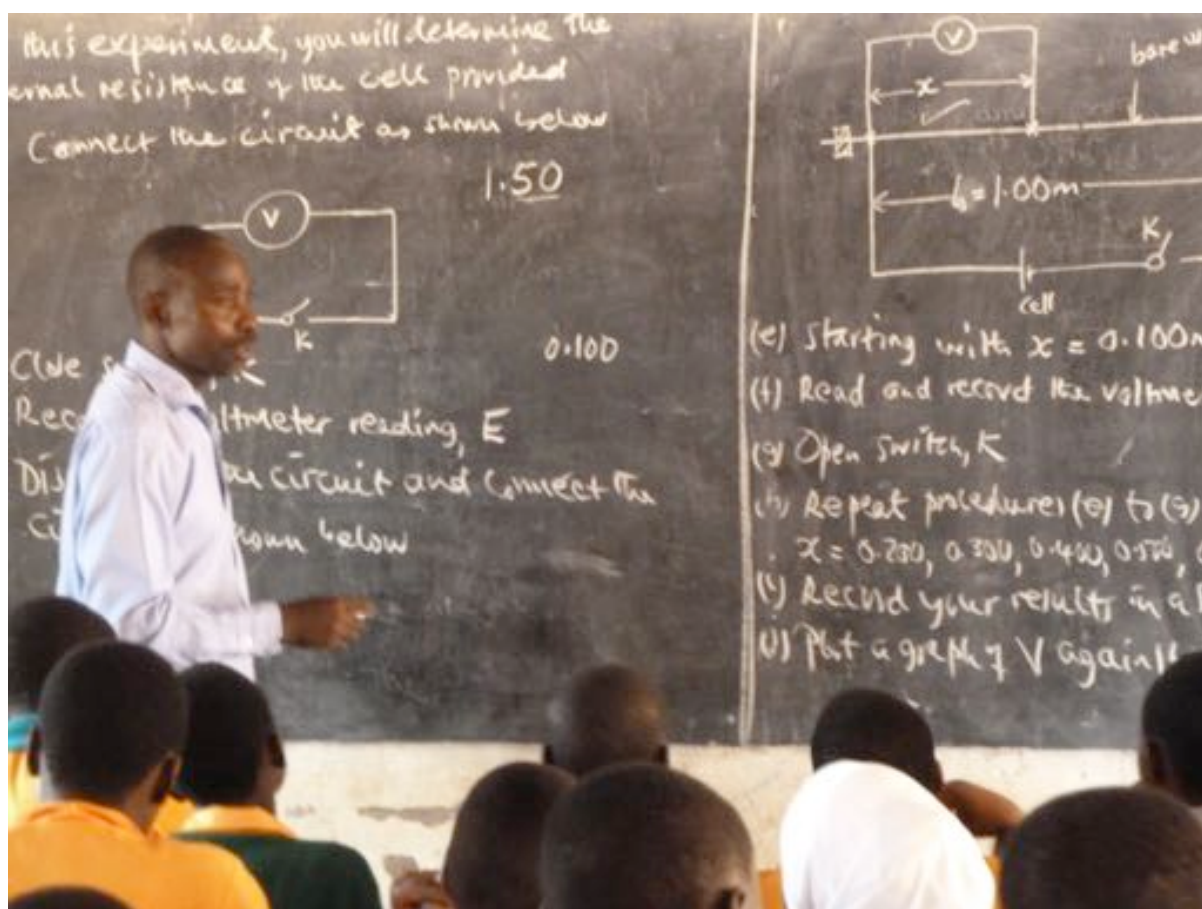




Uganda Humanist Schools Trust

Isaac Newton High School, Kateera, Masaka

July 2016



Peter Kisirinya giving Senior 4 physics laboratory class briefing on electrical circuits

**Drought**

This was our first visit in the month of July. The long rainy season runs from March to early June, around the time of the Equinox. While there is always rain in southern and central Uganda, at least a shower every two or three days, in 2016 the drier season had started earlier in May and there has been little

rain since. This was immediately evident during our drive south-west from Entebbe to Masaka. The maize crop, everywhere, had failed. The plants were brown and no corn had developed on them. The price of maize will rise very high this year, which will hit most Ugandans who have to buy maize and maize flour, as a staple ingredient of the diet. The loss of the crop will hit those many farmers

around Isaac Newton High School who rely on the sale of surplus maize to pay school fees.



Already many parents are in serious arrears in their payment of fees and this is squeezing school cash flow. The failed harvest is also raising the cost of maize flour that the school has to buy to feed the students.



The school's buildings and grounds are well maintained but the effect of the drought is evident. Grass areas around the school were parched and looked dry and brown. The maize in the school garden was lost, so instead of providing some of its own food for school dinners, the school will need to buy even more food than usual from local markets. This will put further pressure on the school's finances until the next harvest is ready in January 2017.

The following picture shows the students queuing outside the school kitchen, as they wait to collect their daily lunch. Over the past year, the school has been making a concerted effort to raise the quality of the school lunches. On the day of the picture, students were being served a new GM variety of high

vitamin sweet potato, beans, and a sauce, supplemented with local green vegetables (nakati). Twice a week the children have chicken, which means buying 40 chickens each time to feed the whole school.



The next picture shows one of the dinner ladies serving additional vegetable items, which can be purchased by students individually.



The latest addition to the school is a tuck shop (above), which they call their canteen. It has small things that students can buy such as:

- sachets of Omo for washing clothes
- toothpaste, brushes and deodorant
- fruits from local farms e.g. mangoes, passion fruit, bananas.
- stationery such as notebooks and pens
- torch batteries
- tomato, brown and chilli sauce!

The shop lady also manages for free the lending scheme for books bought by UHST to promote Reading for Pleasure. These are stocked on the shelves to the left of the picture.

Since our last visit, the school has made further progress on improving the site. A retaining wall to hold back soil and to divert floodwater away from the classrooms is well advanced (picture below). The school is also improving school roadways and paths, which is particularly important in wet weather.



The school nurse, Sarah (below), is now well established in her post and is running a very effective school clinic. Students are now treated for a range of conditions including: malaria, upper respiratory and intestinal infections, small wounds and injuries, headaches and period pains. The clinic has saved money that the school had been spending buying health care from clinics and hospitals outside the school. There is no free health service in Uganda! Neither is there free education.



Sarah's role includes the promotion of health education. She liaises with the local Health Department to arrange talks and demonstrations covering such topics as: first aid, sex education, malaria and HIV prevention. Students each pay 10,000 Uganda shillings (£2.50) per term for health care. This covers the cost of the clinic, medicines, the nurse's salary and hospital fees for those students who need to go to local hospitals and health centres for the treatment of more serious conditions.

## Headteacher



Our meeting with Ezra Mulwana, the school's Headteacher was interesting as always. Ezra has been with the school since it opened in 2006. He is a graduate teacher of Geography and Head of the Geography Department. When Ezra started at the school there were only a handful of students being taught in an

unfinished classroom with an earth floor and very little light coming in through the small unglazed windows. He, like other teachers, were paid on a casual basis by the lessons they taught – as little as 50p per lesson.

How things have changed! The school has expanded to 420 students. There are many good quality buildings. Below Peter Kisirinya and his brother Edward Bakulumpagi Weranga, the site manager, stand outside the school hall, which has satellite TV so that students can watch films and TV programs at the weekend.



The school employs 27 teachers, 15 of whom are university graduates, the remainder trained in National Teachers' Colleges. Most of the teachers are on formal contracts and they are enrolled in the National Social Security Scheme in which teachers contribute 6% of their salary and the school 12% towards the teachers' pension scheme. There are also 11 ancillary workers including: askaris (security guards), cooks, bursar, site manager, school nurse and hostel wardens. Below the School Bursar, Winnie Nassirinya, is shown working hard on the school book-keeping.

Ezra was displaying a well-deserved level of confidence and satisfaction that I had not seen in him before. This is due, not least, to the progressive improvement in the school's examination results, which have improved out of all recognition. In 2016 Isaac Newton High School was the 5<sup>th</sup> highest ranked school in the district on the basis of its performance in national exams.



The school is not, however, without its challenges. There is a national shortage of science teachers and two Physics teachers had recently left Isaac Newton for better-paid jobs in other schools. They had managed to replace one of them and uncovered classes are being taught at weekends by Peter Kisirinya, the School Director. Pay at Isaac Newton is still low, but has improved greatly on the early years. Furthermore, in order to attract and retain staff, a number of incentives had been introduced. All teachers are able to claim a travel allowance to cover the costs of transport to and from the school, which is quite isolated. Many teachers are given a housing allowance, which some use to pay board in houses in the two nearby villages. The biggest perk of all is that each teacher is allowed free education in the school for up to two of their children. As schooling is the major outgoing for most Ugandan families this is a very important perk. Additional children can also attend the school at a discount on fees.

There were a number of other challenges reported by Ezra. The school is waiting for the arrival of mains power and, in the meantime, has to rely on a solar system that we put in for them 6 years ago. These days the gel batteries

from the solar panels are retaining a much-reduced charge, so computers only work for an hour each day.



The other problem he feels, as a keen sportsman, is the lack of a school playing field. They use a village field half an hour away, and have to clear off the cows each time they play. The school inspector, who visits the school each year, says this is no longer acceptable. It is a Ministry requirement that all schools have their own dedicated playing field. With a grant from UHST the school acquired the tenancy of a block of land, but it will either need up to £20,000 to hire excavators to level it to give a suitable playing surface or to rent land in a flatter place. Although we recognise the need for the school to have its own playing field, UHST does not feel we can justify spending such large amounts on providing one when there are currently more pressing educational needs.

Since we visited in February the water pump, which supplies the school with fresh water from the well in the bottom of the valley, failed and has had to be replaced. The lack of pumped water for several weeks meant that students had to leave lessons on a rota basis to fetch jerry cans of water from a source half an hour away. It brought home to everyone just how transforming the pumped water project had been. Fortunately, normality had been restored before our visit.

### Managing Success

Improvements in the school estate and in examination results have brought a huge increase in the demand for places. The local

community regard Isaac Newton very much as “their school” and they expect it to accept local children, almost irrespective of how much of the school fees they can pay. Recognising the huge social need, the school has tried to squeeze in ever more students, with consequent pressure on hostel accommodation and other resources.

#### Student Numbers in 2016

|          | BOYS | GIRLS | TOTAL |
|----------|------|-------|-------|
| Senior 1 | 49   | 71    | 120   |
| Senior 2 | 35   | 47    | 82    |
| Senior 3 | 39   | 32    | 71    |
| Senior 4 | 27   | 51    | 78    |
| Senior 5 | 19   | 23    | 42    |
| Senior 6 | 11   | 10    | 21    |
| TOTAL    | 180  | 234   | 414   |
| Boarding | 115  | 148   | 263   |

The school has a single stream, with one class in each year. Unfortunately, this means it is having to cope with class sizes of 70 to 80, with 120 (when they are all there) in the first year. These figures are extraordinarily high by rich-world standards, but not at all unusual for Uganda, where many public and private schools have classes of 150 or more. When there is a huge shortage of school places there is a trade-off between serving the needs of the community by taking in more needy children and the need to maintain and raise educational standards. Contrary to popular belief, international research has found little correlation between class size and educational attainment. However, there are clearly limits. In Uganda, children are well behaved but when the class is very large it becomes difficult for students to see the chalk board and hear the teacher (especially when there is rain clattering on a corrugated iron roof!).

The school is considering two options. The first is to apply technology to improving

teacher effectiveness in large classes. Some schools in Uganda are putting in microphones and speakers, and equipping classrooms with laptops and data projectors to improve the quality of presentation. Alternatively or additionally, the school could create a second stream to reduce class sizes to a maximum of 50 to 55. To implement the lower class size option an additional classroom block with 4 new classrooms is urgently needed at a cost of £25,000 to £30,000.

Peter Kisirinya would like to combine both of these approaches. He envisages the school setting a limit on the total school population between 500 and 600, with a maximum class size of 55. He would equally like to have laptops and data-projectors in each room.

UHST supports this plan, but we are worried that we may not be able to raise sufficient funds for the infrastructure required to complete the school. The profile of annual donations to the charity is on a downward trend. Whereas, in 2014, we raised £94,132 for the Humanist Schools in Uganda; in 2015, our income fell by more than £10,000 to £83,605; and, in the current year, income might be as low as £50,000 to £60,000. As much of this money is used to provide scholarships and to buy books and other learning resources, there is little money left for major buildings. Almost all the large buildings that we have helped with before have come from single large donations, generally the proceeds from wills.

In addition to requiring extra classroom construction, the school urgently needs more boarding places. The girls' boarding hostel was designed to accommodate 96 girls, with 3 double bunk beds (6 girls to a room). However, the hostel currently accommodates 148 girls. The rate of occupancy is not excessively high by Ugandan standards but UHST Trustees do not feel the overcrowding is healthy or safe. For example, very close contact among the students in the enclosed humid conditions of the hostels is leading to a spate of fungal infections of the skin. There is also concern about evacuation in the event of fire. In the Humanist Schools all the hostels

are divided into 8 or 10 small rooms to prevent the spread of fire. Every room has an escape through an opening window. The hostels are lit by electric light, so there is no need for students to use spirit lamps. There is also an alarm gong and fire extinguishers. However, it is important not to be complacent. Uganda experiences periodic fires in school dormitories.



There is an urgent need to build a second girls' hostel and, in future, a second boys' hostel will be needed. The first girls' hostel cost £27,000 including solar lighting and beds. We shared the costs of the first boys' hostel with the school – with UHST contributing £18,000 and the school paying the remainder to the builder in instalments. This has worked well. The school income has increased and they only have one more payment to make to pay off the debt. Costs have risen but, if we could find another £20,000, then we could repeat the shared finance model and build a much-needed second hostel to alleviate overcrowding in the girls' sleeping accommodation.

## Curriculum & Student Outcomes

Isaac Newton High School offers a good range of subjects at O-level:

- English Language plus options in Luganda, Swahili and English Literature
- Physics, Chemistry, Biology, Mathematics
- History, Geography, Economics,
- Fine Art, Divinity and Islam

- Computer Studies, Agriculture, Entrepreneurship

Swahili is a new subject that is being promoted by the newly reformed East African Community, which is fostering Swahili as the *lingua franca* for East Africa. Luganda is the most widely spoken indigenous language in Uganda.

English Literature is also new. The school has introduced the subject for all students in an effort to promote a reading culture. They are hoping that, irrespective of how well students do in the English Literature exam, there will be positive benefits for all subjects and in educating students to be independent seekers after knowledge and truth both in school and in the adult world. The school encourages co-learning in the school and the pictures below shows this taking place.



In figuring things out together, it is evident that, as in other countries, there is a temptation to write on school desks!?



The three sciences are taught as separate subjects in Uganda. More time is devoted to science than is currently the case in the UK.

The History and Geography syllabuses have a strong focus on Uganda and Africa, although, they also study World Geography. The Economics syllabus applies economic concepts in a national and international context.

The Ministry of Education, up to the start of this year, required students to study either Christianity or Islam to senior 5. However, taking an exam in religion is optional and, unlike many other schools, very few students at Isaac Newton take exams in religion.

From the current first year a new combine Religious Education programme is being phased in. This has a large component of ethics and morality. I saw a lesson, for example, where the RE teacher was asking students to discuss whether white collar workers deserved to be of higher status than peasant farmers or blue-collar workers. This is a big step forward from the previous syllabuses, which could best be described as Biblical or Koranic Studies.

Computer studies has become compulsory as a supplementary subject for most students taking A-level. The syllabus revolves around developing student competency in the use of the Office suite of programs. UHST has just provided funds to expand the computer system to 20 computers, one of which is connected to mobile internet using a mobile phone dongle.



Agriculture is taught in the school. This has a strong practical component and gives students an opportunity to work in the school vegetable garden and to tend the school's pigs, poultry and cows (and calves below).



Entrepreneurship is a new subject. It has replaced Commerce and Accounting and is designed to promote Enterprise.

Co-curricular activities are optional though all students take part in them. They are particularly popular with boarding students at weekends. The current range of activities is: football, netball, volleyball, badminton, athletics, music, dance and drama.

Students in Uganda are required to go out of school for fieldwork related to their studies. In Geography, students have to describe, in the examination, fieldwork they have conducted during their studies. This year the school hired a bus and took the Senior 4 class on a one-week field trip to Western Uganda. They stayed at a student hostel run by Uganda

Wildlife Authority in Queen Elizabeth National Park in Uganda. The park rangers gave the students talks on wildlife management and tourism and they were taken to see elephants, hippos, lions and antelopes.



This was the first time they had seen these big beasts of Ugandan fauna. The trip also included land use and farming studies in an area where conditions were very different from where they lived. They went to Kilembe mines near Kasese. These used to be a main source of copper, but the copper was worked out in the early years of independence. However, a Canadian company is currently extracting cobalt from the waste heaps. They also had a tour of a large cement factory – Hima Cement – where the students had an opportunity to wear hard hats (below).



The school has an annual Dance, Music and Drama festival. They practice drumming and one boy plays guitar. There is a very strong school choir and the school is doing its best to maintain Uganda's rich history of tribal



dancing. During our visit we were treated to a vibrant show (picture below).



## Humanist Ethos of the School

Last year UHST facilitated a Humanist Ethos Project in Uganda. It brought staff together from Isaac Newton and Mustard Seed Secondary Schools and Kasese Humanist Primary School to agree a common statement on the Humanist Ethos of the Humanist Schools. They also created a declaration for new members of staff to sign to show that they understand and were prepared to uphold the Humanist Ethos in their conduct as teachers. Attractive and durable plastic posters espousing Humanist principles were designed for display in all three schools. The example below is on the responsibility of human beings for maintaining a healthy environment for current and future generations and to preserve species diversity.



The project inspired each school to set up a Humanist Students Association and we were hosted at a meeting of the newly formed Isaac Newton Association. It has a student committee, with Samuel Baguma, an S5 science student serving as publicity officer.

Peter Kisirinya is the patron and Ismael Ssozi, a maths teacher, helps guide the group as its Secretary. The association already has 70 members and is developing an ambitious programme of work with the local community.



Its first project is to promote "Hygiene in the Community". It intends to identify 50 particularly needy families, especially single parent households, in the vicinity of the school. It will offer to help with digging and planting subsistence crops, but its main purpose is to assess hygiene standards and offer advice, where necessary. The Association spokesman presented us with a list of requirements and is hoping that UHST supporters will help. The volunteers need water containers, soap and slashers to clear long grass in the compounds to deter snakes. They also want to help with the education of young children. As part of the programme they want to use the school's diesel generator, a laptop and data projector to take a mobile cinema into the villages. Already the school Director has bought them a set of wildlife documentaries to introduce the local people to the rich diversity of Uganda's fauna and flora.

If any UHST supporters have ideas on what other things a Student Humanist Association could be doing or would like to support their work then we would be delighted to hear from you.

In a question session the students asked us: *Who started Humanism? Who is the world leader?* They asked for some more readable books on Humanism (e.g. more copies of Rosen & Young "What is Humanism?") And

they would like us to find money for them to link up with the Humanist Associations in the other two schools.

## Gift of Microscope

Isaac Newton High School is trying to establish a reputation as a school that is good for science. Over several years UHST has been providing money for equipment and chemicals to enable students to learn science by doing science. Peter Kisirinya, the school's Director gives extra laboratory classes at the weekends. Below is a picture of a Senior 5 class conducting laboratory experiments.



Knowing this interest, Jon Jackson, a long-standing UHST supporter, donated a high quality binocular microscope to the school. My wife, Hilary, who is Emeritus Professor of Parasitology at Keele University, provided instruction on how to use the sophisticated piece of equipment.



The microscope is special because it has a sensory eye-piece that is capable of transferring a digital image to a laptop

computer so that specimens can be projected onto a screen using a data projector. This will enable the Biology teacher to set up microscope slides and show and discuss the biological features of each specimen with a large class.

## Scholarship Students

In the picture below, Hilary is talking to some of the new Senior 1 students who have been awarded scholarships funded by UHST supporters. She also spoke with all new Senior 5 students receiving scholarships.

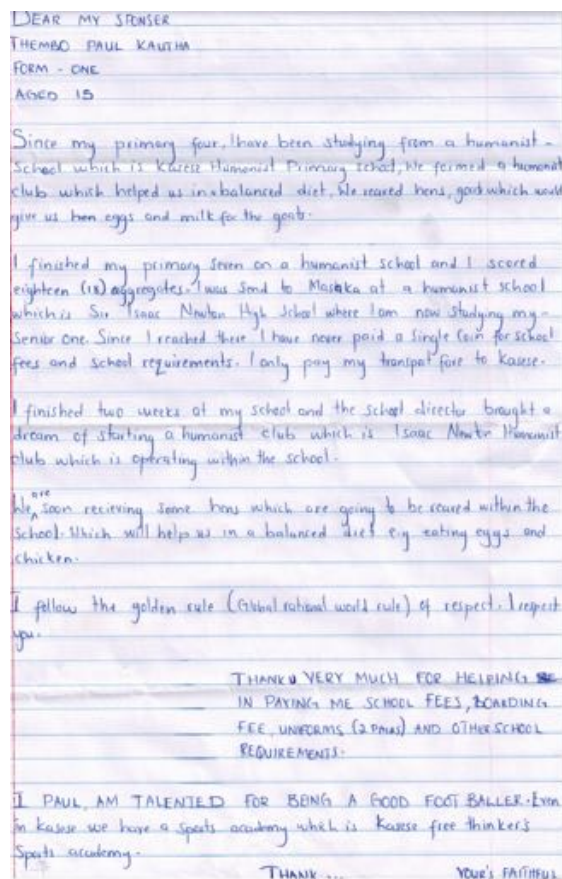


All the students obtained excellent marks in their Primary leaving examination or "O" levels, but are from very poor families who could not afford to let them continue their education. In addition she talked to a few needy students in other years that have been awarded scholarships to replace those scholarship students who failed to return to school after the last holiday for various reasons.

The school provides boarding places in the hostels for all the scholarship students this year, even if they are only supported by a day-student scholarship. This provides a safe environment, especially for the girls, and facilities to study in the evening and at the weekend. Students were especially appreciative of the books available for them to use, electricity to provide light for study in the evening and early morning and a source of water nearby. They all wash their own clothes and are responsible for keeping the dormitories clean. The students are very

satisfied with the friendly atmosphere in the school and the standard of teaching provided. They are very grateful to their sponsors for the opportunity their scholarship has provided for them.

You will see below a letter written by one student to thank his sponsor. Paul Thembo, who has been educated exclusively in Humanist Schools, wrote the letter. His first school was Kasese Humanist Primary School, and he transferred to Isaac Newton School on a scholarship provided by a UHST supporter. Paul is from a very poor family and you can see he is very grateful to his sponsor as he would not have been in school without their support.



This year Isaac Newton School has awarded a scholarship to a Senior 1 girl, Lairah, who is an albino girl (pictured below right). She is coping well and not experiencing the discrimination common in some African countries but has problems with her eyesight. We are intending to provide her with a pair of prescription

tinted glasses. They will make a huge difference to her comfort and ability to study.



Like other students in Uganda they work hard. Lights out in the school hostels is at 10pm. They are woken at 4am to wash and prepare for school prep, which starts at 4.30pm. After working for 2 hours they have a little time to themselves before breakfast at 7am. Formal lessons start at 8am with a short morning break at 10.30 for porridge and a one-hour break from 1.30pm for lunch. Formal lessons end at 5pm, then students have free time for leisure and to take part in sports and other activities. Boarders and growing number of day students stay on for the evening meal at 7pm, then they do more prep or other activities before they go to bed. Amid this tight programme each student has to contribute some time to daily chores such as cleaning hostels, classrooms, slashing grass in the compound and, sometimes, fetching water.

In order to reduce the incidence of malaria we have been providing mosquito nets to prevent students being bitten at night. The mosquitoes that carry *falciparum* (cerebral)

malaria, the most dangerous kind, bite both in the early morning as well as night. The school has realised that waking students up for early morning prep may be increasing their risk of being bitten and contracting malaria. Sarah, the school nurse, is monitoring this. Fortunately she has the latest dip stick tests for diagnosing malaria and the very best artemisinin-based preparations for treating the condition.

### Destinations of students

The school tries hard to monitor what happens to students when they leave school. It is not an easy task. Students take national exams in October and November and there is a long gap to the publication of O-level results in late January (before the start of the school year in February) and A-level results in March (when selection begins for the universities which start back October).

In 2015 78 students completed O-level exams and 28 students took A-level. The following tables show what happened to the students afterwards.

#### Destinations after O-level

|                                |     |
|--------------------------------|-----|
| A-level courses                | 40% |
| Lower-level vocational courses | 20% |
| Unskilled jobs                 | 30% |
| Return to help at home         | 10% |

A surprisingly high proportion of O-level students are accepted onto A-level courses. Some students stay at Isaac Newton School but others move to other schools. A main reason for movement is because the family have moved – there is considerable local movement of people taking place in Uganda, especially due to the general shift of population from rural to urban areas.

Lower-level vocational courses open to students who have complete O-level include: hairdressing, building trades, lower-level nursing and vehicle repairs. Almost a third go

into unskilled jobs such as shop work, domestic service, cleaning, agricultural labouring, riding motor-bike taxis (boda-bodas). A relatively small number continue to work with their families as peasant farmers.

#### Destinations after A-level

|                                 |     |
|---------------------------------|-----|
| University degree courses       | 60% |
| Higher-level vocational courses | 30% |
| Return to help at home          | 10% |

Although they have relatively small numbers taking A-level courses in the school they have a good success rate. 60% gain university places. Each year up to 3 students gain government merit scholarships which cover university fees and subsistence. Such scholarships are special as only 4000 are awarded in the whole of Uganda each year. This year Samuel Ssebulime will be taking up a merit scholarship to read agriculture at Makerere, Uganda’s top university. He gained 2 As and a B grade at A-level and will be doing some part-time teaching at the school both before he goes to university and during his studies. This will help him to pay for the extras that all students need, not least books.

About a third of students are accepted onto vocational courses. If they train as teachers or nurses then the government pays tuition fees. If they go on other courses, such as hotel management and tourism or book-keeping and accounting then they will need to find their own fees. This is where extended family members come in useful. The first successful member of a family is expected to provide a helping hand to those following.

### UHST support in 2016

In 2016 UHST supporters have funded 50 day and 20 boarding scholarships in the school. The scholarships bring bright but needy children into the school and providing an education to such children really does transform their life chances. In addition, so far this year we have approved the use of funds for:

- Improvement of site road and paths, retaining wall for soils and drainage, and for a gatehouse for receiving visitors to the school.
  - A year's supply of re-useable sanitary pads – Afripads - for all girl students.
  - Replacement of the existing solar batteries to restore the electricity supply to the computer lab to its original condition. Expansion of the system with an additional 10 solar panels, batteries and new inverter.
  - Upgrading the computer system to 20 workstations by adding 10 low power use Zotec Z-box mini-computers and 2 HP laptops with DVD writers. This involves purchasing additional low-power use flat screen monitors, mice, headphones for listening to online video lessons, and a mobile dongle to give live internet and email on one of the Z-box computers.
  - The purchase of a large number of new books to support the Reading for Pleasure programme.
  - Purchase of additional equipment and chemicals for science education.
  - A grant to support the work of the Isaac Newton High School's Humanist Association.
3. Addition to the health clinic of a water toilet (linked to a pit and soakaway) and a sink with running water.
  4. Lawyers fees related to the establishment of a long-term land lease for the school.
  5. 50% contribution to the annual accounting fees (£600).
  6. Additional 4-classroom block to allow the school to operate two streams and reduce class sizes (£20,000 to £30,000 depending on what share is paid by UHST).
  7. Second girls hostel to relieve overcrowding in the existing hostel (£30,000).
  8. An opportunity is about to arise to connect the school to the power grid. A large new Hydro-electricity dam at Bujagali Falls on the River Nile has been commissioned and new power lines will come close to the school. The department of rural electrification has offered to pay 60% of the cost of building a feeder line to connect the school to the grid if the school can find the remaining 40%.
  9. The building of a dining hall where students can eat their meals in comfort is needed; especially as now 200 students (boys and girls) are living on the school site. The space would be used as a private study area when not being used for dining. (approx. £10,000)

## Priorities

Over the coming period the school has asked for our help by providing resources for:

1. A Science Project in collaboration with Mustard Seed School. This will include help with the training and pay of a technician and staff.
2. High-speed RISO offset printer. This is a fast machine with low running and maintenance costs and will be used for general school reprographics.

If you feel you or your group would like to contribute to meeting any of these needs then please contact [stevehurd@uhst.org](mailto:stevehurd@uhst.org) (01782 750338).

Donation and standing order forms can be found at:

<http://www.ugandahumanistschoolstrust.org/donate/>