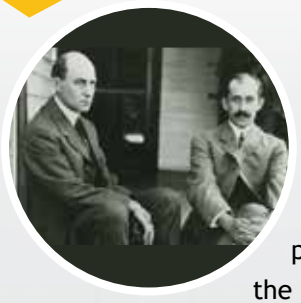

Wright Brothers

On December 17, 1903, two brothers, Wilbur and Orville Wright, became the first humans to fly a controllable, powered aeroplane. To unravel the mysteries of flight, the Wright brothers built and experimented extensively with model gliders. Gliders are aircraft without motors or a power source. Building and flying gliders helped the Wright brothers learn and understand the importance of weight and balance in aeroplanes.

Who can participate?

The contest is open to students of all secondary schools in Mauritius as follows:

Category 1: Grade 10
Category 2: Grade 12

Participants should work in teams of **FOUR** students under the guidance of **ONE** Supervising Teacher/Mentor.

Only one team per school is allowed to participate in each category.

Students who have opted for Science/ Mathematics/ Design and Technology and even non-science subjects (Art/Languages and Social Sciences) are invited to participate as long as they are interested in making a model glider.

Aims

To enable students to use science process skills to explore ideas, design concepts and techniques in aviation through the practical application of basic aerodynamics.

Objectives

1. Enable students to develop, construct and fly their own model gliders.
2. Encourage students to explore ideas and come up with solutions by working in teams.
3. Develop creativity and innovation among young people.
4. Give students the opportunity to participate in fun activities related to Science and Technology.

The Process

STEP 1- Register [14 July 2021]
Supervising teachers of each team have to register **online** by following the **link** below or scanning the **QR Code**.
https://form.jotform.com/211882541832557
Deadline for ONLINE Registration:
28 July 2021

STEP 2 - Workshop for participants [August 2021]
Participants will be requested to attend an online training workshop early August to empower them to work on their project.
Design and construction parameters with the selection of materials will be explained and advice on the general aerodynamic layout of the models will be available from experienced pilots and model aircraft designers.

STEP 3 - Construction of Gliders [August - September 2021]
Following the workshop, supervising teachers will train and guide their teams in designing and constructing their model gliders.
Teams will have to keep a **logbook** to keep track of their progress.

STEP 4 - Working Session [September 2021]
Registered teams (teachers and students) will be invited for an online working session during the school holidays. There will be interaction with experts in aviation whereby the students will have the opportunity to polish their model gliders.

STEP 5 - Evaluation of Model Gliders [October 2021]*
Preliminaries will be held at the start of October 2021.
The **model gliders** and their **Logbooks** will be evaluated. A copy of your **Logbook** must be submitted and will be kept by **RGSC**.

STEP 6 - Finals [October]*
The best teams will be invited to display and fly their model gliders at the end of October 2021. They will be allowed to hand launch their gliders a maximum of **three** times only. Teams will be given achievement certificates based on maximum distance reached. The venue will be confirmed.

****Modalities of the competition might differ, depending on government policy and sanitary restrictions***

Judging

Judging is a two-part process where marks are gained from:

1. Design and build of the model along with the contents of the Logbook (the Preliminaries).
The use of commercial kits or published plans is not allowed, the design must be your own. Previous model gliders that have been entered in previous competitions should NOT be used.

2. The distance of flight (the Finals).
Flying performance: Each team will be allowed a maximum of three hand-launched flights, of which the flight which achieves the longest distance will score.

Rules and Regulations

1. Each team should consist of 4 students of Grade 10 or Grade 12 in the respective category.

2. A maximum of 1 team per school per category will be accepted.

3. A glider has no engine. No radio or other forms of the remote control are permitted.

4. Supervising teachers should mentor students from the beginning to the finals of the project.

5. Teams who submit their logbook along with their model glider during the preliminaries will be awarded a certificate of participation.

6. All up weight of the model in flying conditions, including its nose weight, must be between 50g and 200g. The lower limit (50g) will rule out paper planes or balloons and the upper (200g) will prevent dangerous flying bricks. The model's measured wingspan (again as ready to fly) must be between 60 cm and 100 cm. Wingspan means the extent of the lifting surfaces of the model. The overall length of the glider must not exceed 80 cm.

7. Although balsa wood and doped tissue or plastic covering is an obvious choice, any construction materials may be used, as long as the weight limits are observed. A foam/plastic known as "Depron", which is available locally, is a recommended alternative.

Prize

Winning teams of each category will be awarded prizes as follows:
First Prize: ***Captain Richard Twomey Award***
Cash prize Rs 8000 + shield
Second Prize: ***Cash prize of Rs 4000 + shield***

Certificates:

Certificates of participation will be given to all teams who submit their logbook along with their model glider during the preliminaries.

Finalists will be given certificates of achievement as follows:

Best flight distance > 35 m : Gold certificate
Best flight distance > 25 m : Silver certificate
Best flight distance > 10 m : Bronze certificate

RGSC

AeSM

Scan the QR Code to register

Rajiv Gandhi Science Centre
Old Moka Road, Bell Village
E-mail: education@rgsctf.org
Tel: + (230) 2132773
Fax: + (230) 2132726

MODEL GLIDER COMPETITION 2021

RAJIV GANDHI SCIENCE CENTRE

AERONAUTICAL SOCIETY OF MAURITIUS

Deadline for Online Registration:
28 July 2021
on website: rgsc.govmu.org

Open to students of all secondary schools:
- Category 1: Grade 10
- Category 2: Grade 12