Think Like a Citizen Scientist Pt. 3

Overview

Juniors complete their citizen science project and choose their Take Action project.

Notes for Volunteers:

Use The Talking Points (But Make Them Your Own): In each session, you'll find suggested talking points under the heading "SAY." Some volunteers, especially new ones, find it helpful to follow the script. Others use the talking points as a guide and deliver the information in their own words. Either way is just fine.

Be Prepared (It's What Girl Scouts Do!): Each meeting includes a "Prepare Ahead" section that includes a materials list and what kind of set-up is required. Read it in advance so you have enough time to gather supplies and enlist help, if needed.

Use Girl Scouts' Three Processes: Girl-led, learning by doing, cooperative learning — these three processes are the key to making sure girls have fun in Girl Scouts and keep coming back.

"Learning by doing" and "cooperative learning" are built into this Journey, thanks to the hands-on activities and tips. You'll also find specific "keep it girl-led" tips in the meeting plans. They'll help you create an experience where girls know they can make choices and have their voices heard.

Observe. Record Data. Analyze Data.: On this Journey, girls will do hands-on activities to learn about the scientific method. They'll learn how to observe closely, record their observations and analyze what they've learned. They'll then put what they've learned into practice by doing a citizen science project.

When they send in the data they collected, girls are doing something very important. Their data will help a real-life scientist to do real-life research. They will join thousands — even millions! — of other people who also did the project and sent in their data. That's how science works — gathering millions of pieces of information and then figuring out how it all fits together. And it all starts with observing, recording and analyzing data.

Leave Time For The Closing Ceremony: If girls are having fun doing an activity, you may be tempted to skip the Closing Ceremony so they can keep going — but the Closing Ceremony is absolutely key to their learning. Here's why:

When girls leave a meeting, they'll remember how much fun it was to play an observation game or go outside and take pictures of clouds. However, they may not realize that they just learned how scientists make discoveries — unless you tell them.

On your honor!

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When you do that, you turn a *hands-on* activity into a *minds-on* activity. During the Closing Ceremony, you can connect the dots for girls by:

- Pointing out how they acted as citizen scientists. For example: They noticed dozens of details, small and large, about nature as they did their project. (You might tell them that children are actually *better* at citizen science than many adults! That's because children see the world in a fresh way — they don't fall into the habit of seeing what they expect to see.) The girls may have scribbled notes, taken pictures and recorded sounds. They thought about what they discovered.
- Reminding girls that they are *already* scientists, because they're naturally curious about the world. (Think of how many times girls ask "why" -- why is the sky blue, why is it cold in winter and hot in summer, why aren't there giraffes in Iowa?) Encourage girls to try to find answers to their questions by observing the world around them and asking questions about what they notice.
- Letting them know that they have what it takes to continue exploring STEM.

These simple messages can boost girls' confidence and interest in STEM — and end the meeting on an upbeat note!

Tell Your Troop Story: As a Girl Scout leader, you're designing experiences that girls will remember their whole lives. Try to capture those memories with photos or videos. Girls love remembering all they did — and it's a great way for parents to see how Girl Scouting helps their girls.

And please share your photos and videos with GSUSA by emailing them to STEM@girlscouts.org (with photo releases if at all possible!).

Program Pairing: The Junior Camper, Animal Habitats, and Flowers badges go well with Journey!

Prepare Ahead (Roughly 65 minutes total)

1. **Review vocabulary (2 minutes)**

This meeting includes the following vocabulary:

- **Citizen Science –** Citizen science connects regular people with scientists to help them conduct research. With the help of thousands of citizens around the world, scientists can do research more quickly, share information more readily, and greatly add to the store of human knowledge.
- **Observation –** watching and noticing something using all of your senses, especially sight, to get information and better understand a situation or environment.

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- **Scientific Method –** the process, or series of steps, that scientists take when conducting scientific research.
- **Data –** information that scientists receive, collect, or observe in the field.
- **Analysis –** reviewing data or information to create conclusions that explain more about the subject of observation.

See the **Junior Think Like a Citizen Scientist Journey Glossary** for more vocabulary and examples.

2. Read through this guide and its Meeting Aids (15 minutes)

This will help you to get familiar with the flow of the meeting.

Read the following handouts (found in the **Meeting Aids** section):

- **Junior Think Like a Citizen Scientist Journey Materials List:** Each meeting has its own materials list, but you can use this handout if you like to do all your supply shopping at one time. It includes all materials needed for the entire Journey.
- **Junior Think Like a Citizen Scientist Journey Glossary:** This is a list of words that Juniors may not know and how to define them.
- **Think, Pair, Share:** These facilitation tips will help you to make sure that every girl's voice is heard during brainstorming activities.
- **Take Action Guide:** This handout explains the difference between Take Action and Community Service. It also includes tips to make a project sustainable and Take Action project ideas that you and your troop can use as inspiration.

As girls will be conducting their citizen science project this meeting, review any project instructions and additional materials (available on your SciStarter Dashboard).

3. Gather materials and prepare for your citizen science project (45 minutes)

Gather materials using the Materials List for this meeting. If your meeting location doesn't have a flag, bring a small one that Daisies can take turns holding or hang in the room.

As girls will be completing their citizen science project this meeting:

1. Sign in to your Girl Scouts SciStarter account at https://scistarter.com/girlscouts/volunteer/landing
2. Review the project instructions and find out what materials you will need (on your SciStarter Dashboard.) Look over any additional materials so you'll be able to answer questions and guide girls during the activity.

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3. Depending on your girls' project, you may need a device (to take pictures and upload data), data forms, and other materials.
4. After the meeting, make sure to mark your girls' attendance on your SciStarter dashboard for Meeting 3. This will unlock the Take Action meetings (Meeting 4 & Meeting 5) on the girls' SciStarter Girl Scout dashboards.

Get Help from Your Family and Friends Network
Your Friends and Family Network can include:

- Girls' parents, aunts, uncles, older siblings, etc.
- Other volunteers who have offered to help with the meeting

Ask your Network to help:

- Support Juniors as they complete their citizen science project. Girls may need help looking for things to observe.
- Upload the girls' data

Award Connection
Juniors will earn two awards:

- Think Like a Citizen Scientist award
- Take Action award

Juniors will earn both awards following the completion of the Take Action project and Journey in **Think Like a Citizen Scientist PT. 6.**

(Note to Volunteers: You can buy these awards from your council shop or on the Girl Scouts' website.)

Meeting Length
90 minutes

- The times given for each activity will be different depending on how many Juniors are in your troop.
- There is no snack time scheduled in these meetings, but there are 15 minutes of "wiggle room" built in for snacks or activities that run long.
- Give Juniors 10- and 5-minute warnings before they need to wrap up the last activity so you'll have time for the Closing Ceremony.

Materials List

Activity 1: As Girls Arrive: Prepare Your Field Notebook

- Juniors' field notebooks from Think Like a Citizen Scientist PT. 2
- Pens or pencils

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Activity 2: Opening Ceremony: Time to be Citizen Scientists!

- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

Activity 3: Conducting Our Citizen Science Project

- Device (app or website on tablet, computer, or smartphone) or other materials needed for you to share Juniors' data and show them the 'Thank You' video on SciStarter
- Materials needed for your chosen citizen science project (Check your SciStarter Dashboard or the project's instructions.)
- Field notebooks or blank paper for girls
- Pens or pencils

Activity 4: Closing Ceremony: Time to Decide on Take Action

- List of Juniors' Take Action ideas from past meetings
- Index cards or paper
- Tape
- Pens, pencils, or markers

Awards

Juniors do not receive any awards in this meeting.

On your honor!

Detailed Activity Plan

Activity 1: As Girls Arrive: Prepare Your Field Notebook

Time Allotment

10 Minutes

Materials

- Juniors' field notebooks from Think Like a Citizen Scientist PT. 2
- Pens or pencils

Steps

Welcome Juniors, and have them prepare their field notes for today's citizen science project.

SAY:

Today, you're going to be citizen scientists!

Last time, we talked about all the things scientists include in their notes.

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Can you prepare your notes for today with details like the date, our location, and what our purpose is for the project?

Activity 2: Opening Ceremony: Time to be Citizen Scientists!

Time Allotment
15 Minutes

Materials
- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

Steps
Recite the Pledge of Allegiance and the Promise and Law.

Conduct any troop business.

Remind Juniors about citizen science.

SAY:
Does anyone remember what citizen science is? **(Answer: Citizen science is when people who are not professional scientists help scientists by collecting information to send to scientists. Scientists analyze the data to learn more about the world.)**

Here's an example: A scientist might want to know more about butterflies. Are they flying in different places? Are there more butterflies now or are there fewer? She needs lots of information to answer that question. So she asks regular people to go outside, count the butterflies they see, and send her that information.

Sound familiar? You practiced being citizen scientists last meeting!

Today, you're all going to be citizen scientists.

You're going to help a real scientist do research by observing, recording, and reporting what we see.

After, we're going to review all of the ideas you've had for Take Action and choose our Take Action project.

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Activity 3: Conducting Our Citizen Science Project

Time Allotment
40 Minutes

Materials

- Device (app or website on tablet, computer, or smartphone) or other materials needed for you to share Juniors' data and show them the 'Thank You' video on SciStarter
- Materials needed for your chosen citizen science project (Check your SciStarter Dashboard or the project's instructions.)
- Field notebooks or blank paper for girls
- Pens or pencils

Steps
Complete the citizen science project by following the project's instructions (found on your SciStarter dashboard).

As Juniors move through the steps of their citizen science project, let them know which step of the scientific process they're using.

Before Girls Start the Project: Define The Purpose Of Your Research
Remind Juniors which citizen science project they will be doing and how it helps a scientist to do their work.

SAY:
When scientists want to start a new project, they look at what others have done and choose something to study. This is the purpose of their research.

Sometimes, this is something specific that a scientist wants to learn more about, like a certain bird. Sometimes, scientists may want to answer questions like, "Are the number of squirrels in a certain area increasing or decreasing? Why?"

When we reviewed the videos about the different projects on SciStarter, you chose one project to do. The focus of that project is the purpose of the research you're about to do.

As Girls Do the Project: Conducting Research
As girls do the project, remind them of the skills they're using — and that those are skills that scientists use every day:

- Observation — they'll look very closely at the world around them.
- Gathering data — they'll write field notes, taking photos, take measurements, etc.

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- Analyzing data — they'll send their data to a scientist who will combine it with data from many other people and then analyze it.

When Girls Finish the Project: Sharing and Analyzing Data
Remind girls that the last step is to send their notes or photos to a scientist, who will combine it with data from many other people, and analyze what the data might mean.

Have Juniors verify their observations before you send their data to a scientist.

SAY:
Once scientists have data, what do they do with it?

Girls may say: They read the notes, they share them, etc.

They review their data to make sure their notes match what they observed and had all of the details they want (or need) to include.

Can you review, or verify, our data to make sure it matches what we saw before I send it to the scientist?

Have Juniors review their data. If there are forms to fill out, have them assist you in filling out the forms or even help you to upload the data.

Tell them that you will be sending their data to an online site for the scientist to analyze. By helping a scientist analyze her data, they are working like scientists.

SAY:
Thank you for helping me to record the data.

Now, I'll send it to the scientist running this project. She'll analyze the data.

Does anyone remember what analyze means? **(Answer: Analyze means that the scientist looks at all the information and finds patterns that help her to understand the world better.)**

The scientist will receive our data and look at it, along with data from other citizen scientists around the world.

Optional: Show girls the "Thank You" video on SciStarter from their citizen science project. **This is optional.** You may not have the time or resources available.

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After the meeting, make sure to mark your girls' attendance on your SciStarter dashboard for Meeting 3. This will unlock the Take Action meetings (Meeting 4 & Meeting 5) on the girls' SciStarter Girl Scout dashboards.

On your honor!

Activity 4: Closing Ceremony: Time to Decide on Take Action

Time Allotment
10 Minutes

Materials
- List of Juniors' Take Action ideas from past meetings
- Index cards or paper
- Tape
- Pens, pencils, or markers

Steps
Have Juniors form a Friendship Circle to review what they learned before choosing a Take Action project.

SAY:
You did a great job being citizen scientists today!

This is what scientists do to learn more about the world. They observe, collect data, and analyze it to draw conclusions and find solutions. Do you remember what this is called? **(Answer: The scientific method!)**

What was your favorite part?

What do you think a scientist will learn from your data?

Do you think you might want to be a scientist when you grow up?

Let girls answer.

Have Juniors decide on a Take Action project.

SAY:
You've helped make the world a better place by doing citizen science. Not only did you help a scientist do research, but you've increased how much people know about the world.

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Think Like a Citizen Scientist Pt. 3

The next part of our Journey will also make the world a better place. It's time to choose a Take Action project.

Have Juniors write their Take Action ideas on index cards.

Post the cards on a board or wall

SAY:
You've come up with a great list of ways that you might like to Take Action. Let's go over your list and add any new ideas.

Give Juniors a chance to make more suggestions.

Write the new ideas down on index cards. Use short descriptions instead of the whole idea. For example: "Citizen Science Video" or "Citizen Science Workshop at School."

Have Juniors tape the new index cards on a wall with the others so they can look at them and think about them.

SAY:
Have you ever made a decision before? For example, have you been asked to pick a dessert for your family to eat or to choose a game to play with your friends? Tell us about it.

Give Juniors a chance to answer.

Have Juniors look at the index cards of their Take Action ideas, discuss their choices as a group, and then make a decision.

SAY:
Now, you will decide as a team what you want to do.

Give Juniors time to talk about ideas they like or don't like.

If they disagree, help them to build their conflict-resolution skills.

Remind Juniors to speak with respect, listen to other people, and perhaps even develop a new idea together that everyone likes.

Although it takes a little longer for Juniors to come to a team decision, this process will help them learn to compromise. Instead of stepping in and making the decision for them, help them talk about the pros and cons of each project.

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To help Juniors zero in on their top choices, ask open-ended questions, such as:

- *Which of these project ideas sounds like the most fun?*
- *Which projects would help you learn something new?*
- *Which ones will make you feel proud when you're done?*

To help Juniors think about which projects are realistic, ask open-ended questions, such as:

- *Are there any ideas that might be hard to do right now?*
- *It will probably cost a lot of money to do X. As a troop, you have $X to spend. What do you think you should do? You could put it on a list to do later or you could come up with another idea that doesn't cost so much. What do you think?*

If Juniors are divided between a few ideas, ask them to choose one top idea and keep the others as backups. You can also have them vote — just make sure that anyone whose idea wasn't chosen knows that it was a good idea and that it might be used later.

Juniors may reach an agreement quickly. If they don't, note the top 2 or 3 ideas and facilitate an agreement using "fist to five":

- *If you're holding up 5 fingers, you love it!*
- *4 fingers — it's good.*
- *3 fingers — you're OK with the idea.*
- *2 fingers — you're OK with it but perhaps want to make a little change.*
- *1 finger — you'd like to talk about making more changes.*
- *And a closed fist – no fingers – you really don't like it!*

SAY:
At our next meeting, you'll plan your Take Action project.

End the meeting with a Friendship Squeeze.

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Think Like a Citizen Scientist Journey

Glossary for Juniors

Juniors may not know some of the words used on this Journey. Here are definitions you can share with them:

Citizen Science connects regular people with scientists to help them conduct research. With the help of thousands of citizens around the world, scientists can do research more quickly, share information more readily, and greatly add to the store of human knowledge.

The **scientific method** is the process, or series of steps, that scientists take when conducting scientific research.

Observation is watching and noticing something using all of your senses, especially sight, to get information and better understand a situation or environment.

Data is information that scientists receive, collect, or observe in the field.

Analysis is reviewing data or information to create conclusions that explain more about what you're observing.

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Think Like a Citizen Scientist Journey

Materials List

Think Like a Citizen Scientist 1

Activity 1: As Girls Arrive: Sensing Nature

- 10-15 small items from nature for girls to observe (leaves, twigs, flowers, rocks, etc.) Option: If you can find enough objects of the same type, girls will have to observe and describe the items with even more detail in Activity 3: Observing with Detail and Precision.

Activity 2: Opening Ceremony: Becoming Citizen Scientists

- Flag
- Device (computer, tablet or smartphone) with SciStarter project videos downloaded or with ability to stream
- Optional: Poster Board with the Girl Scout Promise and Law

Activity 3: Observing with Detail and Precision

- 10-15 small items from nature for girls to observe (leaves, twigs, flowers, rocks, etc.) Option: If you can find enough objects of the same type, girls will have to observe and describe the items with even more detail
- Blank paper
- Pens or pencils
- Towel, blanket, or similar item to cover the small items all at once
- Blank paper
- Notecards or blank paper cut into four pieces
- Pens or pencils
- Optional: Take Juniors outside for this activity. It will give girls the chance to explore making observations outdoors, which will be an important part of their citizen science activity in Think Like a Citizen Scientist 3.

Activity 4: Closing Ceremony: Take Action Like Citizen Scientists

- **Take Action Guide**

Think Like a Citizen Scientist 2

Activity 1: As Girls Arrive: Create Your Field Notebook

- Option 1: Blank paper, stapler
- Option 2: Field notebooks (one per girl). A field notebook can be any small notebook that girls can carry with them to jot down notes.
- Pens, pencils, or markers
- Decorating supplies (construction paper, glue, animal stickers, etc.)

Activity 2: Opening Ceremony: Choosing Our Citizen Science Project

- Flag
- Device (computer, tablet or smartphone) with SciStarter project videos downloaded or with ability to stream
- Optional: Poster Board with the Girl Scout Promise and Law

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Think Like a Citizen Scientist Journey

Materials List

Think Like a Citizen Scientist 2 (continued)

Activity 3: Animal Tracking Field Notes

- **Animal Tracks Cutouts**, five sheets printed and cut out (making 15 tracks in total)
- **Animal Tracking Graph** (one for each girl)
- **Example: Animal Tracking Graph**
- **Animal Tracking Key** (one for each girl)
- Tape
- Field notebooks from Activity 1: As Girls Arrive: Create Your Field Notebook
- Pens, pencils or markers

Activity 4: Closing Ceremony: Brainstorming Our Take Action Project

- List of Juniors' Take Action ideas from Think Like a Citizen Scientist 1
- **Take Action Guide**

Think Like a Citizen Scientist 3

Activity 1: As Girls Arrive: Prepare Your Field Notebook

- Juniors' field notebooks from Think Like a Citizen Scientist 2
- Pens or pencils

Activity 2: Opening Ceremony: Time to be Citizen Scientists!

- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

Activity 3: Conducting Our Citizen Science Project

- Device (app or website on tablet, computer, or smartphone) or other materials needed for you to share Juniors' data and show them the 'Thank You' video SciStarter
- Materials needed for your chosen citizen science project (Check your SciStarter Dashboard or project's instructions.)
- Field notebooks or blank paper for girls
- Pens or pencils

Activity 4: Closing Ceremony: Time to Decide on Take Action

- List of Juniors' Take Action ideas from past meetings
- Index cards or paper
- Tape
- Pens, pencils, or markers

Think Like a Citizen Scientist 4

Activity 2: Opening Ceremony: Working Together to Take Action

- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

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Think Like a Citizen Scientist Journey

Materials List

Think Like a Citizen Scientist 4 (continued)

Activity 3: Designing Our Take Action Project

- Large pieces of paper or poster boards
- Markers
- Post-It notes
- Pens and pencils

Think Like a Citizen Scientist 5

Activity 2: Opening Ceremony:Why is Our Project Important?

- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

Activity 3: Creating Our Take Action Project

- Any materials Juniors need for their Take Action project

Think Like a Citizen Scientist 6

Activity 1: As Girls Arrive: Get Ready to Celebrate!

- **Girl Scout Promise and Law** poster(s)
- Any items Juniors want to display (such as photos or videos from their Take Action project)
- Photos and videos from the Journey meetings
- Music system
- Decorations
- Snacks

Activity 2: Opening Ceremony: Welcome!

- Flag
- Optional: Poster Board with the Girl Scout Promise and Law

Activity 3: Awards Ceremony and Celebration

- Think Like a Citizen Scientist award
- Take Action award

(**Note to Volunteers:** You can buy these awards from your council shop or on the Girl Scouts' website.)

Activity 4: Girl Survey

- If girls are taking the survey online: Laptop/tablet
- If girls are filling out the survey on paper: Copies of Girl Survey (pdf available in Meeting Aids) and pen or pencil

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Think Like a Citizen Scientist Journey

Take Action Guide

What's the difference between a community service project and a Take Action project?

Community Service makes the world better by addressing a problem "right now." For example, collecting cans of food for a food pantry feeds people "right now." Gathering toys for a homeless family shelter makes kids happy "right now." Providing clothing and toiletries to people after a fire or flood helps them "right now." These acts of kindness are important ways to help people — right now.

Take Action encourages girls to develop a project that is sustainable. That means that the problem continues to be addressed, even after the project is over. Sustainability simply means coming up with a solution that lasts.

For example, girls might want to do something about trash in a local park. If they go to the park and pick up trash, they've solved the problem for today — but there will be more trash to pick up tomorrow.

Instead, girls could explore why there's so much trash. Here's what they might discover:

1. There aren't enough trash cans in the park.
2. The trash cans are hard to find.
3. People have to walk out of their way to throw away trash because of where the cans are placed.
4. People don't realize the importance of putting trash in the trash cans.

Here's how girls might address these issues:

- **Issues 1 – 3:** Make a presentation to the city council to report on their findings and suggest adding more trash cans or moving them to more visible or convenient positions.
- **Issue 4:** Create a public awareness campaign that encourages people to use the trash cans instead of littering.
- **Variation:** Older girls may want to design interactive garbage cans that make tossing your trash fun. Do an online search for "the fun theory" or "the world's deepest bin" to see this in action.

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What are the steps of a Take Action project?

Girls team up to:

- Identify a problem
- Come up with a sustainable solution
- Develop a team plan
- Put the plan into action
- Reflect on what they learned

Keep It Girl-Led: Girls should actively participate in each step in order for this to be girl-led. Younger girls will need more guidance, but they can and should decide as a team what problem they want to address.

How do girls make their project sustainable?

Here are three ways to create sustainable change:

1. Make your solution permanent.
2. Educate and inspire others to be part of the change.
3. Change a rule, regulation or law.

How can I help girls come up with Take Action Ideas?

Next are some specific examples you can use to help girls understand what sustainable Take Action projects look like.

Keep It Girl-Led: These examples are intended to give a sense of what a Take Action project could look like. **Please do not choose a project from this list for girls to do!** Instead, guide them to brainstorm ideas, get feedback, and come up with a plan. Girls will learn key leadership skills, such as decision-making, compromise, conflict resolution, and teamwork, when their Take Action project is girl-led.

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Citizen Science Take Action Ideas

Issue: More kids and families should know about how they can have fun (and help scientists) by doing citizen science projects.

- **Solution: Educate and inspire others.** Do a presentation at your school's parents' night about why citizen science is important. Showcase a few citizen science projects that are particularly fun and easy for families to do together.

Issue: More people need to know how they can do citizen science projects to help scientists learn about the world.

- **Solution: Educate and inspire others.** Organize a Citizen Science Day at your school or in your town. Set up Citizen Science Stations with handouts explaining different projects (and materials, if needed). Invite everyone to choose a project, collect data and upload it.

Issue: Perhaps you've done a citizen science project that's really sparked your interest. You've discovered that a river near your town is polluted. You've learned that bees are dying off and that our food supply is threatened. You've realized that monarch butterflies are in danger because the milkweed plant, their main source of food, is disappearing.

- **Solution 1: Educate and inspire others.** You create a video, presentation, skit, event, poster campaign, movie, etc. to tell people about the problem — and give them several ways they can take action to address it.
- **Solution 2: Change a rule, regulation or law.** You do some research and find out that changing a local law or regulation could address the problem. You make a presentation to your city council, start a petition drive, or advocate at the state level for a change in laws or regulations to address the problem.

Issue: More people need to know how exciting and fun STEM can be.

- **Solution 1: Educate and inspire others.** Create a list of great books, movies and documentaries that focus on STEM. Make copies for teachers to hand out or make posters for the school library.
- **Solution 2: Educate and inspire others.** Create a short play based on one of the books and perform it for your class or school.

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Other Ideas for Take Action

Issue: We could conserve water if more people collected rain water and used it to water plants.

- **Solution 1: Make it permanent.** Make rain collection devices for family or friends that can be installed in their yards. Give them a list of different ways to use rain water and how they're helping the Earth.
- **Solution 2: Educate and inspire others.** Create a handout, video tutorial, or show-and-tell presentation about how to make a rain collection device, how to use rain water and how that helps the Earth.

Issue: Parents often run their engines outside the school as they wait to pick up or drop off their children, which pollutes the air.

- **Solution: Change a rule, regulation or law.** Make a presentation to the school board or administrators about why this is a problem and suggest a new rule that makes the pick-up/drop-off area a "no idling" zone.

Issue: There's no sidewalk along a street near the elementary school, which makes it dangerous for children to walk home.

- **Solution: Make it permanent.** Make a presentation to the city council about the problem and suggest that they build a sidewalk. (Note: Even if the council doesn't vote to create a sidewalk, the girls have earned their Take Action award because they came up with a sustainable solution and took action through their presentation.)
- **Extra Inspiration:** Do an online search for "Girl Scout Brownies Convince City Hall to Build Sidewalk."

Issue: There have been several accidents at a busy intersection that doesn't have a stoplight.

- **Solution: Make it permanent.** Research the number of accidents and make a presentation to the city council, asking that they have a stoplight installed.

Issue: The local park doesn't have a swing for children with disabilities.

- **Solution: Make it permanent.** Make a presentation to the city council explaining the problem and offering to use troop money from the cookie sale to help pay for the swing.
- **Extra Inspiration:** Do an online search for "How One Brownie Troop Became Social Entrepreneurs.")

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Issue: We should recognize women who have helped their communities and made the world a better place in all kinds of ways.

- **Solution: Educate and inspire others.** Research the "hidden figures" in your community (unsung women who've done great things). Create a display about their accomplishments for a library or community center.

Issue: It's hard for new students to meet people and make friends at school.

- **Solution: Make it permanent.** Design and build "buddy benches." Partner with the school to have the benches installed on the playground so kids who want to make new friends can find each other.

Issue: The local shelter is having a hard time getting rescue animals adopted.

- **Solution: Educate and inspire others.** Use your photography skills to create pet portraits for the shelter's web site. Use your writing skills to craft heart-warming bios for each portrait.

Need more ideas?

Check out Girls Changing the World on the GSUSA web site. Girls post their Take Action and Bronze/Silver/Gold Award projects on this site. You can search by project topic or grade level. (And after the troop has done their project, please post it so they can inspire other girls!)

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33 Ways to Take Action!

Make your solution permanent.

1. Make and install something outside (benches, bird houses, dog run, ropes course, sensory trail for children with disabilities, Little Library, etc.)
2. Plant something (butterfly garden, tree, wind chime garden, etc.)
3. Make something inside (Maker Space, reading room, etc.)
4. Create a collection (children's books children's hospital or family shelter, oral histories for town museum, etc.)
5. Advocate for building a permanent community improvement (sidewalk, bridge, park, streetlights, stoplight, etc.)

Educate and inspire others to be part of the change.

6. Do a show-and-tell
7. Create a poster campaign
8. Perform a skit
9. Make a "how to" handout
10. Draw a comic
11. Give a speech
12. Write and perform a song
13. Make an animated movie
14. Make a live-action movie
15. Make a presentation
16. Create a workshop (perhaps in partnership with a local business or organization) to teach a skill such as coding, camping, canoeing, robotics, sewing, car care, healthy eating, gardening, home repair, budgeting, etc.
17. Create a workshop to teach others about healthy living (exercise, nutrition, mental health, etc.)
18. Create a social media campaign
19. Make video tutorials to teach a skill
20. Organize an email campaign
21. Organize a petition
22. Organize an event (concert, play, poetry slam, art exhibit, sporting event, field day) to raise awareness about an issue
23. Make a "playbook" to help others follow your lead (how to mentor robotics teams, organize a workshop or event, advocate to city council, create an online petition, change a law, etc.)
24. Make an app that helps people take action on an issue
25. Create a web site
26. Write an op-ed or letter to the editor of a newspaper or magazine
27. Start a blog

Change a rule, regulation or law.

28. Make a presentation to your school principal
29. Make a presentation to your school board
30. Make a presentation to your city council
31. Speak up at your representative's town hall meeting
32. Create an online petition
33. Advocate for a law with your state government

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Brainstorming Tips: Think, Pair, Share

How to Run a Think, Pair, Share Activity:

Tell girls that they're going to brainstorm answers to your question using "Think, Pair, Share."

Lead girls through the basic steps by telling them they will:

1. **Break into small groups.**

2. **Listen to the question or prompt.**

3. **Think about their answers.**
   - Girls may want to write their answers down.
   - Twenty seconds should be enough time, since girls will need to sit quietly.

4. **Pair with other girls.**
   - Girls talk with one to three other girls (depending on group size), making sure everyone has a chance to share their answers. If there's time, it's OK for girls to ask questions about each other's answers.
   - For pairs, 20 seconds should be enough time. If your troop enjoys discussion, consider extending this to 1 to 2 minutes.

5. **Share with the group.**
   - Girls share their answers with the larger group.
   - This can be completed in 20 – 30 seconds, but will run longer based on group size and how the group sharing is done.

There are two ways to set up group sharing:

- **Strongly Recommended:** One girl shares the best/most interesting/summary answer for the group. This approach is great if you're running short on time. It also helps develop conflict resolution and compromise skills.
- **Optional:** Each girl shares her partner's answer. This helps girls develop active listening skills, but will run longer because all girls are sharing.

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girl scouts

The Girl Scout Promise

On my honor, I will try:

To serve God and my country,

To help people at all times,

And to live by the Girl Scout Law.

The Girl Scout Law

I will do my best to be

honest and fair,

friendly and helpful,

considerate and caring,

courageous and strong, and

responsible for what I say and do,

and to

respect myself and others,

respect authority,

use resources wisely,

make the world a better place, and

be a sister to every Girl Scout.

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