



SciGirls

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Engaging Latinx Families

Key ingredients
for successful STEM programs



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Key Ingredients for Successful STEM Programs

Parental¹ encouragement is one of the strongest influences on Latinx youth's development of STEM career aspirations and persistence in STEM. Parental and family attitudes towards science in everyday life, also play an important role in children's aspirations and identification with science. Parents and other family members can influence their children's attitudes towards science in a positive way by encouraging them to participate in informal STEM programs.



Cultural Considerations

To engage Latinx youth and families in STEM, it is key to develop culturally responsive programs that consider their contexts, needs and perspectives, and reflect their cultural values and traditions. For example, a basic understanding of Latinx values and norms can help to effectively communicate and engage with families in your program. Some important Latinx cultural values include: familismo (family-centeredness), personalismo (preference for warm personal interactions), respeto (display of mutual respect, trust-building), collectivism (well-being of the group), and simpatía (kindness).

SciGirls offers the following strategies, based on Latinx cultural values, for developing culturally sensitive approaches that engage Latinx families in informal science education. Implementing any or all strategies will improve your program's connection to Latinx families. Focus on incorporating a few strategies and as your program develops take on a few more.

¹ When we refer to parents, we also refer to guardians and caregivers.

Strategies and Tips

1. Build trusting relationships with families

Family, relationships, and trust underlie Latinx community living. To successfully engage families in your program, it is key to build trust and establish strong relationships with them. Once families are engaged, they can serve as ongoing ambassadors for your program.

- Meet families where they are and create caring relationships based on trust and mutual respect.
- Establish direct person-to-person (bilingual) communication with parents and family members. Build relationships with trusted community members (e.g. community organizers, volunteers, faith leaders, teachers) which can help open communication with Latinx families. Latinx value relationships and are more likely to engage in a program if someone they trust invites them. These liaisons often have insights into the needs and features of the community and can reach out to parents and families through home visits, schools, community events, in-person distribution of flyers in grocery stores, laundromats, shopping malls, etc.
- Organize listening sessions (e.g., via interviews, focus groups, social gatherings, after-church events) with parents to learn about their needs, concerns, barriers, experiences, and priorities, and invite them to provide feedback on your program and its resources. This results in an effective and impactful family engagement.
- Recruit bilingual staff members and volunteers from the community that can serve as cultural liaisons and as interpreters and translators.

Why engage families in informal STEM programs?

- Leads to increased family involvement in children's education and school.
- Improves relationships and communication between parents and children and creates family bonding.
- Increases youth awareness about the value of STEM in their life, community, and careers.
- Strengthens parents' skills, confidence, and understanding for how to support their children's STEM learning and education.
- Improves informal STEM programs.

Strategies and Tips Continued

2. Make programs accessible and inclusive.

The Latinx population is remarkably diverse with different demographic, geographic and economic conditions that give them unequal access to STEM learning opportunities. Be proactive in planning for access and inclusion when designing your program. Think about who benefits from your program and who is left out. Make sure your program reaches all families, especially families from diverse linguistic and educational backgrounds (e.g. Spanish speaking with low-to-no literacy skills), and those in greatest need.

- As you plan new programs, invite families from underserved communities to the design table. Listen and learn from families what they want and need and discuss barriers that impact their participation. Do not assume that the approach that works well to engage families from one community will be effective for all communities.
- Latinx families need more personal outreach strategies. The most important way to communicate with families is through direct contact. This is especially important for recent immigrants many of which may fear or mistrust educational institutions. Consider phone calls and face-to-face communication such as door to door visits or distribute flyers at community events, schools, grocery stores, churches, or bus stops.
- Communicate information about your program to parents in both English and Spanish, and through organizations and people Latinx consider trustworthy such as faith figures, teachers, local leaders from schools, and community-based organizations.
- Address common barriers to program participation such as lack of transportation, work schedule conflicts, childcare, and inadequate accommodations for disabilities.
- Invite parents and families to a welcome event prior to the start of your program to inform them about the program's goals and activities, meet other families and staff, see the program's site, and ask questions. This gives parents and families a sense of community and inclusion and makes them feel welcome.
- Create an inclusive environment that gives program participants a sense of community, makes them feel like a welcome participant, and values their perspectives and contributions.

3. Foster family involvement

Latinx value interpersonal familial relationships and the family unit, thus they prefer activities that engage the whole family and build family cohesion. Fostering the family unit is especially important to low-income families as parents usually have heavy work schedules (e.g., working two jobs or six days a week) which gives them limited time to spend with their families. If parents accompany their children to an event or activity, they will appreciate the opportunity to spend time with their children and feel more comfortable and assured of the safety and well-being of their children.

- ⊕ Promote your program as family-friendly, welcome parents, grandparents, siblings, aunts, uncles, etc.
- ⊕ Recruit staff that reflect the cultural diversity of the community and encourage them to greet and welcome families at the door.
- ⊕ On the first day of the program let parents know that they are important and that their involvement, knowledge, and skills are critical to the success of their children and the program.
- ⊕ Set up self-directed “warm-up” activities so parents and families get to know one another. This can be done at the beginning of an event, while families are arriving—with roaming bilingual facilitators. Think about methods to help parents and families feel connected.
- ⊕ Design activities that allow opportunities for children and adults to work on problem solving and critical thinking together. They can also participate by either working together or separately at the same event.
- ⊕ For families with young children, allocate staff (if available) to oversee activities for the little ones in a separate room.
- ⊕ Consider incorporating family members as event helpers or facilitators.
- ⊕ Ask parents to act as advisors to your program and consider involving them in program design and in developing strategies for outreach to other parents and families.
- ⊕ Develop mechanisms for ongoing communication with parents about your program activities and volunteer opportunities; take into consideration literacy and cultural barriers.
- ⊕ Celebrate accomplishments with a culminating event (e.g. a Family Fiesta).

Strategies and Tips continued

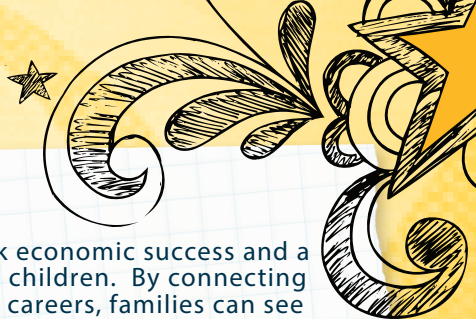
4. Offer culturally relevant programming.

To successfully engage Latinx audiences, programs must reflect the cultural traditions, beliefs, and values of the people you are trying to reach. Also consider the diversity and complexity of your local Latinx community and use strategies to maximize their unique strengths, knowledge (personal and/or academic), skills, interests, and cultural ways of interacting.

- ⊗ Deliver programming in English and Spanish and encourage them to use their home language as they participate. Using Spanish shows respect for Latinx culture and may be the most effective way to reach some groups within the community.
- ⊗ Provide bilingual materials and resources and ensure that they are reading-level appropriate for the specific community you serve. Written materials should be clear and accessible. Use short sentences, active voice, and simple vocabulary. This helps to keep materials appropriate for a range of literacy levels.
- ⊗ Emphasize the program's educational merit, as educational activities are highly regarded by parents who hope their children will achieve a better standard of living and quality of life than they themselves have.
- ⊗ Connect activities to the participants' lives to make STEM real and meaningful. This connection validates their interests, knowledge, skills, culture, and lived experiences, helps them develop a positive STEM identity, and increases their interest in STEM.
- ⊗ Work with program staff that is culturally competent (or provide cultural competency training) and engender trust and respect.
- ⊗ Incorporate everyday experiences into the program that foster a cultural connection among participants. The experiences might be related to sports, entertainment, gardening, food, customs, etc.

Vast Diversity Among The Latinx Community

The Latinx population in the United States is remarkably diverse. U.S. Latinx represent many different countries of origin, comprise both native-born and immigrant residents, and include communities with varied levels of assimilation, socio-economic status, and education. Therefore, before you begin your program, it is crucial to understand the makeup of the Latinx population within your community. While Latinx share some important cultural characteristics, an effective communication and engagement strategy should convey an understanding of the diversity of the Latinx populations.



5. Include a focus on careers.

Latino parents, particularly immigrants, seek economic success and a good quality of life for themselves and their children. By connecting program's curriculum and activities to STEM careers, families can see pathways to a diversity of career options that will increase their economic potential.

- ⦿ Connect real-world STEM skills to hands-on activities and make direct connections between the activities and the work of STEM professionals.
- ⦿ Integrate discussions of potential careers into project activities and use SciGirls role model videos to spark discussion.
See http://www.scigirlsconnect.org/resource_topic/role-model-profiles/.
- ⦿ Introduce youth to approachable and relatable Latinx STEM professionals that mirror the diversity in your community, are passionate about STEM, and can show youth real-life connections between STEM and their everyday lives. This can have a powerful impact on youth's life and help them envision a career in STEM.
- ⦿ Invite Latinx interested in STEM from all levels (high school, undergraduate, and graduate students) to interact with families and share their career stories.
- ⦿ Invite guest Latinx STEM professionals to help lead an activity. Visit the FabFems directory – an online, searchable directory of women STEM professionals interested in outreach to youth.
Go to <https://www.fabfems.org/>.
- ⦿ Help your guest Latinx STEM professionals be a success! SciGirls offers an online training for STEM professionals to help STEM professionals develop skills to effectively connect with youth and engage them in STEM. Go to <http://www.scigirlsconnect.org/>.
- ⦿ Engage with local partners to connect youth to real-world STEM opportunities (e.g. job shadowing, internships, outdoor experiences).

Hispanic, Latino/a or Latinx?

Hispanics are people from Spain or from Spanish-speaking countries in Latin America (this excludes Brazil, where Portuguese is the official language). A person who identifies as Hispanic may be of any race. Latinos or Latinas are people from Latin America regardless of language (this includes Brazil but excludes Spain). Latinx is a gender-neutral term that is used in place of "Hispanic" or "Latino/a". In addition to men and women, Latinx makes room for people who are queer, agender, trans, non-binary, gender fluid, and gender non-conforming. The term is used by scholars, an increasing number of journalists, and activists, and is quickly gaining popularity among the public.

Despite their wide use, these terms are not universally embraced by the community that has been labeled. Most Latinx in the United States prefer to use their family's country of origin to describe themselves. For example, a person's family who is from Mexico will typically identify as "Mexican-American". So, who is considered Hispanic, Latino/a or Latinx? Anyone who says they are, and no one who says they are not.

Strategies and Tips continued

6. Empower parents to support their children in STEM.

Youth are more likely to participate, persist and succeed in STEM with parental and family support. This is especially important for girls and youth from underserved communities. Many Latinx parents want to encourage their children in STEM but feel anxious or lack confidence in their own STEM knowledge. This may be passed onto their children and can influence their child's comfort level and confidence in STEM. By empowering parents with knowledge, research, and resources, they can help their children be confident in STEM and see themselves as future STEM professionals.

- Help parents tap into their existing knowledge and “uncover” their STEM skills as they engage in hands-on activities with their children. Remind parents that everyone has STEM skills; they may not be engineers, chemists, or mathematicians, but many use STEM skills in their jobs (e.g. construction workers, seamstress, etc.), at home (e.g. fixing, and building things, cooking, gardening), and routine activities (e.g. shopping).
- Communicate to parents that STEM knowledge is not necessary to engage and support their children in STEM. Parents do not need to be STEM experts or have the answers; motivation and encouragement is what matters.
- Provide information on the importance of teaching children noncognitive skills such as confidence, grit, and self-control. These skills are as important as the “hard” STEM skills, as STEM professions are all about problem solving, experimentation, and iteration.
- Explain the concept of growth mindset to families and emphasize the importance of communicating to youth that they all have the potential to succeed in STEM.
- Share tips with parents on how to integrate STEM into their everyday lives and suggest activities with accessible materials so that parents can repeat them at home with their children and build skills together.
- Share information about what degrees are required for STEM jobs (e.g. an associate degree for positions such as Engineering Technician, bachelor and doctorate degrees for research scientists and other professional careers).
- Connect parents with accessible STEM resources and organizations available in their community. These include organizations that advocate for more diverse representation in STEM, after-school programs, science clubs and cafes, library activities, special events, competitions, links to online citizen science projects, etc. The CONNECTORY is an online database of STEM programs where families can find local STEM education opportunities for their children.

See: <http://www.theconnectory.org/>.

7. Evaluate impact

Evaluating the impact that your program has on youth and families leads to more effective family engagement practices, strategies, and programs. Program evaluation serves as a tool in learning about the needs and preferences of the target population and assists in targeting outreach efforts more effectively.

- Keep track of your communication efforts with families. This will allow you to adjust your strategy as you learn what methods work best.
- Learn from each outreach strategy; think about what components were the most and least effective, and why.
- Collect feedback from parents and other family members in formal and informal ways. Encourage bilingual staff to have one-on-one conversations with families at programs and offer incentives for completion of surveys. Through formal surveys parents can give specific feedback on new program elements and possible programmatic changes that best address their needs.
- Organize parent focus groups and interviews to invite parents to talk about what is working and what is not. Inform parents why their feedback matters and how it will be used for program design and improvement.
- Think about innovative ways to encourage feedback from program participants and incorporate input throughout every program element. Partner with researchers and evaluators to learn more about how to design effective family engagement strategies and programs.



Resources

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For more information go to <http://www.scigirlsconnect.org> and <http://www.pbs.org/parents/shows/scigirls>.

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