GSTEP
Ghana Science & Tech Explorer Prize

Semi-Finalists Support

2025 Handbook

Contents

The guide includes the following information:

Congratulations, GSTEP 2025 Semi-Finalists!

We extend our warmest congratulations on being selected as one of the semi-finalist teams for the 2025 Ghana Science and Tech Explorer Prize Challenge (GSTEP). Your innovative ideas, passion for problem-solving, and commitment to STEM have distinguished you among over 1,500 applications.

This milestone is the beginning of an exciting journey where you will refine your ideas, bring them to life through prototypes, and gain valuable skills that will shape you as future leaders, innovators, and changemakers. As you step into this phase, remember that your hard work and creativity have already made a difference, and we cannot wait to see the extraordinary potential you will unlock in the months ahead.

At GSTEP, we believe in the power of STEM to transform lives and communities, and you are at the forefront of this transformative mission. Embrace this opportunity to learn, grow, and inspire others around you.

Welcome to the GSTEP community; we can't wait to see you grow, connect, and excel!

Best wishes,
The GSTEP Team

Aims

The GSTEP Challenge is a unique opportunity for young people to learn more about entrepreneurship, innovation, and Science, Technology, Engineering, and Mathematics (STEM). It presents a new and exciting way for young people to engage with Science and Technology through practical learning, developing skills such as problem-solving, presentation skills, communication, teamwork and entrepreneurship skills.

The GSTEP Challenge provides all of the resources you need to take part, including lesson plans to support the application process, mentorship and coaching for semi-finalists and finalist teams and additional training where necessary.

The Challenge Statement

Create a product or solution that uses Science or Technology to make the world around you a better place

Themes

Live healthier
Providing people with what they need to lead happy and healthy lives, including physical health and mental wellbeing. This covers topics that relate to improving health, such as nutrition, hydration and exercise.

Live greener
Protecting the environment and saving the planet's resources. This covers topics that relate to the planet, such as climate change, conservation and waste management.

Live together
Tackling social issues and helping people to live better together. This covers topics that relate to society, such as discrimination, communication, transport and crime.

Overview of GSTEP

Stages of the Challenge

Application Stage (14th October - 18th November 2024):
Teams are invited to make an application to the GSTEP Challenge. Teams should comprise 4 - 6 students and each team must be paired with a teacher or adult representative.

Lesson plans and other materials are available to support teams to develop their ideas and complete their applications.

Assessment Stage (November - December 2024):
A team of expert assessors will decide and select 105 semi-finalist teams from the Greater Accra, Ashanti and Eastern regions to move on to the next stage of the challenge

Semi-finalist Stage (January - February 2025):
These semi-finalist teams will be supported to develop their ideas through the provision of expert mentors, technical coaches, training materials and resources. They will be supported to develop a minimum viable product. The products will be evaluated by a team of expert judges and 45 teams from Greater Accra, Ashanti and Eastern regions will be selected to move on to the Finalist stage.

Finalist Stage (March - May 2025):
The finalist teams will be supported to develop their ideas further through the provision of bespoke materials and resources, seed funding, industry engagements through industry visits, and continuous personalised engagements with their assigned mentors and coaches. They will be required to complete their business plans and final prototypes.

Pitching and Judging Stage (June 2025):
The finalist teams will have the opportunity to pitch their ideas, business plans and demonstrate their working prototypes in front of a team of expert judges.

Exhibition & Awards Ceremony (July 2025):
All finalist teams will showcase their prototypes to the general public at an exhibition. A prestigious awards ceremony will be held to celebrate finalists, recognize outstanding teams and announce winners of the Challenge.
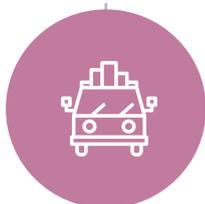
Homecoming (September 2025)
Schools of all category winners receive STEM materials to improve the learning experience and outcomes in the schools.

GSTEP Consortium

DreamOval Foundation is a nonprofit that focuses on improving quality of education through science, technology, mathematics and engineering. The DreamOval team is the lead implementer of the GSTEP programme. The Foundation engages schools through Ghana Education Service (GES), coordinates all stakeholders for the GSTEP programme and supervises the activities of the Youth Steering Group.

Partnership Bureau is a Ghanaian non-profit that works to reimagine how communities, grassroots, local and national organisations across the Global South can draw on collective power and address the imbalances within the international development sector through innovation, intervention and impact. Partnership Bureau manages the public and private partnerships in the implementation of the challenge.

Shulem Lake Limited is an IT and software development company committed to driving digital transformation and STEM education across Ghana. They offer hands-on training in robotics, drone construction, ERP software, and more.
Shulem Lake will support this year's challenge by providing STEM kits, resources, and STEM training to participating teams.

Practical Education Network (PEN) is a non-profit organisation specialising in practical STEM education through a hands-on learning approach. With expertise in curriculum development and training, they are at the forefront of educational technology, incorporating innovative tools and approaches to make STEM learning more engaging and effective.
PEN will provide coaching and mentoring support to the participants of this year's challenge.

Judging Criteria

Here is a reminder of the judging criteria that you will be assessed against:

Category	Description
1. Impact	Have the team clearly explained the problem they are trying to solve? Is this a problem that needs solving?
2. Innovation	Is the project an innovative idea that uses Science and Technology in a new way?
3. Enterprising	Have the team clearly explained the steps they would need to take to turn their idea into a reality? Is the idea feasible?
4. Teamwork	Have the team worked together effectively?
5. Communication	Do the team have a clear plan for marketing and promoting their idea to their target audience?
6. Risk Factors	Have the team thought about how they would make their idea safe for people and the environment?

A summary of the Judging Criteria and a list of prompt questions for students can be found by clicking on Semi-Finalist Judging Criteria on the Resources Page on our website: www.gstep.org.gh/resources/.

Mentorship & Coaching

To help you successfully complete the semi-finalists stage, you will be paired with an experienced mentor and a coach. Their role is to support you through the process, answer any questions you have and help you develop a **Business Model Canvas, Team Canvas and a Minimum Viable Product.**

Your teacher (or adult representative) will be in contact with the mentor and the coach and should be able to answer any questions you have and provide you with the additional support you will need through this process.

Key Dates

Now that you are a semi-finalist, you will need to spend the next few weeks completing the following three tasks:

1	2	3
Develop a Team Canvas & Business Model Canvas (BMC)	Build a Minimum Viable Product (MVP)	Prepare a 5-minute pitch video that highlights the key features of your developed MVP and demonstrates its functionalities.

You would have to submit all the developed documents and video stated above. These submissions would be accepted through a Google Form. The appropriate link will be shared at the time you will be required to submit your documents and video.

If you encounter challenges accessing the link, please get in touch and we will provide assistance. Please refer to the **Timeline of Activities** on the next page for the applicable submission deadline. Late submissions will not be accepted, so make sure you manage your time carefully.

For assistance on issues related to your engagement with your mentor or coach, kindly contact: **Keziah Clad - 0550692449 / 0204208665**

Timeline Of Activities

Over the next few weeks, you will be completing a range of activities, with support from your mentors and coaches. Please complete the activities in whichever order makes sense to you. In reality, you will have to work on all tasks in parallel throughout, as they all link together. However, one suggestion is to prioritise the activities as follows:

Activity	Greater Accra Region	Eastern Region	Ashanti Region
Semi - Finalist Induction Event	8th & 9th January, 2025	10th January, 2025	14th & 15th January, 2025
Coaching Sessions Guidance			
Introductions, Team assessments, Project Planning (Weeks 1)	13th - 17th January, 2025		
Introduction to One4All Kit (Week 2)	20th - 24th January, 2025		
MVP Development (Weeks 3 - 4)	27th January - 7th February, 2025		
MVP Testing (Week 5)	10th - 14th February, 2025		
MVP video development (Week 6)	17th - 21st February, 2025		

Timeline Of Activities

Activity	Greater Accra Region	Eastern Region	Ashanti Region
Business Mentorship Session Guidance			
Introductions, Team assessments (Weeks 1)	13th - 17th January, 2025		
Introduction to Team Canvas (Weeks 2)	20th - 24th January, 2025		
Introduction to Business Model Canvas	27th - 31st January, 2025		
Development of BMC & Team Canvas	3rd - 14th February, 2025		
Preparation of all required documents for submission (Week 6)	17th - 21st February, 2025		
Submission Deadline of all required documents and developed MVP Video	24th February, 2025		
Assessments and Announcement of Finalists Teams	26th February - 5th March, 2025		
Finalists Teams Inductions	10th - 14th March, 2025		

Minimum Viable Product

Guidance

Bringing Your Solution to Life

As part of the GSTEP Challenge, you will be required to create a Minimum Viable Product which will be assessed as part of the deliverables for the Semi-Finalist stage. These MVPs will be presented as a video pitch to qualified assessors who will review against the set judging criteria and select the teams that progress to the Finalist stage. (You will receive more information about this later.) It is important to carefully consider the requirements of the judging criteria to help you in the development of your MVP.

At this stage of the challenge, we recognize the potential of your idea and we can't wait to see you bring it to life. Once you have been able to define your solution clearly, you will need to turn your idea into reality. This section will guide you through the process of prototyping to build your MVP. This is not your final product but it should be gradually leading you towards it. Prototyping is a way for you to test your design and make improvements before your final product or service is built.

Introduction

A Minimum Viable Prototype (MVP) is a basic version of a product designed to showcase its core functionality and potential impact. It helps in communicating the solution to early users, validating the idea, and receiving feedback for improvement.

In this GSTEP competition, an MVP demonstrates the application of the scientific process to solve real-world problems. This involves observation, experimentation, and using technology, engineering, and mathematics to develop a solution.

In recent years, the general notion about the subjects learnt in class is that, they are of no use. Students are rather encouraged to only memorize key information to pass exams but are not required to pursue practical knowledge which is key in gaining understanding. (In the Ghanaian context its referred to as "just chew, pour, pass and forget.") This results in demotivation for practical education. It is necessary to be able to link the principles introduced in the classroom to solutions provided for problems in the community. This stage in GSTEP is geared towards encouraging you to find how the principles you learn in the classroom can be translated into helping you bring your solutions to life. Your video presentations should capture and reference the principles of STEM as stated in the learning materials used at school.

Minimum Viable Product

Your MVP video will be evaluated based on how well it communicates the problem, the solution, and its potential impact. Let's break down the key aspects to focus on.

Key Elements of Your MVP

1. Problem and Solution Explanation
- Clearly describe the problem you are addressing.
- Introduce your solution and how it works to solve the problem.

2. Inputs (Resources)
- Define the raw materials, tools, or factors you used to develop your solution.
- Highlight innovative or local materials and how you transformed them.

3. Process and Demonstration
- Show the steps you followed to develop your solution.
- Explain any iterations you made, challenges you faced, and how you resolved them.
- Demonstrate the solution in action using real-world scenarios or simulations.

4. Outcome and Impact
- Present the final results of your solution.
- Share how it benefits the community, using examples, statistics, or testimonials.
- Discuss the potential for scaling or improving the solution.

5. Future Vision
- Highlight areas for innovation and potential enhancements.
- Share how your solution can evolve to address new challenges.
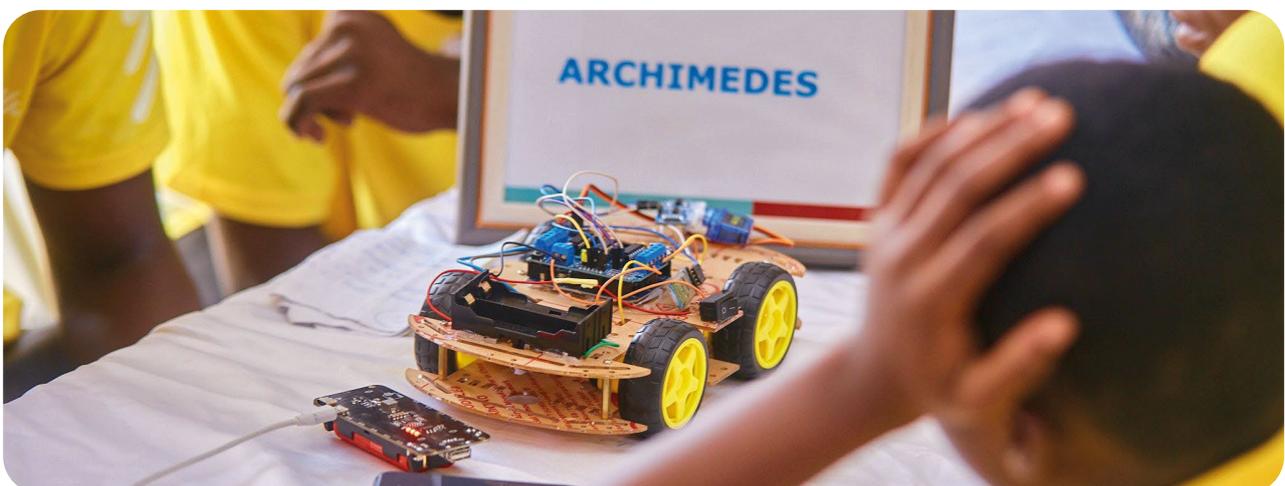
All you need to know about the One4All Kit

Bringing Your Solution to Life

Now that you are ready to start your prototyping journey, you will need important tools, materials and resources that will help you bring your idea to life. The GSTEP One4All Kit is a carefully curated kit with selected materials that is essential for you in building your MVP. It captures the true spirit of the challenge, which is to help you innovate and help you become the inventor you have always dreamed about.

It also contains materials that can support experimenting with various topics to support the learning experience in the classroom.

The materials within the kits capture projects that fall under the following categories:

Electrical/Electronics

Mechanical
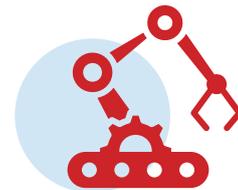
Robotics/IoT/Automation.

These materials have been selected because they are utilised by most ideas that participate in the challenge prize process and equip students with essential components for electronics, IoT, and automation projects.

All you need to know about the One4All Kit

Key Components:

- **Microcontroller:** ESP32 NodeMCU (WiFi & Bluetooth)

- **Sensors:** IR Obstacle, Light (LDR), Gas (MQ5), Temperature/Humidity (DHT11), etc.

- **Power System:** Li-ion cell, Boost Converter (adjustable voltage), etc.

- **Motors & Motion:** Geared Motors (6V-9V), Motor Driver, etc.

- **Connectors:** Jumper Wires, Silicon Wires, Headers, PCB boards, etc.
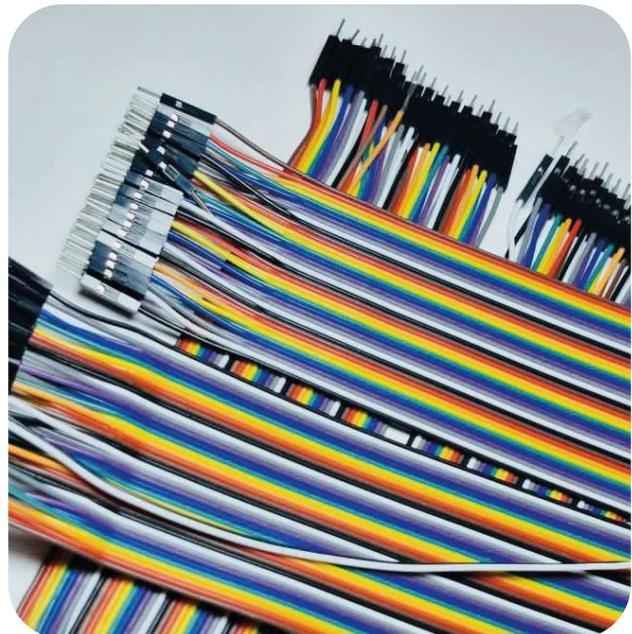
All you need to know about the One4All Kit

Key Components:

For projects that require the use of biological/chemical components, a special request process has been created to help you access some of these chemicals, subject to the discretion of the GSTEP team as well as health and safety considerations.

You will also have access to videos that will assist you in the use of the materials within the kit. You can access all the required information from **https://shulemlake.com/edustem**
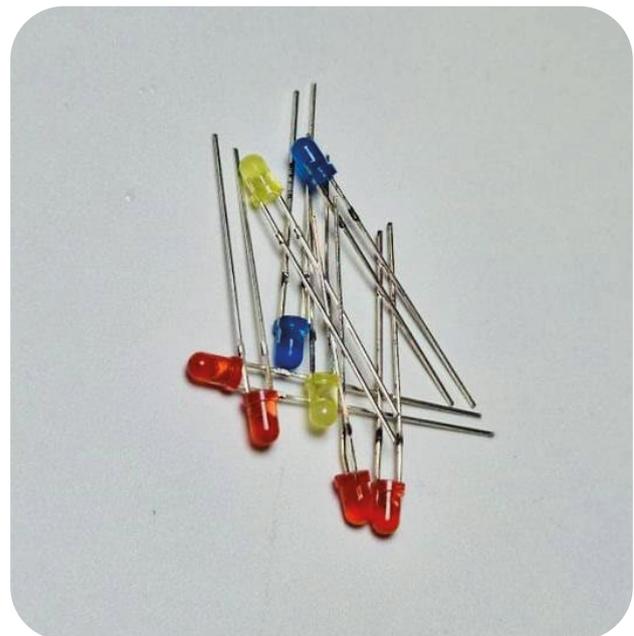
For assistance on issues related to you mobilising resources, your MVP development or the use of your One4All Kit, kindly contact: Gideon Mensah - 0545886695

MVP Video Presentation Guidelines

MVP Video Presentation Guidelines

1. Introduction
- Briefly introduce your team and project.
- Clearly state the problem and give a high-level overview of your solution.

2. Prototype Demonstration
- Use high-quality visuals and clear audio to show the key features of your MVP.
- Include close-up shots to highlight important details and provide voiceover or subtitles to explain how it works.
- Make reference to mathematical, scientific, engineering and technological principles that are related to the methods used in your solution. Eg. Circuits and electromagnetism learnt in science is applied in the making of a fan to regulate ambient temperature.
- Another is geometry applied in the construction of the fan's propeller.

3. Impact Explanation
- Use data, examples, or testimonials to show how your solution will benefit society.

4. Conclusion and Future Plans
- Summarize the project, its outcomes, and share the long-term vision for further development.

5. Video Specifications
- Format: MP4 or MOV
- Resolution: 720p or 1080p (Landscape)
- Length: Maximum of 5 minutes
- Audio: Ensure clear and audible sound, free from background noise.

Things to Remember

- Be concise and clear in explaining each step so it's easy to understand.
- Focus on demonstrating how your MVP addresses the problem and its potential real-world impact.
- Highlight creativity, especially in how you approached the problem and used available resources.

Risk Factors

When we talk about risk factors to consider for the solutions or innovations you have created, we also consider ethics. Ethics are defined as a set of moral principles that inform how people (an individual or a group) behave. This is important because it influences how we develop our solutions and helps us think about the safety and impact of our solution on our environment and health.

In other words, ethics are a set of rules that help determine the way we should act. This includes how we treat other people and also the environment. Ethics also translates to risk factors. For the purpose of this challenge, we will consider the environment, health and safety as our key focus for identifying risks associated with our inventions or solutions.

Here are some examples to help you think through some of the possible risk associated with your solution and how it affects the environment, health and safety:

- **Environmental pollution:** Products and solutions using Science and Technology often require a lot of materials and energy to create. As the Earth's resources and materials are finite, this can have a negative impact on the environment.

- **Privacy:** Technological products often require the collection of personal data. This personal data could get into the wrong hands and be used for negative purposes, such as identity fraud.

- **Automation:** Science and Technology tend to make the lives of people easier. However, this could mean that Science and Technology essentially outcompete humans and replace their jobs. This could have a negative impact on some people's livelihoods.

After you have identified the risks associated with your solution, you should take a step further to identify ways of mitigating or reducing those risks, especially when they have the potential to cause harm.

Here are some examples of how you develop ways to reduce the risks associated with your solutions:
• Protecting personal data by using trusted companies and following legal guidelines.
• Using renewable energy sources to create your products and solutions in order to reduce environmental pollution.

Introduction

An important part of developing a solution is being able to talk about it, gain support for it, and sell it to business partners or directly to your users. Once you have developed your Business Plan and build your prototype, you are ready to market your idea and pitch it.

At this stage, you should have been working on your Business Model Canvas and finalising key elements to help you complete it; you should be considering what your best options are to market and communicate key details about your solution.

In thinking about how to communicate your solution, you should consider answering these key questions for your potential consumer:
 • What is your product or solution and how does it work?
 • Which problem does this product or solution tackle?
 • How is your idea innovative? (i.e. How is this better than existing products or solutions?)

Presenting Tips

It is totally understandable if you feel a bit nervous about presenting or pitching your ideas in your MVP video but remember, this is a great opportunity to share all of your great work with the expert judges.

A few tips that might help you with your pitch preparation:
 • Remember to speak loudly, clearly and slowly so that everyone can hear you.
 • You are welcome to have some prompt notes if this helps you.
 • Make sure that everyone in the group has the opportunity to speak. We want to hear from you all!
 • This is not a judgemental environment, so please don't worry if you make a mistake.
 • And most importantly, please enjoy this experience.

Teamwork

We have been discussing various topics to help guide you in your journey; however, you will not be successful without the key element of teamwork. Teamwork is essential for your team's success. Here are a few tips to note:

What is teamwork?

Teamwork is when people work together to reach a shared goal. It's more than just splitting up jobs—it's about combining everyone's strengths to create better results than anyone could achieve alone.

Why is Teamwork Important?

- **Helps Everyone Succeed**
  By working together, you can use each other's strengths, get more done, and learn new skills from your teammates.

- **Encourages New Ideas**
  Sharing and discussing ideas in a group can lead to creative solutions and fresh ways of thinking.

- **Improves Communication**
  Being on a team means talking and listening to each other, which helps you understand different opinions and communicate more clearly.

- **Builds Problem-Solving Skills**
  You can tackle challenges with the combined knowledge and experience of your teammates, making it easier to find solutions.

- **Makes Everyone Responsible**
  Each person has a role to play, which motivates you to do your best and support your teammates.

- **Teaches Leadership and Decision-Making Skills**
  Working in a team gives you the chance to guide others, learn how to make decisions together, and become a stronger leader.

Qualities of a Good Team Player

Being a team player means working well with others and helping your group succeed. Here's what makes someone a great teammate:

- **Reliability**
  A reliable teammate always completes their tasks on time and can be counted on to deliver good work

- **Strong Communication Skills**
  Great teammates share their ideas clearly, listen carefully to others, give helpful feedback, and stay open to advice.

- **Collaboration**
  rue team players appreciate everyone's input and give credit where it's due. They know that a team's success depends on everyone working together.

- **Adaptability**
  Flexible team members can easily handle new challenges, learn quickly, and adjust their plans when needed.

By developing these skills and understanding the power of teamwork, you'll be able to make a real difference in any group. You'll inspire your teammates, contribute in meaningful ways, and help everyone reach their goals in all GSTEP-related activities.

Teamwork

Key Teamwork Concepts

- **Communication:**
  Communication is about sharing ideas and information with others. For it to work well, everyone should listen carefully to make sure they understand what's being said. It's also important to keep your message clear and simple to avoid any confusion.

- **Collaboration:**
  Collaboration happens when people use their different talents and skills to reach a common goal. Each person takes on tasks they're good at, and together, the team becomes stronger and more effective.

- **Problem-Solving:**
  Problem-solving is all about handling tough situations and finding answers as a group. By thinking and brainstorming together, you can come up with creative solutions to any challenge.

- **Conflict Resolution:**
  When people with different ideas work toward the same goal, disagreements can happen. The important thing is to handle them in a respectful way. Listen carefully, understand different viewpoints, and find helpful ways to move forward.

- **Goal Setting and Planning**
  Setting goals gives the team direction. It helps everyone know exactly what they are working toward. Try using SMART goals (Specific, Measurable, Achievable, Relevant, Time-bound) to stay on track and measure progress.

- **Time Management in Teams:**
  Good time management means staying on schedule and getting things done without rushing at the last minute. Setting clear deadlines for tasks helps reduce stress and keeps the quality of work high.

Introduction to Team Canvas & Business Model Canvas

Team Canvas

The Team Canvas is a tool that helps team members talk about and agree on their goals, roles, values, and ways of working together. It gives everyone a chance to share ideas openly and make sure they understand what's expected of them. By using the Team Canvas, teams become clearer on what they want to achieve, which helps them work better and become stronger together.

Business Model Canvas

The Business Model Canvas (BMC) is like a map that shows how a company works. It explains what the business offers, how it reaches customers, who those customers are, and how the company earns money. By putting these ideas in one place, the BMC helps people understand a business plan quickly and think of ways to improve it. This is especially helpful for new businesses (startups) who want to be creative and find better ways to succeed.

Team Name:

Version:

Date:

Team Canvas

Most important things to talk about in our team to make sure our work as a group is productive, happy and stress-free

People and Roles
What are our names and the roles we have in the team? What are we called as a team?

Common Goals
What we as a group really want to achieve? What is our key goal that is feasible, measurable and time-bounded?

Personal Goals
What are our individual personal goals? Are there personal agendas that we want to open up?

Purpose
Why we are doing what we are doing in the first place?

Values
What do we stand for? What are our guiding principles? What are our common values that we want to be at the core of our team?

Needs + Expectations
What each one of us needs to be successful? What are our personal needs towards the team to be at our best?

Rules and Activities
What are the rules we want to introduce after doing this session? How do we communicate and keep everyone up to date? How do we make decisions? How do we execute and evaluate what we do?

Strengths and Assets
What are the skills we have in the team that will help us achieve our goals? What are interpersonal/soft skills that we have? What are we good at, individually and as a team?

Weakness and Risks
What are the weaknesses we have, individually and as a team? What our teammates should know about us? What are some obstacles we see ahead us that we are likely to face?
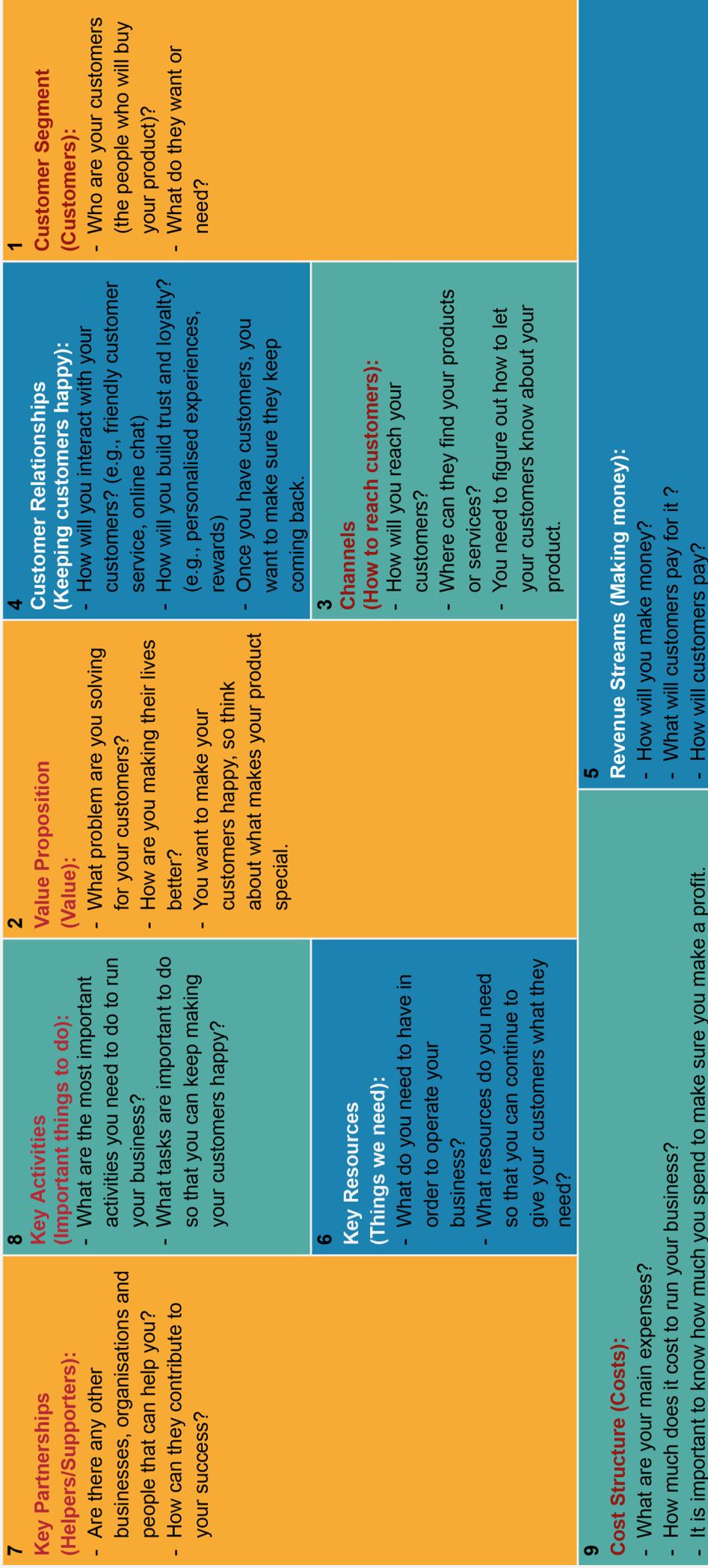
Business Model Canvas

Imagine you want to start a business. A business model canvas is like a big puzzle that helps us understand and plan how our business will work. On the canvas, we have different pieces that represent important things we need to think about.

7

Key Partnerships (Helpers/Supporters):
- Are there any other businesses, organisations and people that can help you?
- How can they contribute to your success?

8

Key Activities (Important things to do):
- What are the most important activities you need to do to run your business?
- What tasks are important to do so that you can keep making your customers happy?

6

Key Resources (Things we need):
- What do you need to have in order to operate your business?
- What resources do you need so that you can continue to give your customers what they need?

2

Value Proposition (Value):
- What problem are you solving for your customers?
- How are you making their lives better?
- You want to make your customers happy, so think about what makes your product special.

4

Customer Relationships (Keeping customers happy):
- How will you interact with your customers? (e.g., friendly customer service, online chat)
- How will you build trust and loyalty? (e.g., personalised experiences, rewards)
- Once you have customers, you want to make sure they keep coming back.

3

Channels (How to reach customers):
- How will you reach your customers?
- Where can they find your products or services?
- You need to figure out how to let your customers know about your product.

1

Customer Segment (Customers):
- Who are your customers (the people who will buy your product)?
- What do they want or need?

9

Cost Structure (Costs):
- What are your main expenses?
- How much does it cost to run your business?
- It is important to know how much you spend to make sure you make a profit.

5

Revenue Streams (Making money):
- How will you make money?
- What will customers pay for it?
- How will customers pay?

10

Risk (Health, safety and environmental concerns):
- What are the ethical impacts of your idea?
- Can this idea have a negative impact on society?
- Can someone with negative intent misuse your idea?
- What could you do to prevent the possible negative impacts?

11

Key Metrics (Success measures):
- How will you measure the success of your business?
- What are the important numbers to track?
- You want to know if your business is doing well

What are the Perseverance Awards?

The Perseverance Awards are designed to honour teams that demonstrate exceptional resolve and a commitment to their proposed ideas. These awards celebrate the spirit of pushing forward, refining solutions, and staying engaged in STEM innovation, regardless of the outcome of the initial competition stages.

Award Categories

This year, two awards will be presented:

Application Stage Perseverance Award:
For a team from the initial application stage that didn't get selected to the semi-finalist stage but completed their projects and stood out for their creativity and effort.

Semi-Finalist Stage Perseverance Award:
For a team from the semi-finalist stage that didn't progress to the finalist stage but displayed tenacity and commitment to finish their project.

Being part of the semi-finalists qualifies you to participate in the Perseverance Awards program if you **don't qualify for the finalist stage.**

Six teams who don't qualify as finalists will have the opportunity to participate in the Exhibition and Awards ceremony upon participating in the Perseverance Program and meeting the judging requirements.

Details on the application for the Perseverance Awards program will be communicated in due time.

Safety Protocols in Using the STEM Kit.

1. General Guidelines
- Supervised Use: Always have adult supervision when students are handling STEM kits.
- Read instructions: Ensure all users read the included safety instructions before starting.
- First Aid: Keep a first aid kit readily available in case of minor injuries.

2. Electrical Safety
- Low Voltage Components: Use components that operate at safe, low voltages (3.3V–12V) to minimise risks of electric shock.
- Insulated Wires: Ensure wires are properly insulated to prevent accidental short circuits.

3. Battery Safety
- Do not overcharge or puncture batteries.
- Avoid exposing batteries to extreme heat or moisture.
- Use proper connectors to prevent reverse polarity.
- Inspect Circuits: Check circuits for loose or exposed wires before powering them.

4. Mechanical Safety
- Sharp Edges: Ensure tools like screwdrivers and cutting tools are used carefully, and blunt any sharp edges on mechanical components.
- Moving Parts: Avoid touching moving parts (e.g., motors) during operation to prevent injury.
- Wear protective gear: Use safety goggles and gloves when working with mechanical tools or assemblies.

5. Chemical Safety
(If the kit includes chemical components.)
- Storage: Store chemicals in labelled, childproof containers.
- Usage Area: Conduct experiments involving chemicals in well-ventilated areas.
- Protective Gear: Use gloves and safety goggles when handling chemicals.

6. Tool Safety
Soldering Precautions:
- Use a soldering stand to hold hot irons.
- Work on heat-resistant surfaces.
- Provide proper ventilation to avoid inhaling fumes.
Multimeter Usage:
- Ensure proper settings to avoid damage or injury.

Emails

The primary mode of communication with semi-finalist teams will be via email. All detailed updates on events, activities, deadlines and programmes will be provided via email. You are encouraged to regularly check and open their emails for information from the GSTEP team. You can reach the GSTEP team **via challenge@gstep.org.gh.**

WhatsApp Group and Channel

A WhatsApp group will be created for semi-finalists in each region to assist in the dissemination of information quickly and effectively. It is important to note that the information provided here will be brief and not contain as much information as those shared via email. You are required to follow the **GSTEP 2025 WhatsApp Channel**

SMS

Reminders on events, updates and programmes will be shared via SMS.

Phone

Finalists will be reached out to by phone for key information. You must share your right contacts through which the GSTEP team can easily reach out to you. You can reach out to the GSTEP team via these contacts: Franklina: 0595703311 (DreamOval Foundation), **Gideon: 0577724450 (Shulem Lake) and Kezia: 0550692449 (PEN).**

Website

Updates on events and activities will be shared on the GSTEP website.

Social Media

You are highly encouraged to stay up-to-date on our activities, events and programmes on our social media pages. Follow us using the below handles:

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Official Hashtags

You are required to use the following hashtags in all your related GSTEP-related posts on social media.
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