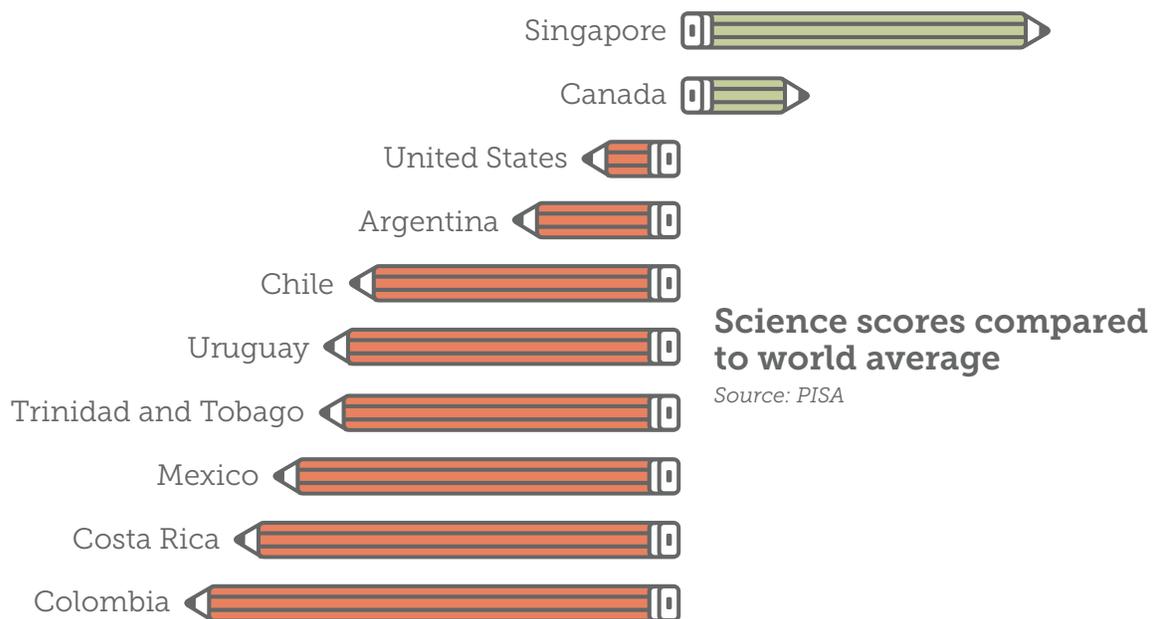


STEPS AMERICAS



WHY STEM EDUCATION?



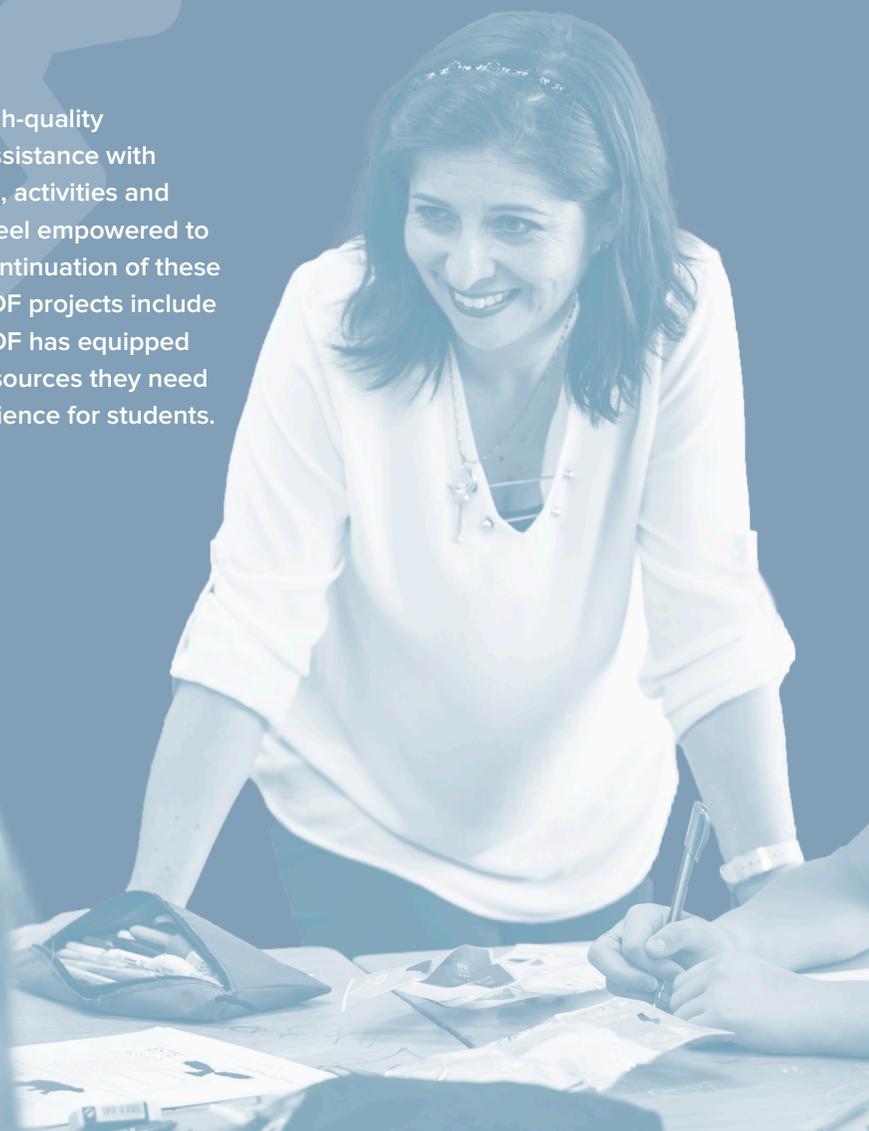
Although school enrollment rates in the region have vastly improved in recent years, Latin American students continue to rank in the bottom third worldwide in math, reading and science, according to PISA. One of the barriers to success is unequal access. The Inter-American Development Bank found that the region's poorest students are more than two years behind their wealthier counterparts.

As the global tech sector booms, machines are replacing traditional manual labor jobs. New jobs require skills informed by STEM - Science, Technology, Engineering and Mathematics. Aside from those hard skills, STEM education teaches soft skills such as leadership, critical thinking and teamwork. Therefore, PADF launched the STEM Americas initiative to promote STEM education and prepare the workforce in Latin America and the Caribbean.

SUPPORT TO TEACHERS

Teachers are the backbone of high-quality STEM education. In addition to assistance with curriculums, supporting materials, activities and other content, teachers need to feel empowered to advocate for the inclusion and continuation of these initiatives in their schools. All PADF projects include teacher training and support. PADF has equipped teachers with the training and resources they need to create a quality learning experience for students.

Through the OAS online certification portal, PADF provides unique access for educators to acquire STEM teaching methodologies.



GRAND CHALLENGES: A HANDS-ON APPROACH



Grand Challenges teach students how to approach real-world problems by connecting two or more disciplines within STEM. Additionally, they may connect a STEM discipline with a non-STEM discipline like art or sociology. Grand Challenges are versatile educational elements that can be introduced into any curriculum and can include as little or as much technology as necessary.

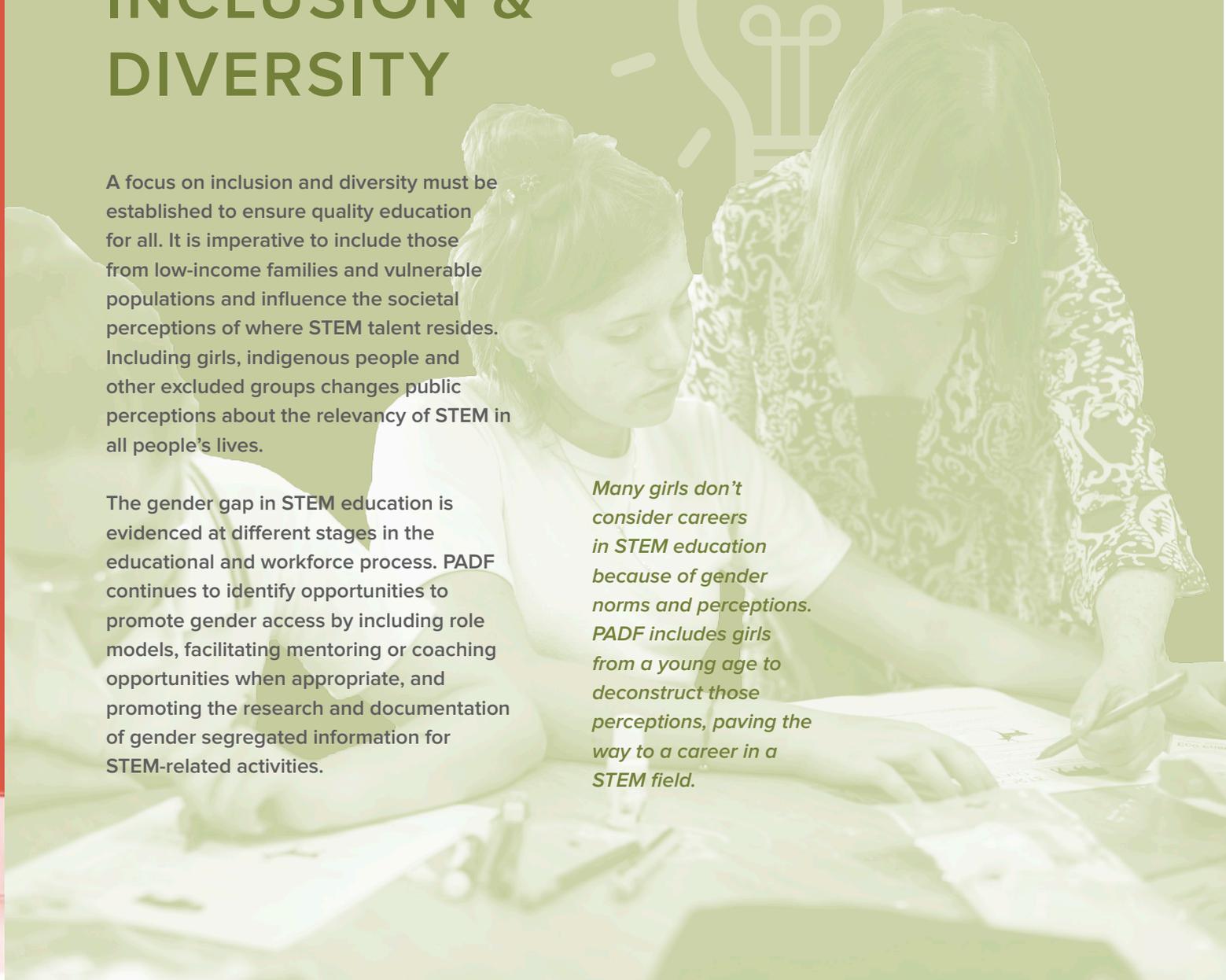
PADF has introduced robotics competitions, which challenge students to draw from a range of skills and disciplines to make functional machines. In Panama, students have developed skills in leadership, teamwork and creative problem-solving by building robots to compete in the National Robotics Olympiad.

INCLUSION & DIVERSITY

A focus on inclusion and diversity must be established to ensure quality education for all. It is imperative to include those from low-income families and vulnerable populations and influence the societal perceptions of where STEM talent resides. Including girls, indigenous people and other excluded groups changes public perceptions about the relevancy of STEM in all people's lives.

The gender gap in STEM education is evidenced at different stages in the educational and workforce process. PADF continues to identify opportunities to promote gender access by including role models, facilitating mentoring or coaching opportunities when appropriate, and promoting the research and documentation of gender segregated information for STEM-related activities.

Many girls don't consider careers in STEM education because of gender norms and perceptions. PADF includes girls from a young age to deconstruct those perceptions, paving the way to a career in a STEM field.



NETWORKS & COMMUNITIES OF PRACTICE

Participants in “STEM in the Americas” engage in communities of practice, drawing on the knowledge, tools and resources needed to succeed. PADF creates communities of practice around STEM education by connecting students, teachers and other education stakeholders. After participating in trainings, fairs and existing online communities, they become well-connected and better informed.

Together, PADF and the OAS offer a scholarship to a select number of teachers for a certification in STEM education. It is a professional development program that focuses on designing and implementing STEM practices. In addition to improving the quality of education, the course focuses on STEM opportunities for the integral development of society.

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GLOBAL ISSUES, LOCAL SOLUTIONS

The increased knowledge and technological fluency resulting from STEM education allows for locally adapted solutions to worldwide issues. STEM education can play a fundamental role in creating solutions in many areas of sustainable development. Additionally, it fosters robust partnerships at the local, regional, national and international levels.

PADF has supported STEM education to Colombian communities displaced by decades-long internal conflict. In those communities, conflict resolution and violence prevention are especially relevant, and are included in the STEM curriculum.



ABOUT PADF

The Pan American Development Foundation, a 501(c)(3) nonprofit organization, brings together many stakeholders to improve livelihoods, empower communities, strengthen civil society, support human rights, protect the environment and respond to natural disasters in Latin America and the Caribbean. Established by the Organization of American States in 1962, PADF has worked in every country in the region. In 2017 PADF reached 10.3 million people through sustainable development initiatives in Latin American and Caribbean countries.

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