# SAGICOR VISIONARIES CHALLENGE

**You could win a trip to Florida plus up to $5,000 U.S. for your school.**

CARIBBEAN SCIENCE FOUNDATION

CXC®

Sagicor

# Competition Guidelines for the Sagicor Visionaries Challenge

These guidelines outlined below should be used to prepare for the national competition exhibit during which you will present and we will judge in person. We recommend that the activities associated with each task are emphasized at your exhibit booth.

## At the exhibition, we will provide:

1. A 6 foot by 6 foot space for each entry plus a poster board.
2. Access to a power supply.
3. A table and chair that are protected from the sun and rain.

You are responsible for bringing anything else related to your exhibit. Also, be sure that your display can be set up within an hour and dismantled within an hour.

Your competition entry should be submitted online. The entry should comprise of a summary of all of your activities (that is, a subset of the guidelines listed below) and must follow the application format in "Application for the Sagicor Visionaries Challenge." Please note, that a teacher or administrative representative of the entrant school must submit the online application on behalf of the entrant(s).

# Tasks for a student/team
## (entrant representative)

**1.** State a challenge facing your school and/or community and your solution that uses Science, Technology, Engineering or Mathematics (S.T.E.M.) to make a more sustainable Caribbean community (that is, one that is healthier, wealthier, happier, smarter, safer, cleaner and more resilient to food and water scarcity). Select a problem that you would like to solve and write the solution in the form of an idea.

**Example:** I want to reduce the amount of waste from my school that we send to our local landfill. I envision a school-wide solid waste separation and composting system that will help to solve this problem and generate fertilizer for our garden and energy for our aquaponics system.

**Example:** We live on a low-lying coast that is vulnerable to rising sea levels, so we want to reduce the carbon footprint from our school as $CO_2$ emissions contribute to global warming. We'd like to see how a school-wide paper reduction system could be effectively implemented through the development of an online document platform built by the students in our Information Technology class.

**Example:** Our school compound has little green space as the entire yard is covered with concrete. When it rains, the water runs off our property and floods the street below, making it difficult for us to access the school. This water then flows down to the community below and out to sea where it spoils our reefs. We envision a series of projects at our school that adds beneficial green space to our schoolyard, provides live laboratories for our classes, and simultaneously reduces the amount of storm water that leaves our yard.

**2.** Provide background information on this problem and why solving it your way contributes to making Caribbean communities more sustainable (a sustainable solution takes into account economic, environmental and social factors).

**3.** Describe one or more appropriate methods of investigation needed to better understand the problem you want to solve and how your idea would solve it.

a. Select one or more methods to collect data to support your idea.

b. Describe the method you are going to use or used to collect your data. Some examples of methods are surveys, observations, mini-experiments, interviews, and document searches.

**4.** Design a simple instrument (protocol) to collect the data needed to better understand the problem you want to solve and how your idea would solve it.

a. Write out the exact questions that you will put in a questionnaire or ask in an interview.

b. Create the checklist for your observation schedule or document search. Your data collection instrument may be a questionnaire, interview schedule, observation checklist, mini-experiment and/or document search checklist.

**5.** Describe the procedures to collect data.

a. State how many people/observation episodes/ documents were in your sample and how they were selected for inclusion in your study.

b. Give details of each data source.

For people, please state their gender, age group, and area of residence or class in the school from which they were selected.

For observations or quantification of things, please state when and where they took place, list who or what was observed, how you made observations, and why these observations were selected.

For documents, please state which documents were included, why they were selected, how many were used and how they were accessed.

**6.** You must present your data and analysis as clearly as possible and in a well-organized fashion.

State your findings by compiling your data, analyzing it and presenting your results and analysis using at least three of the following tools: graphs, charts, tables, maps, drawings/sketches, diagrams, photographs, video, audio, models, as well as text.

**7.** Interpret the data in terms of the challenge and idea raised in Task 1.

a. State how the data relates to the challenge you identified and the idea you proposed in Task 1.

b. Does the data help to solve your problem?

c. What does the data say about your idea?

**8.** Describe how your idea incorporates Science, Technology, Engineering and/or Mathematics (S.T.E.M.).

**9.** State three conclusions you can make about your problem/idea, based on the information gained from your data.

**10.** Propose the implementation strategy of your idea based on your findings.

a. Describe the steps/measures you would take to implement your idea.

b. Show how you have or would involve the community (for example, your classmates, the school alumni association, the PTA, etc.) in the development and/or implementation of your idea.

**11.** List your references.

**12.** Communicate information in a logical way using correct grammar and effective resources to support ideas.

a. Use correct spelling and grammar.

b. Ensure clarity and appropriateness of language.

c. Use appropriate resources to support your idea.

d. Demonstrate an ability to answer questions.

## Judging Criteria: The same judging criteria will be used at the national and regional levels.

## Category & Points

| Relevance to Sustainable Caribbean Communities | (4) |
|---|---|
| Very relevant to sustainable Caribbean communities. Addresses school/community needs in many ways. | 4 |
| Relevant to sustainable Caribbean communities. Addresses school/community needs. | 3 |
| Somewhat relevant to sustainable Caribbean communities. Addresses school/community needs. | 2 |
| Very little relevance to sustainable Caribbean communities. Barely addresses school/community needs. | 1 |
| Is not relevant to sustainable Caribbean communities. Has no application at school or in the community. | 0 |

| Creativity and Innovation | (4) |
|---|---|
| Adapts, extends, and transforms a unique idea, question, format, or product to create something new. | 4 |
| Experiments with a unique idea, question, format, or product. | 3 |
| Begins to experiment with a unique idea, question, format, or product. | 2 |
| Successfully reproduces an appropriate idea, question, format, or product with minimal changes. | 1 |
| Does not reproduce an appropriate idea, question, format, or product. | 0 |

| Content and Knowledge of Project | (4) |
|---|---|
| Excellent (clear and thorough) explanation of project challenge, background and findings. | 4 |
| Good explanation of project challenge, background and findings. | 3 |
| Satisfactory explanation of project challenge, background and findings. | 2 |
| Limited explanation of only one or two parts of project challenge, background and findings. | 1 |
| No explanation of project. | 0 |

| Project Plan and Design | (3) |
|---|---|
| Clear and thorough identification of project plan, design and implementation process. | 3 |
| Good identification of project plan, design and implementation process. | 2 |
| Limited identification of project plan, design and implementation process. | 1 |
| No identification of project plan, design and implementation process. | 0 |

| STEM Linkage | (3) |
|---|---|
| Good description of how topic relates to S.T.E.M. (Science, Technology, Engineering, or Mathematics). | 3 |
| Topic linked to STEM, but the linkage is poorly described. | 2 |
| Topic is not closely related to STEM. | 1 |
| No consideration given to how topic relates to STEM. | 0 |

| Methods of Investigation | (2) |
|---|---|
| Method(s) of investigation is identified and properly described with details on protocols used. | 2 |
| Method(s) of investigation is identified, but not properly described with few details on protocols used. | 1 |
| No method of investigation is identified or described. | 0 |

| Presentation | (2) |
|---|---|
| Excellent presentation using appropriate tools (e.g. pictures) with few spelling and grammatical errors. | 2 |
| Good presentation using appropriate tools with some spelling and grammatical errors. | 1 |
| Disorganized presentation, does not use appropriate tools and has many spelling and grammatical errors. | 0 |

| Answering Questions | (2) |
|---|---|
| Clear and thorough answers to questions. | 2 |
| Partial answers to questions. | 1 |
| No answers to questions. | 0 |

| Public or Community Engagement | (2) |
|---|---|
| Project engaged with and/or got a lot of support from local and non-local community. | 2 |
| Project engaged with and/or got some support from local and non-local community. | 1 |
| Project did not engage with and/or did not get support from local and non-local community. | 0 |
| **TOTAL** | **26** |

## Public Participation

At the national level, the public will be asked to select their favourite project ideas on the competition website and/or by voting at the national competition where applicable. For each national competition, the votes will be normalized to reflect the total number of votes. The total number of points an entrant can possibly receive is 4.

For example, if the total number of votes received for all of the projects in Barbados is 6000 and Entrant #5 received 3000 of those votes, the score for Entrant #5 would be 2 (3000/6000 x 4).