



## Program Overview

# Science Education Uplift—Uganda



### Basic Idea

Install TGUP's *Science Lab in a Box*™ (SLaB) at 17 highly qualified high schools in Uganda. Measure improvement in student performance through nationally-normed test scores.

If schools perform as expected, expand the program with the help of major Tech firms to include an additional 33 schools, bringing to 50 the total number of schools served.

The goal is material improvement in high school Science preparation in Uganda. The program will be administered by TGUP's Ugandan partner, Nsawo Community Development Project.



### TGUP's *Science Lab in a Box*™

Science Lab in a Box™ (SLaB) provides all of the equipment and curriculum to allow developing world high schools to carry out world-class laboratory work in Biology, Chemistry, and Physics. More than 20 SLaBs have been installed in Kenya, Uganda, Cameroon, and Nepal.

Outcomes after one year include: dramatic (>80%) improvements on nationally-normed Science exams; major increases (3X) in matriculations to study Sciences at university; improved Science-based GPAs; increases in number of students enrolling in Science courses.

### Projected Impact

An estimated 200,000 students will be exposed to SLaB over the three-odd years of the Program. These are a substantial portion of the estimated 900,000 students who graduate from secondary school in Uganda every year.

The impact will occur through contributions to improved growth of Ugandan GDP. A very conservative estimate of this impact (+ 1/1000th % increment to GDP) shows the Program paying for itself three times over after five years of implementation, and delivering a 200X return on investment within 10 years. See the GDP Data Model, below.

## Science Education Uplift--Uganda

### Phase 1

Schools (800 students each)	17
Years in force	5
Total # students helped	68,000

### Phase 2

Schools (800 students each)	33
Years in force	5
Total # students helped	132,000

<b>Total Students Helped</b>	200,000
<b>Total Program Cost</b>	\$150,000
<b>Cost per student helped</b>	\$ 0.75

## Costs and Sources of Funding

One SLaB costs \$3,000. It is expected that we can secure substantial discounts to this with the purchase of 50. Costs shown here reflect the price for a single unit, so are conservative.

### Funding

#### Phase 1

		# SLaBs
TGUP/U.S. Rotary	\$41,000	
Uganda Rotary	\$10,000	
<b>TOTAL</b>	<b>\$51,000</b>	17

#### Phase 2

TGUP/U.S. Rotary	\$20,000	
Uganda Rotary	\$5,000	
Major Tech firms	\$74,000	
<b>TOTAL</b>	<b>\$99,000</b>	33

<b>TOTAL</b>	<b>\$150,000</b>	50
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## Rotary Club Participation, Uganda

Christine Kawooya, District Governor of 9214, Kampala, has given her enthusiastic support. She indicates four clubs will provide the Uganda-side contribution to the funding. They are:

- Rotary Club of Muyenga
- Rotary Club of Muyenga Bukasa
- Rotary Club of Bunga
- Rotary Club of Mengo

## Modeling the Impact of SEU-U/SLaB on Ugandan GDP

	2025	2031 *	2032	2033	2034	2035	2036	2037	2038	2039	2040
<b>GDP (\$,B)</b>	49.00										
<b>Historical growth %</b>	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
<b>SLaB increment, %</b>	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%	0.001%
<b>GDP without SLaB (\$,B)</b>		\$ 55.1820	\$ 56.2856	\$ 57.4113	\$ 58.5595	\$ 59.7307	\$ 60.9253	\$ 62.1438	\$ 63.3867	\$ 64.6545	\$ 65.9475
<b>GDP with SLaB (\$,B)</b>		\$ 55.1825	\$ 56.2867	\$ 57.4130	\$ 58.5618	\$ 59.7337	\$ 60.9289	\$ 62.1481	\$ 63.3917	\$ 64.6602	\$ 65.9540
<b>Difference w/ SLaB (\$,B)</b>		\$ 0.00054	\$ 0.00110	\$ 0.00169	\$ 0.00230	\$ 0.00293	\$ 0.00358	\$ 0.00426	\$ 0.00497	\$ 0.00571	\$ 0.00647
<b>Expressed as \$,M</b>		\$ 0.54	\$ 1.10	\$ 1.69	\$ 2.30	\$ 2.93	\$ 3.58	\$ 4.26	\$ 4.97	\$ 5.71	\$ 6.47
<b>Cumulative difference, \$,M</b>		\$ 0.54	\$ 1.64	\$ 3.33	\$ 5.63	\$ 8.56	\$ 12.14	\$ 16.41	\$ 21.38	\$ 27.08	\$ 33.55
<b>Cost</b>	\$150,000										
<b>Payback</b>		3X		20X							200X

\* First year of full implementation

\*\* = 1/1000th of 1%

# Science Education Uplift—Uganda, Schema

