



Address: #58, 5th Floor, Icon Building, 216 Norodom Blvd, Tonle Bassac, Chamkarmorn, PP, Cambodia, 12301

Tel: (+855) 69 626 898

Email: info@stemcambodia.ngo

Concept Note

THE ANNUAL CAMBODIA STEM FESTIVAL 2026

Patterns and Programming: Discovering Math, Games, and Creativity through STEM

I. OVERVIEW

The Annual Cambodia STEM Festival 2026 is a vibrant celebration of the nation's growing achievements in Science, Technology, Engineering, and Mathematics. Centered on the theme ***“Patterns and Programming: Discovering Math, Games, and Creativity through STEM,”*** this year's festival explores how patterns form the foundation of both mathematics and computer programming, shaping the logic behind games, algorithms, and innovation.

The festival provides an exciting platform for Cambodian students to present their ideas, featuring approximately **250 STEM projects and 1,000 creative exhibits** that demonstrate how pattern recognition, coding, and problem solving can be applied to real-world challenges.

In addition, the festival will feature a STEAM Career and Innovation Fair, offering students a chance to explore career opportunities where logic, design, games, and technology intersect. The festival highlights how mathematical thinking and computational creativity can empower the next generation to build Cambodia's future through smart, innovative, and sustainable solutions.

Theme: Patterns and Programming: Discovering Math, Games, and Creativity through STEM

This year's theme highlights how patterns form the foundation of both mathematics and programming. The aim of this theme is to demonstrate how patterns are fundamental to how we learn, think, and create, emerging in everything from basic numerical sequences to complex systems in coding and design.

Project Exhibition - Guidance for Students:

- Primary Students (Grades K-6)

You can create project boards that show patterns in math, everyday life, or games.

Examples include number puzzles, symmetry designs, board games with math rules, or

flowcharts that explain step-by-step instructions (like a recipe or a daily routine as a “program”).

- Lower Secondary Students (Grades 7-9)

You can design and display physical games or activities that use math or logic. For example, a card-matching game with equations, a puzzle based on Fibonacci numbers, or a maze where instructions must be followed like code.

- Upper Secondary Students (Grades 10-12)

You are encouraged to create digital projects such as coding games, apps, or simulations. These can use Scratch, Python, robotics kits, or other programming tools to show how math and logic come alive through technology.

Key expectation: Students are encouraged to design projects that explore the connection between patterns and programming, highlighting how both concepts contribute to reasoning, creativity, and problem-solving. This connection can be expressed through mathematics-based activities, logic or strategy games, or projects that use coding to model or solve real-world challenges.

II. OBJECTIVES

- **Explore the power of patterns and programming:** Engage participants in hands-on activities, games, and creative challenges that reveal how mathematics, logic, and computational thinking form the foundation of STEM learning
- **Foster Curiosity and Innovation:** Encourage students to think critically and creatively as they apply problem-solving skills to design solutions inspired by real-world applications
- **Promote Collaborative Learning:** Create opportunities for students, teachers, and mentors to share ideas, exchange knowledge, and work together on projects that bridge different STEM disciplines.
- **Inspire Future STEM Careers:** Introduce students to exciting education and career pathways in fields where logic, design, and technology intersect

III. EVENT DETAILS

- Event: The Annual Cambodia STEM Festival 2026
- Date: 7th February 2026
- Location: Premier Sen Sok Halls: D, E, F, G
- Theme: “Patterns and Programming”: Discovering Math, Games, and Creativity through STEM

Supported By : Ministry of Education Youth and Sport

Ministry of Environment

Ministry of Industry, Science, Technology, and
Innovation

IV. HIGHLIGHTS & ACTIVITIES

1. STEM Performances

Students will perform creative showcases inspired by “Patterns and Programming” – celebrating rhythm and the art of structured creativity.

2. ECO-STEM Zone

Hands-on activities where participants explore how STEM can be applied to design sustainable cities, develop green technologies, and protect the environment.

3. Project Exhibition

A showcase of student-led projects that bring ideas to life through STEM and creativity. From coding and robotics to art and design, the exhibition highlights how patterns and programming can be used to solve problems and inspire innovation.

4. Primary School Art Exhibition

A showcase of primary students from grade 1-6, allow visitors to explore how creativity and mathematics come together through student hand drawn and digital tessellation art. The exhibition highlights how simple patterns can grow into intricate designs, how geometry and repetition are found in nature and technology, and how logical thinking supports creative expression.

5. Robotics Zone

Interactive demonstrations where students can explore how patterns, coding, and algorithms bring robots to life.

6. Interactive Zone

Exhibits featuring cutting-edge advancements in STEM and technology allow participants to engage in interactive demonstrations.

7. STEAM Career Fair

A dedicated space where students can interact with professionals from STEAM (Science,

Technology, Engineering, Art, and Math) fields. The fair will focus on career opportunities where creativity meets technology, highlighting how patterns and programming drive innovation in today's digital era.

8. Quizzes and Competitions

Engaging and interactive quizzes where students can test their knowledge and win prizes related to STEM and sustainability.

9. Post to Win

A social media engagement campaign inviting attendees to share event highlights and tag the official STEM Cambodia page for a chance to win prizes.

10. STEM Kids Zone

An interactive space designed to spark curiosity and creativity in children through hands-on activities such as LEGO building, art, robotics, and 3D printing.

V. TARGET AUDIENCE

- Schools and educational institutions
- Families and students
- Government and ministries (MoEYS, MoE, MISTI)
- Private Sector and Industry Partners
- NGOs and Development Partners
- General Public and Media

VI. EXPECTED OUTCOMES

1. **Promote Innovation and Computational Thinking:** Inspire students to explore how patterns, logic, and programming can be used to solve real-world challenges creatively
2. **Foster Collaboration Between Art and Technology:** Showcase the connection between creativity and coding by highlighting how artistic expression and digital design intersect through pattern recognition, algorithmic thinking, and interactive creation.
3. **Enhance Public Engagement in STEM Creativity:** Encourage the public to discover how STEM can be used to shape Cambodia's innovative future, promoting curiosity, digital literacy, and creative problem-solving across all ages
4. **Prepare Students for STEAM Careers:** Encourage students to explore career pathways in fields where pattern and programming intersect, preparing them for a rapidly evolving job market.

VII. GET INVOLVED

We invite all interested parties to participate in the Annual Cambodia STEM Festival 2026:

- Exhibit a Project: Applications for project submissions will open soon. Please follow our website for more details.
- STEM Performance: Students are invited to creatively interpret STEM principles through performances, focusing on future cities and industries.
- Sponsorship Opportunities: We welcome sponsorship and partnership opportunities to support the festival. Please contact our sponsorship team for more information.

VIII. TIMELINE

No.	Progress	Start Date	End Date	Remarks
1	Announcement of the upcoming CamSTEMFest 2026	1 November 2025		
2	Call for Sponsors	1 November 2025		
3	Registration: ● Project Application Form	1 November 2025	23 January 2026	
4	Registration: ● STEM Performance	1 November 2025	23 January 2026	
5	Registration: ● Primary School Art Contest	1 November 2025	23 January 2026	
6	Call for Volunteers	15 November 2025	2 January 2026	
7	Project Confirmation of Exhibitors	27 January 2026		
8	Consolidate all data on each activity: ● Project Exhibitions ● STEM Performance ● Primary School Art Contest	31 January 2026		
9	Preparation Day	06 February 2026		
10	The Annual Cambodia STEM Festival 2026	07 February 2026		
11	Post Event Planning			

IX. CONTACT INFO

Phone Number:

Facebook pages:

(+855) 69 626 898

Email:

info@stemcambodia.ngo

sponsor@stemcambodia.ngo

Telegram Channel:

STEMEOC: <https://t.me/stemeoc>

Robotics Cambodia

STEM Education Organization for Cambodia

STEM Sisters Cambodia

STEAM Cambodia

Website: www.stemcambodia.ngo