



# Hidden Figures



Exceptional: students complete A Levels in less than a year

(above right) ASA founder Tom Ilube

## African Science Academy founder and tech entrepreneur **Tom Ilube CBE** explains how the continent's first girls-only STEM school helps its students reach their full potential

### What is the premise of African Science Academy (ASA)?

ASA is a girls-only, Advanced Level school for science and maths, which opened in August 2016 in Tema, Ghana. Funded by the African Gifted Foundation, a UK-registered charity founded in 2010, it is a pre-university boarding school for young women with outstanding potential in science and maths. ASA is a pathway to undergraduate study and future careers in science, computing, engineering, maths and many other subjects. Students attend from across Africa and are admitted after their senior secondary education, in preparation for progression to the best universities in Africa and around the world. We are able to offer full scholarships to all of our students.

### Can you explain what inspired you to set up the school?

I have a passion for education and love science and maths. I wanted to create a unique and special institution for young African women who share my passion for these subjects. In my career of over 30 years, I have seen the impact that technology can have on the world, and how it can open doors for your career. I wanted to open doors for other young people so that they can go on and have an amazing impact on their communities and country, on Africa and on the world.

### Of all the African countries, why did you choose to locate the campus in Ghana?

For several years, our charity ran summer schools in East Africa and West Africa. When we decided to create our permanent school, we wanted to choose a location that offered the ideal environment for us. We decided on West Africa first and then chose Ghana because of the importance that it places on education, the political and economic stability and the level of welcome and support that we received for our plans. We have not regretted our decision for a moment!

### Why did you decide to focus on educating girls?

It is so important that we provide opportunities for girls, particularly those with a passion for science, so it was an easy decision to focus on them. My vision is that over time we will unleash hundreds of extremely talented young African women scientists on the continent and the world, and I think they will have a distinct focus on how to tackle the continent's challenges. I can't wait to see what they will go on to achieve.

### How vital is the study of science, technology, engineering and maths (STEM) to Africa's future?

STEM studies are the bedrock subjects



of the 21st century. Africa must take its place at the top table in terms of technology talent. The future of the continent depends on success in this domain and there is huge potential to achieve exponential change through technology and science. Think of the impact that the invention of the internet has had! The internet has changed everything. The next big thing will be Artificial Intelligence (AI) and that will change everything again. I want Africa to

be a leader in shaping the future through technology and science.

### Is it true the girls have to complete A Levels in one year?

All of the young women who come to ASA will study three core subjects – Maths, Further Maths and Physics – at Advanced Level. They will

## WHO CAN APPLY

High-achieving female students from across Africa interested in careers in STEM. ASA is strongly academic and selects students who they believe will flourish in their intellectual environment.

sit the internationally-recognised Cambridge International A Levels at the end of our intense, one-year programme. In fact, our students arrive in August and sit their exams the following May, so it's ten months from start to finish!

### What does ASA offer students that other schools may not?

ASA offers students a world class education. Our cohort is small, just 25 girls each year, so we are able to give each student individual attention. ASA is fully equipped and the students are given laptops with WiFi from the start. We have all the physics lab equipment that we need, but it's not just the academic side that makes ASA special. Our extra-curricular programme is outstanding, with a strong focus on creative problem-solving and excellent communication skills. Activities include community service, robotics, sports,

## ASA APPLICATION PROCESS

# 1

### Application

- Apply through the online portal or download forms from the African Gifted website [www.africangifted.org](http://www.africangifted.org)
- Pick up a form from an ASA volunteer

#### ESSENTIALS

- Recent exam results
- 6 high school report cards
- Teacher recommendation

# 2

### Entrance Exams

- Selected applicants will sit entrance exams in their home countries and regions under the supervision of ASA volunteers
- Applicants are expected to submit essays on the exam day

#### KEEP IN MIND

- Exams consist of:
- Maths aptitude tests
  - Physics aptitude test
  - Essay – the topic will be communicated before the exam day

# 3

### Interviews

- Shortlisted applicants are interviewed by the ASA team in order to know more about them

#### INTERVIEW TYPES

- Face-to-face with Ghanaian students
- Video interviews with applicants from other African countries



Big names: Every week ASA attracts high profile people like Sir Lenny Henry to its guest speaker programme



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debating, choir and board games. There is a host of clubs started and run by students themselves. Our guest speaker programme ensures that every week, students enjoy interactive lectures with leading experts from Africa, UK, USA and around the world. We also organise trips to enrich students' learning and we have run a successful exchange programme with St Paul's Girls' School in London.

#### **What else makes it unique?**

The school is designed for young African women who are truly gifted in the field of science and technology. So far, we have accepted students from Ghana, Nigeria, Sierra Leone, Cameroon, Ethiopia, Uganda, Kenya, Zimbabwe, Togo and Zambia. All students have access to full scholarships. Our students have gone on to universities across the world, including across Africa, the UK and the USA, many on full scholarships provided by those institutions. We have an exceptional leadership team, guided by headteacher Mrs Efua Adabie. A scientist by training, she has many years' experience teaching in both the UK and Ghana, and is supported by a wonderful, dedicated staff.

#### **HOW MANY GIRLS ACCEPTED?**

It is a highly competitive process and hundreds of candidates apply every year. Currently the Academy accepts 26 girls from all over Africa. At least 50% are Ghanaian students.



Girl Power: Pupils get a world class education and make friends for life

There is no other school quite like ASA in African and in fact, we believe, anywhere in the world.

#### **Are there any highlights that you are particularly proud of?**

My highlights have been the girls themselves. The results after just one year have been amazing. Take our Class of 2018 for example. They achieved 100% pass rate for their A Levels with 79% of the grades being A\*-B, and 27% of the students achieving an A\*. 100% of the Class of 2018 received university offers with 95% of them receiving scholarship offers. But beyond these incredible results, when you meet ASA girls, when you hear them speak and debate, when

you watch them introducing themselves to some of the most powerful people in society, that is when you realise the difference that ASA makes to these young women in such a short space of time.

#### **What are your plans for the school's future?**

To grow in size, but we are very careful. We prioritise quality over quantity. It is far more important to us to get excellent results and find exciting and inspiring pathways for our young women than to increase numbers. We want to be seen as Africa's premier science and maths school for girls and we want to deliver a world class education and experience to the select group of students that have the privilege of spending a life-changing year at the African Science Academy.