



Guide for Parents and Guardians



Aga Khan Education Board

Welcome to the Global STEM Festival (GSF) 2021 *'creating real life solutions for real life problems'!*

GSF is an opportunity for youth ages 5-18 to explore Science, Technology, Engineering and Mathematics (STEM) virtually and develop key skills for the future. Following on from last year's successful programme, this year the GSF looks at "creating real life solutions for real life problems."

This will be achieved by focusing on the *United Nations' Sustainable Development Goals* and how they apply to our everyday life as well as on global capacity. The festival this year looks to equip participants with STEM skills to understand these problems, find sustainable solutions and consider their applications in real life.

This will allow for exploration of the natural and created world around us, and further develop important skills including critical thinking, problem solving, creativity, research and analytical skills. The Festival is not a competition, but an opportunity to see the talent of the youth and young adults from around the world and learn from one another. Although submissions are for ages 5-18, this is something that parents/guardians can also get involved in as these initiatives can affect all of our lives!

We also invite parents to engage in this Festival by accompanying their child throughout the whole journey — from finding inspiration, learning the key concepts needed for the project, developing, recording and submitting their project, and of course participating in the Festival Finale together.

Why is STEM important?

Throughout the years, STEM is becoming even more present in our lives as the world is evolving around Science, Technology, Engineering and Mathematics, allowing us to tackle everyday challenges and improving our quality of life.

In addition, the importance of STEM is amplified in our world as it has constantly been a key instrument in shrinking the gender and ethnic gaps at times found in these fields.

Besides the capacities achieved in these areas, following a STEM approach will allow children and young adults to develop skills such as creativity, problem solving, critical thinking, adaptability, technological skills, teamwork, communication and leadership, providing them the foundation to achieve their goals.

By participating in the Festival, children and young adults will be able to not only learn but also develop key skills for their future.



What does the GSF programme entail?

The GSF 2021 is designed to replicate the structure of an ideathon. An ideathon is an opportunity for students to address some of the most pressing challenges of our time by using concepts such as design thinking and innovative learning practices to ideate and create possible solutions. These challenges have been based on the UN Sustainable Development Goals (SDGs).

What are the SDGs?

The UN Sustainable Development Goals (SDGs), adopted by the UN Member states in 2015, are designed to be a global blueprint for peace and prosperity not just for the present, but also for the future. The SDGs build upon decades of past agreements on sustainable development and poverty alleviation.

There are 17 SDGs as shown below:



Each of these goals aims to address global challenges including poverty, education, climate change and sustainability. The achievement of the 17 UN SDGs is considered to be critical as the SDGs have the capability to impact the well being not only of the planet, but of the global population. The SDGs represent some of the most urgent needs of the world today.

To achieve the SDGs by 2030, we must think creatively to develop innovative solutions to the development challenges of today. Raising awareness and advocating for these goals results in actionable and achievable solutions to realising the goals.

With this in mind, The UN SDGs will be used as a basis for the GSF 2021. We have grouped the SDGs into five themes:

- Climate and Sustainability
- Education
- Health
- Economic Growth
- Equality



How can we solve these problems?

In order to guide participants and equip them with the tools to be able to find innovative solutions to these problems. The GSF 2021 Programme will provide participants with the following tools:

Problem Solving Framework

We have created a problem solving framework to assist participants in creating their solutions. This framework is based on the concept of design thinking and encourages participants to think innovatively and creatively about their solutions. The framework has five stages including:

- Brainstorming users and their challenges
- Rapid solution brainstorming
- Evaluating solutions
- Designing solutions
- Reflecting and testing

Each stage is accompanied by a series of prompts that vary by age group in order to guide participants through the process.

Videos

We will publish a series of videos to talk through the problem solving framework and give examples to assist participants with their own process of completing the framework.

Newsletters

We will publish a series of weekly newsletters to contextualise how the SDGs impact our everyday lives. Each newsletter will focus on one of the five themes mentioned above and will provide information on the theme, ongoing projects relating to the theme that are being carried out in the world, dinner table conversation starters that parents can facilitate with their children and how this all relates to our faith and ethics.

Problem statements

Participants will be provided with a variety of problem statements based on the SDGs. These problem statements will be grouped into the five themes as mentioned above. Participants will then have the option to choose a problem statement from the given list and this will form the basis of the solution that they hope to create. Problem statements have been developed based on the following age categories: 5-8 years, 9-12 years, 13-18 years.



Submission Guidelines

For submissions guidelines, please visit the “how to participate” section at the below link

<https://the.ismaili/stemfestival/>

Key dates and timelines

- 26 June
 - Registration opens
- 5 - 10 July
 - Introductory communications sent to participants and parents
- 17 July - 7 August
 - Newsletter and videos released on a weekly basis
- 8 August
 - Registration closes
 - Problem statements released
- 30 August
 - Submissions close
- 18/19 September
 - Festival Finale weekend on Ismaili TV / Platform to showcase projects

Additional Information

For any additional information, please visit <https://the.ismaili/stemfestival/>.

We look forward to ‘creating real life solutions for real life problems’ with you and your children!

Thank you,
GSF Team 2021