REQUEST FOR PROPOSALS

RESOURCES, EQUIPMENT & MATERIALS

GHANA SCIENCE AND TECH EXPLORER PRIZE

Inspiring and empowering the next generation of inventors, industry leaders and entrepreneurs in Ghana.

ACCRA, GHANA
JULY 2024

Introduction

The Ghana Science & Tech Explorer Prize (GSTEP) Programme is a dynamic education programme for Junior High School (JHS) students (ages 11-16) centered on a challenge prize. Students will collaborate and compete to produce products and services which tackle key developmental and/or socio-economic issues within their community. The competition takes a stage-gate approach, where thousands of young people are given an opportunity to come up with solutions and ideas, and then a cohort of finalist teams are selected to go on to receive seed funding, mentoring and development support over the course of a year. In the final round, cash prizes are awarded to the winning teams' schools with a pipeline of post-prize activities.

GSTEP excites and empowers young people whilst equipping them with key skills in: STEM, ICT and entrepreneurial thinking, as well as key soft skills, such as problem-solving and presentation skills – thereby making a meaningful impact on their communities.

The lead implementer of GSTEP is DreamOval Foundation, a Company Limited by Guarantee with registration no. CG044582013. DreamOval Foundation (DOF) is a STEM not-for-profit committed to increasing the technological know-how, skills, and tools of 30 million underserved African youth by 2063.

Challenge Background

In Ghana there is currently a notable gap in digital and STEM (Science, Technology, Engineering, and Mathematics) related skills within the education sector, precipitated by a lack of resources, technical knowledge, teaching pedagogy, and issues with connectivity.

Ghana, characterized by a predominantly youthful population where over 58% are under the age of 25, has witnessed significant strides in its education system over the past few decades, boasting a youth literacy rate exceeding 80%.[1] Concurrently, Africa is experiencing a surge in the Information and Communication Technology (ICT) industry, with Ghana positioned as a key player in the digital Business Process Outsourcing (BPO) sector. Despite these advancements, young Ghanaians encounter substantial challenges in securing employment, often exiting the education system without the essential skills for high-demand positions in the evolving economy. Indeed, young Ghanaians are also rarely given the opportunity to develop these skills during mainstream education. Ghana's schools rely largely on traditional teacher-centred methods such as rote learning and memorisation, where students act as passive recipients of knowledge.2 This leaves little room for the development of skills such as creativity, innovative thinking and practical problem-solving, which in turn restricts the development of self-efficacy, risk-propensity, and critical thinking.3 Early exposure to innovation can make a real difference in the development of these traits and the future skill-set

[1] [1] UNICEF, 2020 - The 2020 MICS-EAGLE Ghana Education Fact Sheets

of young people. These sought-after skills encompass ICT, STEM , entrepreneurship, as well as soft skills such as problem-solving, design thinking, and networking.

STEM education encourages a culture of innovation and creativity. African nations can tackle complex issues and develop novel solutions that contribute to societal advancement by nurturing a generation of thinkers and problem-solvers. Teaching STEM skills at an early age provides young people with a well-rounded education that equips them with essential cognitive, problem-solving, and technological skills, preparing them for success in both academic and professional pursuits.

STEM skills emphasize adaptability and a growth mindset. Children learn to embrace challenges, learn from failures, and persist in the face of difficulties, driving resilience and a positive attitude toward learning.

Failing to bridge the digital and STEM skills gap carries widespread implications, limiting the capacity for locally-driven development. In an increasingly digital world, there is a risk that young Ghanaians may be marginalised, assuming follower roles rather than leadership positions in the fourth industrial revolution. The World Economic Forum underscores the importance of imparting skills that enable Africans to design and engineer indigenous solutions, rather than merely servicing the lower-skilled aspects of the global digital market.

The consequences of widespread unemployment and underemployment within an entire generation extend beyond economic concerns, impacting the mental and physical well-being of those affected.

STEM is crucial for Ghana's development as it provides the necessary tools and knowledge to address current challenges, drive economic growth, and position the continent as a competitive player in the global arena. As the world becomes more interconnected, countries recognise the importance of a strong STEM foundation for global competitiveness. Early STEM education helps prepare future generations to contribute to the global economy and address global challenges.

What is a Challenge Prize?

Challenge Prizes are competitions that offer a reward for the first or best solution to a problem. They attract the best innovators, and incorporate elements from a range of innovation tools to provide them with the support they need to compete. Our criteria define what success looks like, without prejudging how it is achieved.

Challenge prizes support innovators from diverse backgrounds to submit their ideas for solving the identified problem. The process identifies the most promising and supports them with seed funding and expert support to develop the idea further to demonstrate its ability to solve the problem at hand. The first or best solution wins the overall prize. Challenge prizes are an

effective structure and framework to encourage social innovation. Put simply, challenge prizes are a mechanism for rewarding people who solve problems, by offering a series of incentives to the winning ideas.

This competition approach will be used in GSTEP to accelerate social outcomes, engage a broad community, and inspire new and better approaches to address social challenges.

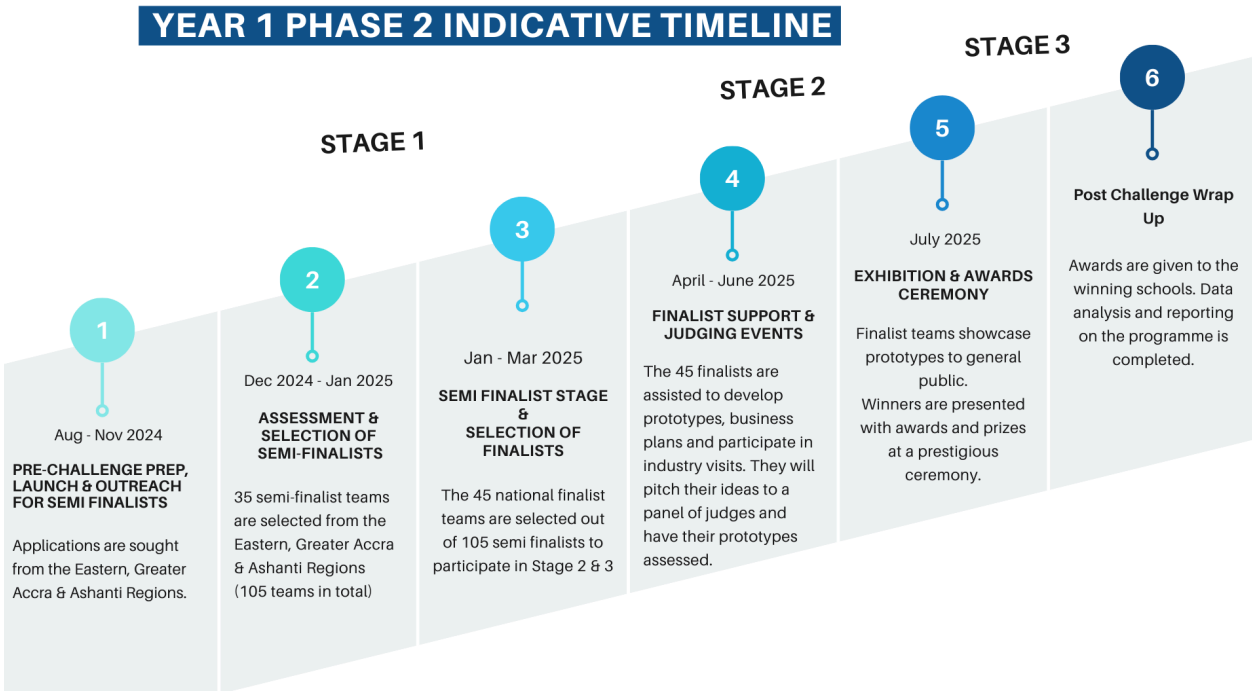
Project Approach and Key Challenge Dates

The GSTEP Challenge Prize will run for two (2) years, from September 2024 to August 2026. The program will be implemented in three stages: Outreach, Mentoring and Coaching, and Exhibition and Awards.

The challenge prize will run as follows: In the first stage, the Outreach stage, we will conduct launch & outreach activities in three regions — the Greater Accra, Ashanti and Eastern regions. In this stage, outreach programs will be held to provide an overview to GSTEP, knowledge in problem-solving, ideation, critical thinking and prototype development skills, etc. to equip teams to put in applications for the Challenge. Thereafter, we will have an open call in each region where all eligible teams comprising between 4 to 6 students will submit applications with their ideas. A team of independent assessors and experts will select the finalist teams based on prescribed criteria.

In the second stage, the finalists are inducted into the GSTEP program and matched with their mentors and coaches. They then begin the process of taking their solution/device from ideation to implementation. During this second stage, they receive coaching and mentoring, are provided with seed funding, prepare business plans, visit various industries to expose them to varying professions, and develop their prototypes. The finalists then pitch their ideas/prototypes to a panel of judges who give feedback for refinement and then, in a moderation session, select the various teams to win awards.

The third and last stage is the Exhibition and Awards, where all finalists present their devices to the general public, and the winning teams are presented with cash and non-cash prizes (e.g. a STEM Laboratory).



Objectives and Deliverables for Resource & Materials Proposal

The GSTEP programme is designed to directly impact approximately 19,000 individuals by engaging with approximately 500+ schools, 16,000 students, 2,000+ teachers, and 400 coaches and mentors. To achieve this, the programme will be delivered by a consortium of partners, working alongside the Ghana Ministry of Education (MoE), the Ghana Education Service (GES), teachers, schools, private sector industries and non-profit organisations.

As lead implementer, DOF is seeking a **Resources and Materials Consortium Partner**, who can demonstrate the ability to provide resources and materials, including the science kits the participants will use for their prototypes, across the Greater Accra, Ashanti and Eastern Regions.

A successful Resources and Materials Partner will, amongst others, develop and implement a plan that is based around value chain management, efficient resource delivery & problem-solving, and resource mobilization. Put specifically, the Resources and Materials Consortium Partner should be able to supply the necessary materials and equipment the Semi Finalists and Finalists will need to take their inventions from ideation to prototypes. The materials and equipment will include, but are not limited to, Arduino kits, motor drivers, servo motors, jumper wires, soldering kits, Raspberry Pi kits, sensors, bread boards, etc.

Value Chain Management

- Develop a plan for identifying and managing new suppliers
- Develop a plan for identifying and acquiring materials and ensuring efficient and timely delivery of materials to the young participants
- Develop and manage the delivery of bespoke items and unique prototype requirements
- Develop and implement an approach for agile resource management
- Iterate quickly if the process is not working
- Data analysis and reporting on suppliers, materials delivery and impact

Efficient Resource Delivery & Problem-Solving

- Identify the needs and required equipment of young participants/teams
- Develop an approach for quick and effective material delivery
- Outline process of getting materials to young participants on time
- Develop and implement an efficient packaging and delivery mechanism to schools
- Mitigate potential obstacles and iterate quickly
- Address internal resource requirements
- Maintain open communication channels with the GSTEP consortium and provide regular progress updates

Resource Mobilization

- Develop a budget plan and strategy
- Leverage fundraising networks and resources for GSTEP sustainability

Partners will be evaluated on a yearly basis, and their continued involvement in the program will be contingent upon successful performance and progress towards program objectives.

Application, Timeline and Submission

Applicants will need to provide responses to the questions on this Application Form and to the Fit4Future budget and workplan template. Applications will be reviewed by internal experts and at least 1 external expert with experience and knowledge in the applicant's field, in GSTEP implementation, and in Challenge Prize projects.

Those recommended and approved will then be notified that they have been shortlisted. Shortlisted applicants will be invited for an interview. After the interview, successful applicants will be notified that they have been selected as partners. Selected partners will then enter into a

grant agreement with DreamOval Foundation (DOF), where the parameters of the grant are set and agreed to by all parties. Finally, a kick-off call will be scheduled to officially begin the partnership and discuss the details of the program implementation.

Any questions on the RFP should be submitted by end of day July 22, 2024. The deadline for submission of proposals is end of day July 29, 2024. Questions to the RFP must be submitted via email to partnerships@gstep.org.gh [*Subject line must begin with "GSTEP RFP"*].

Activity Deadline: *Please note, the dates are indicative and subject to change:*

RFP published	July 8, 2024
Deadline for Questions	July 22, 2024
Deadline for Proposals	July 29, 2024
Review of Proposals	July 29, 2024- August 5, 2024
Notification to shortlisted potential partners	August 5, 2024 - August 12, 2024
Proposed Partner interviews	August 12, 2024- August 19, 2024
Notification to selected partners	August 19, 2024- August 26, 2024
Grant agreement phase	August 26, 2024- September 6, 2024
Kick Off Call	September 9-16 , 2024