

## **ENGINEERS DAY CELEBRATION – 13 SEPTEMBER 2025**

### **STEM**

Following discussions held between the Institution of Engineers Mauritius (IEM) and the Rajiv Gandhi Science Centre (RGSC) on promoting STEM among Secondary Students, a workshop was held on 13 September 2025 between 09 30h and 13 30h at the seat of the RGSC. This event also marked the Engineers Day. The joint collaboration between the RGSC and the IEM is the first step towards a sustained one ahead. A detailed programme is attached hereto.

The workshop targeted students aged between 13 and 17 coming from various Secondary institutions, both Government and Private. 27 participants attended the workshop. Participants were grouped into teams and they were exposed on how to integrate the basic principles of physics taught at schools into problem solving by engineers. There were 7 groups in all.

Two tasks in the form of challenges were programmed for the students namely: -

Challenge 1 - Construct the tallest most stable tower (10 minutes)

Challenge 2 – Constructing a bridge to span 30 cm keeping in mind strength and aesthetics (2 hours)

All materials and logistics were provided by the RGSC.

The workshop was covered by the Mauritius Broadcasting Corporation (MBC) and reported in the evening 19 30h news.

#### **Task 1 – Stability of Structures**

Participants learned on stability and reliability of triangular structures in solving an engineering problem. With marshmallows as joints and spaghetti as members of the frame a group managed to model a 0.7m high frame structure. Emphasis was also placed on completing a functional design at minimal.

#### **Task 2 – Bridge structure**

Participants were exposed to history of bridges and their evolution over time. They learnt about the different types of bridges, their structural performance and their relevant importance. Students were then requested to construct a model based on what they learnt. All models were then tested and none failed. Models were able to withstand loads exceeding 4 kg (equivalent to filled water bottles)

After the completion of the two tasks, the students' efforts were acknowledged and each participant received a Certificate of Attendance.

#### **Workshop outcome**

Working in groups enhanced the team spirit among participants who managed their time and resources allocated to them. By understanding the basic principles of physics and materials behaviour they could understand how engineers solve complex problems.

The joint collaboration between the IEM and the RGSC need to be reinforced as this type of activity and forum can be viewed as a springboard for students to embrace an engineering career.











