struggled with water available only twice a week, many residents connected to the school's pipeline now have access that is more consistent.

What began as a solution to a school challenge has become a solution shared with the community - a powerful reminder that at Arusha Science, science is not only learned; it is put to work.



In 2021, Arusha Science welcomed 139 Form Five students, significantly increasing the water demand. Vegetable production and other school activities added to the need, while a growing surrounding population placed even more pressure on the village supply. At times, the school had to purchase water from external suppliers.

Every drop is also treated and filtered before storage and distribution, with additional specialised filtration for drinking water.

True to the school's project-based approach to science, students and teachers have also explored ways



*EVERY DROP COUNTS
WHEN SUSTAINABILITY
BECOMES A SHARED
RESPONSIBILITY.*





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