

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.

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.

School Name, Address, and website: Shree Narayan Jan Secondary School, Chandragiri Municipality, Ward No -09, Kathmandu

Principal's name and email address: Bishnu Prasad Rupakheti, advbishnu@gmail.com

Senior Science Department official overseeing SLaB, and email address:
Anup Rijal, shantimurari@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? **No**

Circle 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? **Yes**

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

How many students in the school? **428**

Boys **203** # Girls **225**

How many teachers in the school? **22**

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

155 who study Biology in any given year:	_____
155 who study Chemistry in any given year:	_____
155 who study Physics in any given year:	_____

90 % of students who matriculate every year to college or university _____

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

•Specific outcomes at the experiment level? **Yes**



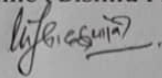
- Overall outcomes at the class level? **Yes**
- Improvements on standardized national tests at the school level? **Yes**
- Improvements to matriculation at the school level? **Yes**

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

School Principal's Name : Bishnu Prasad Rupakheti

Signature :

Date:2080/04/08



Science Dept. Official's

Name : Anup Rijal

Signature :

Date:24thJuly,2023



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

TGUP * (650) 575-3434 * 4164 Stanford Way, Livermore, CA 94550 * tgup.org
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TGUP'S Science Lab in a Box (SLaB)

Biology Experiment

Currently doing	Currently Doing	Will do with SLaB	Will not do	Not curriculum
1. DNA Extraction		✓		
2. Classifying Plant & Animal Cells	✓			
3. Solute Concentration Effect on Cells	✓			
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	✓			

Chemistry Experiment

1. Mass, Volume and Density	✓			
2. Chemical Reactions & Reagents	✓			
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 Rate	✓			
10. Temperature vs. Solubility	✓			

Physics Experiment

1. Free Falling Projectiles		✓		
2. Newton's Laws in Equilibrium		✓		
3. Circular Motion	✓			
4. Work & The Conservation of Energy	✓			
5. Simple Harmonic Oscillators		✓		
6. Impulse & Conservation of Momentum	✓			
7. Sound and Light Wave Phenomenon	✓			
8. Electrostatics, Ohm's Law & Circuits	✓			
9. Magnetism/Electromagnetic Induction	✓			
10. Geometric Optics - Mirrors & Lenses	✓			

