

Juniors Toolkit

About Girls Get STEM: Unleash Your Inner Scientist

Girl Scouts of the USA has unleashed a new partnership with Discovery Education to spark girls' interest in STEM and help them unleash their G.I.R.L. (Go-getter, Innovator, Risk-taker, Leader)™ potential. Girls Get STEM: Unleash Your Inner Scientist provides educators and Girl Scouts troop leaders with standards-aligned curriculum that aims to address gender equity in STEM education across the country through a series of girl-led, girl-tested, and girl-approved resources for students in grades 2–5.

Quick Facts

- Program Name: Girls Get STEM: Unleash Your Inner Scientist
- URL: <https://www.girlsleadstem.com/educator-resources>
- Audience: Girl Scouts in grades 2–5

About the Girls Get STEM Activities

The Girls Get STEM activities below were created to bridge national science and engineering standards into the Think Like a Citizen Scientist Journey. This can support you as a troop leader in recruiting girls and establishing relationships with educators. In addition to our national standards, non-cognitive skills are factors that predict success in school beyond content knowledge and academic skills. In education, we refer to some of the most popular learning strategies in today's workforce as the "4Cs" for 21st Century Learning. They include critical thinking, communication, collaboration, and creativity. Each of the activities created in this partnership highlight and help develop these important skills.

The table below provides an overview of each Girls Get STEM activity, how to include this activity in your current Think Like a Citizen Scientist Journey, and identifies the 21st Century Learning Skill featured.

Collaboration

Brainstorm Activity: Collaboration

Timing: Approximately 45 minutes, but tailor this activity to fit your troop's needs!

Focus Area: As your troop begins to think of ideas for their Take Action project, it will be helpful to hold a brainstorming session. This will ensure that all girls can contribute their ideas while also collaborating with others.

Activity Overview: Girls will be asked to brainstorm issues and causes that they'd like to consider for their Take Action project. The troop will put all their ideas into categories before they do preliminary research in small groups to consider each category's issues and needs. The groups will present their findings to the entire troop, and from there the girls will select one final category that they believe could most benefit from their efforts.

Where can this activity fit in?

- Take Action Project: Include this activity just before the Closing Ceremony in Think Like a Citizen Scientist Pt. 3, where girls are asked to write their own Take Action ideas on index cards and choose a Take Action project to complete together as a troop.
- Any Time: This activity can be modified to help your troop brainstorm other kinds of ideas, too!

Materials:

- A couple packs of sticky notes (Alternatively, you can use small sheets of paper and tape.)
- **Sticky Note Sort & Brainstorm**, one per girl
- **Presentation**, one per girl
- **Optional:** Devices with internet access, at least one per every 3 or 4 girls

Steps:

Juniors will brainstorm issues and causes to consider for their Take Action project. They'll do preliminary research to consider each category's issues and needs before they present their findings and select the final category that they believe could most benefit from their efforts. This final category will be the troop's Take Action project.

Part 1: What problems can we help solve?

Distribute several sticky notes to each girl.

Collaboration

SAY:

- Before you select a Take Action project, it's important to consider all of the options!
- There are many different problems you could help solve in your community and many different issues you could focus on for your Take Action project.
- As you start to plan, it's important to think about your Take Action project from the perspective of those you'd like to help. This will help you select a project that has the potential to make a real impact in your community.

Ask the girls to find a quiet spot in the room and quietly brainstorm Take Action ideas on their own. Girls should write a different idea on each sticky note.

Note to Volunteers: If girls seem unsure about what to write, it may be helpful to provide a couple of examples that are applicable to your community, such as recycling, pollution, bullying, etc.)

Once girls have brainstormed independently for a few minutes, bring them back together and ask them to place their sticky notes on a central board or wall before taking a seat.

Read each of the ideas aloud and work with the girls to develop four or five broad categories that the ideas can fit into. For example, people, education, animals and/or the environment may all be good starting points.

Separate the sticky notes into these categories, and then use new sticky notes to label each category.

Part 2: What are the needs?

Divide the girls into groups to match the number of categories that you created.

Assign each group a category, and then distribute one **Sticky Note Sort & Brainstorm** handout to each group. Ask each group to take their category's corresponding sticky notes off the board.

Read through the directions on the **Sticky Note Sort & Brainstorm** handout as a group, and review the difference between Problems and Needs with the girls.

SAY:

- Problems are negative situations or situations that could use a change.
- Needs are what must happen (what is needed) to end or fix this problem.

Read through the examples that are given on the handout and clarify any questions.

Collaboration

Then, groups can work together to decide whether their sticky notes belong on the Problem side or the Needs side of the chart. If the subject is very general, then the girls can reword it so it more clearly describes one or the other (problem or need).

Note to Volunteers: As groups work, it's okay if they have so many sticky notes that they go off the page!

Once the sticky notes have been sorted into problems and needs, give additional sticky notes to each group to fill in the gaps! For instance, if a group has a sticky note on the Needs side that says, "People need to learn why it is important to conserve electricity," they should come up with the problem, write it on a sticky note and put it on the opposite side of the chart. Or, if they have a sticky note that says: "Many people waste electricity," they should then come up with a corresponding need. Ultimately, each problem will have a corresponding need (and vice versa).

Float around the room as girls add sticky notes to their charts. As groups finish, encourage them to continue brainstorming other problems and needs associated with their category.

Optional: If you have access to devices with internet access, girls may also perform internet research during this step. Girls should be directed towards kid-friendly websites or articles that discuss needs in your local community.

Part 3: How can we make a difference?

Pass out a **Presentation** handout to each group.

Challenge each group to narrow their list of problems and needs down to two or three that they think are most important to share with the rest of the troop. Then, groups can fill in the speech bubbles on their handout with information about these problems/needs. Each group member should be ready to share at least one of the speech bubbles.

When the groups are ready to present their ideas, ask the rest of the troop to listen carefully and think about which category seems to have the most needs that they could help.

SAY:

- Next, present your group's ideas to the rest of the troop.
- As you're listening to the presentations from the other group, consider the needs in each.
- Think: Which category has the most needs you could help? Where could you truly make a difference?
- After the presentations, you'll vote on one category that you'll continue to explore as a troop for your Take Action project.

Once all groups have presented, ask the girls to close their eyes. Lead them in voting for the category that they would like to pursue for their project.

Collaboration

After the vote, announce the category that has received the most votes.

SAY:

- While you've already begun to research the problems and needs in this area, the next step will be to talk to the people they may be able to help in order to find out their specific needs.
- When you Take Action, it's important to hear from the people who will be directly affected by your project.
- It would be difficult for their project to have a real impact without listening to what is most important to your community.

While there's still a lot to be done, congratulate the girls on completing one important step in creating their Take Action project!

Collaboration

Sticky Note Sort & Brainstorm

Problems and Needs Category: _____

<p><u>Problem/Issue</u> This note describes a negative situation or a situation that could use a change.</p>	<p><u>Need</u> This note describes something that must happen to end or solve the problem.</p>
<div data-bbox="212 617 657 1045"> <p>Many people waste electricity.</p> </div> <div data-bbox="212 1096 657 1528"> <p>Students are lonely.</p> </div>	<div data-bbox="846 617 1291 1045"> <p>People need to learn why it is important to conserve electricity <i>and</i> how to actually conserve electricity!</p> </div> <div data-bbox="846 1096 1291 1528"> <p>Students need to know that others care about them.</p> <p>or</p> <p>Students need someone to play with.</p> </div>

Collaboration

Presentation Handout—Category: _____

One of the biggest problems is:

Some of the needs related to this problem are:

Another important problem is:

Some of the needs related to this problem are:

A third important problem is:

Some of the needs related to this problem are: