

## School Application

The Global Uplift Project's Science Lab in a Box (SLaB) helps high schools deliver science education at international standard quality. It provides instruments, equipment, and supplies to carry out laboratory work in Physics, Chemistry, and Biology.

This document defines the requirements a school must meet to be a candidate for receiving a TGUP Science Lab in a Box. The requirements are intended to ensure that the SLaB is effectively utilized and that students are commensurately benefited.

### Requirements:

#### Staff

Recipient schools must have credentialed teaching staff trained at a university level in the fields of Physics, Chemistry, and Biology. Staff must be competent to set up a working laboratory, to conduct standard experiments as defined in the SLaB, and be able to test for learning according to national standards.

#### Curriculum

Courses in at least two of Physics, Chemistry, and Biology must exist as part of the school's standard curriculum. The courses must include laboratory work and be geared to nationally-normed exams required for university matriculation.

#### Facilities

The school must have facilities competent for hosting standard laboratory work. This includes, but is not limited to, work benches with water, electricity, and gas. Facilities must exist to lock away expensive equipment when not being used.

#### Feedback

Schools and teachers must be willing to work with TGUP to report on the outcomes of the SLaB and students' work. This includes: reporting on the adequacy of equipment for individual experiments; reporting on nationally normed test scores; and matriculation rates before and after SLaB installation.



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## Qualification Requirements for TGUP's Science Lab in a Box

### School Application

TGUP's Science Lab in a Box (SLaB) is available at no charge to schools that are qualified to use it appropriately. Please complete the below questions and return the completed form by email to [cathyd@tgup.org](mailto:cathyd@tgup.org).

School Name, Address, and website:

Shree Mahendra Adarsha Secondary School, Mahalaxmi Municipality, Ward No -04, Lalitpur

Principal's name and email address:

Ek Bahadur Bhandari, [ekbdr7@gmail.com](mailto:ekbdr7@gmail.com)

Senior Science Department official overseeing SLaB, and email address:

Kiran Poudel, [kiranpoudel2074@gmail.com](mailto:kiranpoudel2074@gmail.com)

Does your school have dedicated space for a science lab? Yes

Does that space have adequate work areas for conducting experiments? Yes

Does that space have locking cabinets to ensure security of equipment? Yes

Does the room have electricity? Yes Water? Yes Gas? Yes

Which laboratory classes are part of the school's formal curriculum? Biology Chemistry Physics (All) Other: ASTRONOMY

Is there a dedicated, university-trained teacher for each class? No

Does your school meet the standards for national university matriculation? Yes

How many students in the school? # Boys 502 # Girls 502

How many teachers in the school? 35

#of students who study laboratory science in any given year 2023, 2024, 2025

# who study Biology in any given year: 255

# who study Chemistry in any given year: 259

#who study Physics in any given year: 245

% of students who matriculate every year to college or university 80%




Is your school willing to provide structured feedback to TGUP on:

- Specific outcomes at the experiment level? Yes
- Overall outcomes at the class level? Yes
- Improvements on standardized national tests at the school level? Yes
- Improvements to matriculation at the school level? Yes

Name (if any) of the TGUP partner who has brought SLaB to your school's attention:

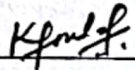
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School Principal's Name: Ek Bahadur Bhandari

Signature: \_\_\_\_\_ 

Date: 2081/11/22

Science Dept. Official's Name: Kiran Poudel

Signature: \_\_\_\_\_ 

Date: 2081/11/22

TGUP Partner (or equivalent) Official's signature and date:

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TGUP\*(650) 575-3434 \*4164 Stanford Way ,Livermore,CA94550\*tgup.org

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UGP'S Science lab in a Box(SLaB)

	<b>Biology Experiment</b>	Currently Doing	Will do with SLaB	Will not do	Not in curriculum
1	DNA extraction		✓		
2	Classifying plant and animal cells		✓		
3	Solute concentration effect on cell		✓		
4	The cell cycle		✓		
5	Photosynthesis		✓		
6	Fermentation		✓		
7	Bacterial growth		✓		
8	Natural Drug Discovery				✓
9	Food web using owl pellets		✓		
10	Water quality testing		✓		
	<b>Chemistry Experiment</b>				
1.	Mass,volume,and density	✓			
2.	Chemical reactions and reagent	✓			
3.	Identifying cations		✓		
4	Acid Base titration		✓		
5	The Universal Gas constant		✓		
6.	Specific heat of metals		✓		
7.	Acid /Base reactions	✓			
8.	Products of combustion		✓		
9.	Temperature vs Reaction	✓			
10	Temperature vs Solubility		✓		
	<b>Physics Experiment</b>				
1.	Free falling projectiles		✓		
2.	Newtons laws of equilibrium		✓		
3.	Circular motion		✓		
4.	Work and conservation of momentum		✓		
5.	Simple harmonic oscillators		✓		
6.	Impulse and conservation of momentum		✓		
7	Sound and light wave phenomenon		✓		
8	Electrostatics,Ohm's law and circuits	✓			
9.	Magnetism ,Electromagnetic induction	✓			
10	Geometric optics -Mirrors and Lenses	✓			



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