

Saving the World on Their Way to College

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Today's Panel Topics

- STEM Education & Global Collaboration
- How Global Challenge Works
- Student and Teacher Experiences
- Open Discussion

STEM Education

- Science, Technology, Engineering & Mathematics Education
 - Inquiry Methods & Theories
 - Information & Communication Tools
 - Creativity & Problem-Solving
 - Analysis & Representation Tools

Global Collaboration

- Interest, Initiative & Entrepreneurship
- Making New International Friends
- Using Technology for Social Networks
- Sharing Diverse Perspectives
- Forging Agreements
- Working Together on Common Goals
- Providing Feedback & Critique

How Global Challenge Works

- Two Students & an Adult They Select
- Find a Similar Team from Another Country
- Study & Strategize
- Make Decisions
- Produce Work & Reflect on Learning
- Submit a Final Solution by April 30
- Win Scholarships & Travel \$

Castilleja School

- Girls' School, Palo Alto, California
- Rigorous Academics
- Mission Statement for 21st Century Education

STEM Integration

21st Century Skills	Global Challenge	Castilleja STEM
Collaboration	<ul style="list-style-type: none"> •Teamwork •Work with Undergraduate mentor 	<ul style="list-style-type: none"> •Groups work throughout curriculum
Communication	<ul style="list-style-type: none"> •With Team (in/out of country): skype, eFolio, written work, email •With GC Directors, Undergraduate mentors 	<ul style="list-style-type: none"> •Ability to articulate science knowledge through written and spoken means throughout the Department, Science Fair
Leadership	<ul style="list-style-type: none"> •Student leader for on site program 	<ul style="list-style-type: none"> •Student leaders in group work

STEM Integration continued

21st Century Skills	Global Challenge	Castilleja STEM
Creative Problem Solving	<ul style="list-style-type: none">•Synthesis of several disciplines to create a “solution”	<ul style="list-style-type: none">•Hands-on approach to math and science topics; encourage participation in competitions (GC, science fair, robotics, Siemens, internships)
Intercultural Awareness	<ul style="list-style-type: none">•Experience with other cultures	<ul style="list-style-type: none">•Diversity on campus
Inquiry/problem solving	STEM exploration	Support of standard curriculum

Benefit to students

- Chance to use their knowledge in “real” world setting.
- Communication skills enhanced across cultures
- Group work provides sense of connectedness.

"I learned a lot about alternative ways of approaching the same problem. I gained a thorough understanding about the design process and the implementation of an idea through teamwork. GCA deepened my understanding in science and math in that a lot of physics and chemistry concepts I had learned in the past two years were applied in this context."

- Sammy

Coordination with IB program

Theory of knowledge: GC asks students to take their knowledge of science and math and apply it to world problems using their knowledge of history, current affairs, and economics. Students are required to communicate with their teammates, across cultures, and share their “solutions” with adults through written reports.

The business plan could be considered for the extended essay requirement.

Other philosophical connections:
interdisciplinary projects, stimulating curiosity and inquiry