The AAUW STEM Task Force — a group of member leaders who serve as ambassadors in science, technology, engineering, and mathematics (STEM) education to AAUW states and branches — and AAUW STEM staff created an online survey (see Appendix) in order to gain information about the breadth and variety of STEM programs for girls and teens held by AAUW states or branches in 2012. This report includes an analysis of the data from the survey, recommendations for AAUW staff and the STEM Task Force, and suggested avenues to follow up with branch and state members who responded to the survey.
SURVEY RESULTS

Methodology

The survey was distributed to 1,001 state and branch presidents from all 50 states as well as the territories of Guam and Puerto Rico.

All survey participants provided their name, AAUW position, and state or branch organization. All other questions were optional.

If more than one member responded for the same state, branch, or STEM program, only the first response was used to ensure that numbers were not duplicated.

States Represented

Of the 1,001 participants polled, 326 AAUW members from 43 states responded. STEM programs or events were reported in 115 branch or state organizations and spanned 33 states. Responding STEM chairs or officers held positions at 87 branch or state organizations from 29 states. No responses were received from Guam or Puerto Rico.
SURVEY RESULTS

STEM Areas Covered

The survey asked participants which STEM fields their programs focused on. Most programs included most or all of the STEM areas. The most represented was science, with 93 percent of programs including a science component, and the least represented was engineering, with 74 percent of programs including an engineering component.

Program Types

The survey asked participants to describe their state or branch STEM program as one or more of the following: a one-day program of multiple STEM activities, a half-day program of STEM activities, an after-school program, a weekend program, a weeklong program, a summer program, or “other.”

The most common type of program reported was a one-day program of multiple STEM activities. The least common type of program reported was a weekend program.

“Other” responses included evening or afternoon programs, science fairs, and awards ceremonies for high-achieving female students in STEM.
SURVEY RESULTS

Activity Types

The survey asked participants about the types of STEM activities planned for girls or teens in their STEM programs. Survey participants could pick multiple activity types.

Hands-on STEM activities were the most common type of camp activity cited (73 percent). The majority of programs also featured older women or girls as speakers (69 percent). The least common type of activity was mentoring (18 percent). “Other” types of activities included field trips, research projects, and exhibitions. Many respondents used the “other” field to give more specific information about the types of speakers or parent activities available during their program.

![Activity Types Chart]

- Site Visits: 18%
- Other: 18%
- Mentoring: 28%
- Robotics: 28%
- Parent program: 32%
- Computer research: 34%
- Experiments: 52%
- Women speakers: 69%
- Hands-on activities: 73%

Total answers: 71
SURVEY RESULTS

Girls Served

According to the survey, 10,496 girls and young women participated in AAUW STEM programs in 2012. The majority (67 percent) of these girls were in middle school, grades 6–8.

![Number of Girls Served, by Grade](image)

Volunteers

The survey asked participants about the number and type of individuals recruited as volunteers for their STEM programs for girls in 2012. The overwhelming majority of volunteers were AAUW state and branch members. Other common sources of volunteers included STEM professionals, local educators, and parents. Respondents who selected “other” commonly listed high school and college women as volunteers.

![Volunteers](image)
Program Funding

Respondents were asked to identify the source(s) of funding for their branch or state STEM programs. Most programs (56 percent) were funded by AAUW member donations. It was also common for members to conduct state or branch fundraising activities in their local area (34 states and branches, or 49 percent of respondents) and receive donations from local businesses or organizations (49 percent of respondents).

Funding Sources for State and Branch STEM Programs

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member donations</td>
<td>56%</td>
</tr>
<tr>
<td>State/branch fundraising</td>
<td>49%</td>
</tr>
<tr>
<td>Business/organization donations</td>
<td>49%</td>
</tr>
<tr>
<td>Registration or activity fees</td>
<td>39%</td>
</tr>
<tr>
<td>Grants</td>
<td>29%</td>
</tr>
<tr>
<td>Partnerships with other organizations</td>
<td>24%</td>
</tr>
</tbody>
</table>
SURVEY RESULTS

Long-Running Programs

The survey asked how long participating states or branches had been holding their STEM program. The longest-running programs reported were

27 years
- Harford County (MD) Branch — Judith Resnik Luncheon

25 years
- Placentia-Yorba Linda (CA) Branch — Bridges to Tomorrow
- Lake Washington (WA) Branch — Expanding Your Horizons

23 years
- Farmers Branch-Carrollton (TX) Branch — Reach for the Stars

22 years
- Woodbridge (VA) Branch — Girls + Science + Math = SUCCESS!
- Grant County (NM) Branch — Expanding Your Horizons

21 years
- West Harris County (TX) Branch — Expanding Your Horizons
- Reston-Herndon (VA) Branch — Girls Excelling in Math and Science (GEMS)

When asked if they were planning to host their state or branch program again in 2013, 83 percent of respondents said yes.

Evaluations

Forty-eight respondents indicated that they evaluated their 2012 program with methods such as surveys or focus-group discussions. Of those 48, 36 tallied the responses, prepared a summary, and retained the data. Most evaluations (70 percent) were written on paper and handed out to girls at the end of the program.
RECOMMENDATIONS

Based on the findings of the STEM State and Branch Survey, AAUW STEM staff and the STEM Task Force recommend the following to improve AAUW’s national STEM programming. These recommendations are based on current capacity and resources.

• **Recognize states and branches with long-running STEM programs.** AAUW STEM staff can feature long-running programs in print, electronic, and social media communications.

• **Promote communication between the STEM Task Force and state and branch STEM chairs and officers.** State and branch organizations should encourage communication between the task force and members who are actively involved in STEM programming. AAUW STEM staff can provide contact information to the task force members and encourage them to regularly communicate with STEM leaders at the state and branch levels.

• **Create avenues for communication among state and branch members involved in STEM.** AAUW staff can create an e-mail list for designated state or branch STEM chairs and officers to share information with members about upcoming programs, discuss their challenges and successes, and feel connected as a STEM programming community.

• **Encourage states/branches to host STEM programs for girls in elementary and high school.** Most of the programs surveyed served middle school girls in sixth through eighth grade. Middle school is a critical time when girls make choices that will affect their future educational and career paths, but women and girls need support and encouragement at all stages in their lives and education. The STEM Task Force can work with branch STEM chairs and officers to encourage programming for all age groups.

• **Provide a sample evaluation for STEM programs.** Most branches that conducted a survey of their program used a paper survey. With online survey tools like Survey Monkey, as well as AAUW’s existing relationships with professional evaluators, it would be possible to create an effective and easy-to-use evaluation template to share with all branches to simplify and improve the review process. Previous state and branch evaluations can also serve as references (see Follow-up). This evaluation template would be specific to STEM programs and would relate program goals and achievements to STEM objectives such as incorporating recommendations from the AAUW research report *Why So Few? Women in Science, Technology, Engineering, and Mathematics*.

• **Continue to survey states/branches in future years.** The state and branch survey saw a high level of engagement and provided useful information to AAUW. Issuing annual surveys will give AAUW and the STEM Task Force a more complete picture of the types of STEM programs AAUW provides to girls across the country, and the organization will continue to connect with local members who are active in STEM.
FOLLOW-UP

Based on the findings of the STEM State and Branch Survey, AAUW STEM staff and the STEM Task Force have identified several possibilities for follow-up with the survey respondents.

- **Send survey data to state leaders.** AAUW state leadership would benefit from the survey information when planning activities for the upcoming program year. In addition to the summary data in this report, AAUW STEM staff can prepare a state-specific report to send to that state’s president.

- **Ask branches about their fundraising best practices.** Fundraising can be one of the biggest challenges for our states and branches. Members who did not plan to hold their program again in 2013 often cited lack of funds as a factor. There is also a fundraising component to hosting AAUW’s new national STEM programs, Tech Trek and Tech Savvy. State and branch organizations that were able to raise funds from sources other than their own members and activity fees have valuable knowledge about successful marketing strategies; this information would be helpful to all members who host STEM programs. In consultation with AAUW Development staff, AAUW STEM staff have determined key strategies such as identifying corporate partners, establishing budget ranges for STEM events, and tracking the proportion of in-kind donations to monetary funding. AAUW STEM staff and the STEM Task Force can use the contact information provided by members who responded to the survey to talk to them about their particular programs.

- **Ask branches about their volunteer management best practices.** Lack of volunteers was also a common reason cited by state and branch members who decided not to host their STEM programs in 2013. States and branches that have successfully worked with volunteers from a variety of different populations can provide helpful information and best practices to share with other states and branches across the country. AAUW STEM staff and the STEM Task Force can reach out to members who provided contact information on the survey about the specifics of their programs. The AAUW Branch Programs Resources Committee has indicated that this information would be of interest and is not currently being collected for any branch programs.

- **Request evaluation data from branches.** Knowing evaluation best practices can be valuable both to AAUW staff and state and branch organizations. These findings can be used to create effective evaluation templates and methods. AAUW STEM staff can see which previous AAUW programs successfully engaged girls and how, as well as the populations those programs served.
APPENDIX: SURVEY QUESTIONS

1. Please provide the following information about yourself:
   - Your name
   - Your state or branch
   - AAUW position
   - E-mail address

2. Did your state or branch host a STEM program for girls or teens in 2012?
   - Yes
   - No

3. Please share some information with us about your state or branch’s 2012 STEM program — name of event(s), date(s), link to more information on the web, etc.
   - [Open-ended response]

4. How many years has your branch had a STEM program?
   - [Open-ended response]

5. On what STEM areas is your state or branch program focused? (Check all that apply.)
   - Science
   - Technology
   - Engineering
   - Math

6. How many girls and teens participated in your state or branch STEM program in 2012? Indicate their grade in school.
   - Total number of girls in STEM Program
   - Number in primary school grades 1–5
   - Number in middle school grades 6–8
   - Number in high school grades 9–12

7. Describe your state or branch’s STEM program for girls and/or teens. (Check all that apply.)
   - A one-day program of multiple STEM activities
   - A half-day program of multiple STEM activities
   - An after-school program
   - A weekend program
   - A summer program
   - A weeklong program
   - Other type of program — please describe
APPENDIX: SURVEY QUESTIONS

8. Identify the types of STEM activities planned for girls and teens in your state or branch program. (Check all that apply.)
   - Offering hands-on activities
   - Conducting experiments and recording results
   - Using computers to search for information
   - Listening to older girls or women talk about why STEM is important to them
   - Matching girls with mentors to guide their learning experiences
   - Learning how to build or program robots
   - Visiting a museum, college, or university to observe STEM in action
   - Involving parents in learning about the importance of STEM for girls and teens
   - Other STEM activities planned — please name them

9. What resources has your state or branch used to finance your STEM program for girls or teens? (Check all that apply.)
   - State or branch fundraising activities
   - Donations from businesses or organizations in the local community
   - Grants received through competitive applications
   - Registration or activity fees
   - Partnership with another organization to seek funding
   - AAUW member donations
   - Other types of fundraising activities — please explain

10. How many individuals did your state or branch recruit to help conduct the STEM program for girls or teens in 2012? (Insert an approximate number for each type below.)
    - State or branch members
    - Parents
    - Local educators — public school, community college, four-year college, or university
    - Working STEM professionals
    - Staff of girl-serving organizations (e.g. Girl Scouts, 4-H clubs, Girls Inc.)
    - Other types of volunteers — please name them

11. After completing the program, did your state or branch decide to host the program again in 2013?
    - Yes
    - No
    Why? Please explain your answer:

12. Did your state or branch conduct an evaluation of its 2012 STEM program for girls or teens?
    - Yes
    - No
13. Which of the following were used to evaluate the state or branch STEM program for girls or teens? (Check all that apply.)

- A paper survey was administered to the girls or teens at the beginning of the program.
- A paper survey was administered to the girls or teens at the end of the program.
- An online survey was administered to the girls or teens at the beginning of the program.
- An online survey was administered to the girls or teens at the end of the program.
- A sample of girls or teens was interviewed about the STEM program, and results were noted or recorded.
- A focus group was held with a sample of girls or teens, and results were noted or recorded.
- A survey was administered to parents who participated in a related activity.
- Any other method used to evaluate the state or branch STEM program — please explain.

14. If a survey was administered, did you tally the responses, prepare a summary, and keep the data?

- Yes
- No

15. If your state or branch is planning to host a STEM program in 2013, please share some information about the program — e.g. name and date of event(s) or a link to more information on the web.

[Open-ended response]

16. If your state or branch has a STEM chair or officer, please provide that person’s name and contact information.

[Open-ended response]