Caribbean Science Foundation
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"Grooming the next generation of Caribbean science and engineering leaders"

PROJECTS OF THE CARIBBEAN SCIENCE FOUNDATION

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ABOUT THE CSF

The Caribbean Science Foundation (CSF) is an independent, private, non-profit, non-governmental organization, founded in 2010 by the Caribbean Diaspora for Science, Technology and Innovation (CADSTI). The mission of the CSF is to assist with the diversification of the economies of the Caribbean Region by harnessing Science, Technology, Engineering and Mathematics (STEM) for economic development and thereby help to raise the standard of living in the Region. The CSF is achieving this objective by:

- Accelerating STEM education reform that supports technology-based entrepreneurship
- Offering STEM and entrepreneurship education programs for Caribbean youth
- Stimulating technology-based entrepreneurship for new company formation
- Enhancing the communication skills of the youth in CSF programs
- Providing scientific and engineering advisory services to Caribbean Governments

Student Program for Innovation in Science and Engineering (SPISE)

SPISE, launched in 2012, is an annual 5-week intensive summer STEM program for Caribbean students, 16-18 years of age, who are highly gifted in STEM and interested in studying and exploring careers in the STEM disciplines. To date, 283 students have participated in the program. SPISE is modelled after the well-known and highly successful MITES program at MIT. During SPISE, students are totally immersed in university-level calculus, physics, biochemistry, entrepreneurship, and hands-on projects in computer programming, and electronics or robotics. Rote learning is discouraged; instead, students are taught how to focus on mastery of the material and on applying the fundamentals to solve novel and complex problems. The benefits of SPISE also include teamwork, time management and multi-tasking skills, coaching in public speaking, and increased self-confidence. SPISE graduates have enrolled in the top science and engineering universities, including MIT, Stanford, Caltech, Harvard, Princeton, Columbia, Carnegie-Mellon, Howard and UWI. The ultimate goal of SPISE is to groom the Region's next generation of science, engineering, technology and business leaders. Please visit https://caribbeanscience.org/spise/




Barbados Junior Robotics Camps (BJRC)

The BJRC, launched in 2015, are annual summer enrichment programs for Barbadian students 10-18 years of age who are interested in robotics. At the camps, held on the UWI Cave Hill campus, students participate in team-based robotics building and programming projects in a fun environment. Teamwork is emphasized, and its value is highlighted. The aim of the camps is to introduce basic technology and engineering concepts to children and ignite their excitement for STEM. The BJRC offer robotics at 4 levels. Levels I and II are for children who have little or no previous STEM, programming, or robotics experience. Scratch is used primarily as the Levels I and II programming language. Level III comprises a mix of building, and the use of higher-level programming languages and micro-controllers. Level IV students are contributing to a multi-year project of making a humanoid robot. Campers use a 3-D printer to create custom parts as needed. The BJRC ends with a robotics showcase where the campers demonstrate their robots to the public. Approximately 80 - 90 students are served annually in the BJRC.



For more details visit: https://caribbeanscience.org/barbados-junior-robotics-camp/

Caribbean STEM Olympiads (CSO)

The annual Caribbean STEM Olympiads, launched in 2023, comprises 3 competitive categories: Math Olympiad, Computer Coding Olympiad, and Robotics & Electronics Systems Olympiad. Students 13-21 years of age compete in one of three age levels in each category for medal certificates and cash prizes. About 250 students participate annually in the Olympiads. Held in virtual format, the CSO showcase and celebrate the Region's most outstanding STEM students and assist with science popularization. They test the competitors' creativity, critical thinking, problem solving ability, leadership, and team working skills. Other objectives are to:



- Assist with enhancing the quality of secondary and tertiary STEM education.
- Ignite and nurture STEM inventiveness in our youth
- Encourage students to pursue further studies in STEM-related disciplines
- Give our medalists a competitive advantage on their university applications
- Provide a launch pad for Caribbean teams to compete in international STEM Olympiads.

Please visit https://caribbeanscience.org/cso/

Caribbean Computer Coding Workshops (C3W)

The C3W were launched in 2018 with the following aims: (1) help increase the low number of persons in the Region having competency with modern computer programming languages, (2) help train the technology workforce of the future (goal is a 50/50 gender balance), (3) assist with the training of persons from low-income households, and with disabilities, (4) stimulate more technology-based entrepreneurship, and (5) generate more student interest in going beyond programming and into the field of advanced computer science. The workshops offered to-date have been on Website Development, Python and Machine Learning/AI. The workshops, offered via Zoom to CARICOM citizens 13 years and older, cover the basics while still providing a taste of the more advanced code libraries used to address practical applications. About 50 students participate annually in the Workshops. The CSF truly believes that "*there is no reason why the next Google cannot start in the Caribbean*". For more details visit: https://caribbeanscience.org/coding-workshop/



Caribbean SEED (STEM Engine for Economic Development) Summit

The theme of the annual Caribbean SEED (STEM Engine for Economic Development) Summit is "Harnessing STEM for Caribbean Economic Development". The Summit is the premier gathering event for Caribbean nationals and global collaborators and entrepreneurs who are pursuing real-world commercial applications of STEM, financing STEM companies, leading ground-breaking STEM research, and engaging in STEM education reform. It serves as a catalyst that provides pathways for STEM talent and entrepreneurs to come together with funding sources for new company formation. **Of primary interest are companies that can potentially grow to at least US$ 100 million in revenues in about 5 years**. The Summit features: (1) business plan pitches by technology entrepreneurs and early-stage companies, (2) networking sessions for the exchange of technical and business information, and (3) high-impact technology research and development presentations that are relevant to Caribbean economic development. Persons participate both virtually and/or in person. The 2026 Summit was held in collaboration with the Barbados Ministry of Industry, Innovation, Science and Technology, and over 300 people registered. Visit https://caribbeanscience.org/stem-summit/

Barbados Robotics-Innovation Challenge (BRIC)



The Barbados Robotics-Innovation Challenge (BRIC) is a series of robotics initiatives, each consisting of 4 phases, for Barbadian citizens or residents interested in applying creative problem-solving robotics approaches to address challenges of relevance to Barbados and the world. The revised BRIC initiative will provide maker space and funding (on a rolling basis) to successful BRIC teams to redesign, rebuild, and test prototypes of their robots before manufacturing. Participants must be more than 15 years old on January 1 of the year the applicant first applies to participate in Phase 1. Teams from secondary and tertiary academic institutions, members of robotics clubs and associations, and curious innovators are all encouraged to submit proposals. Persons from low-income households and females are especially encouraged to apply. Development of a coconut harvesting robot is the first project, but applicants may suggest other challenges. Virtual information sessions are held regularly to give guidance on the proposal preparation process. For more information, visit https://caribbeanscience.org/bric/. BRIC is a partnership of the CSF, the Abed Foundation and the Barbados Government.