

Junior Geocacher Badge Activity Plan 2

Badge Purpose: When girls have earned this badge, they will know how to have a geocaching adventure.

Planning Guides Link: Outdoor Awareness and Environmental Stewardship

Activity Plan Length: 1.5 hours

Involve Family and Friends: Participation from family and friends can enrich your troop's Girl Scout experience, both for the girls and for you. Use the suggestions below to make it easier for you to connect with additional support.

- Before the meeting:
 - Send a note to families to find those with interest in or expertise with the topic. Ask them to lead or support an activity or two, or even lead the whole meeting.
 - Offer this activity plan as a starting place and point out that they may choose alternative activities using the *Customize It!* section as a guide. For example: If an activity plan directs girls to sit outside and observe animal habitats, you may choose to go to the zoo and learn about animal habitats there instead.
- At home:
 - Encourage families to ask questions about their girls' badge activities. Some examples that work for any badge include: What did you learn? What surprised you? What does it make you think of trying next?
- Throughout the year:
 - Suggest to families ways that girls can share or display their Girl Scout accomplishments. Possibilities include a bulletin board, a scrapbook, a special memories box or family sharing time.

Girls Take the Lead: Include girl leadership through long-term planning, short-term meeting prep and specific activities at meetings.

- Long Term Planning
 - If you use "Plan Your Junior Year", share this with the girls at the start of the year. Have them ask friends and family to help out with specific meetings or activities. Let the girls brainstorm ways to make the plans their own, such as thinking of related field trip activities. If a girl has experience with a field trip, ask her to be assistant tour guide.
 - If you are adapting the "Plan Your Junior Year", get the girls' input on which badges to choose. Offer just a few choices in each category or timeframe to make decisions easier. Every girl should have at least one badge or journey she's excited about.
- Short Term Planning
 - Ask a family to help lead a badge. Make sure they have access to activity plans and any resources you might have. Keep additional requested materials to a minimum.
 - Choose two helpers to stay after a meeting for 15 minutes. Give them each an activity to introduce and either instruct or help guide at the next meeting.
 - Before a meeting, ask everyone to vote on some aspect of the activity: draw posters or perform skits, open with a song or game, etc.
 - Use a rotating list of helper tasks, called a 'kaper chart', to share responsibilities. Examples include acting as emcee of the meeting, leading an opening game, bringing a snack next meeting or taking attendance.

- At the Meeting
 - During the opening, have 1-2 girls share their answers to a get-to-know-you question.
 - Have girls fulfill their kaper chart responsibilities.
 - Try to find something in each activity that you can let girls decide or manage.

Customize It: If your group wants to expand work on this badge, or simply try different activities, go for it! There are many ways to earn this award, including: completing the activities as listed in the Junior Skill-Building Badge set for *It's Your Story-Tell It!*, completing two of these activity plans, attending a council-sponsored event or customizing activities. Pick the one(s) that work best for your group. Girls will know they have earned the award if:

- They have learned what is involved in a geocache adventure and are prepared for it
- They have learned to use a GPS receiver
- They have made a trade item—an item to leave at the geocache
- They have gone on a geocaching adventure

Tips and Tools

- This activity plan assumes that you have done Activity Plan 1 for Geocacher, or its equivalent. From here, there are three possible approaches:
 - Have a geocache adventure at your meeting place, either indoors or outdoors. This requires some set-up from you, but no special equipment. These are listed as the Alternative Activities in this plan.
 - Go on a field trip using GPS devices. You will want to research public caches at geocaching.com and choose a location before planning the trip. You can use GPS receivers made for geocaching, car GPS units (if they have battery power and a status page showing latitude and longitude), or smartphones with GPS apps activated.
 - Go on a field trip using maps only. You will still research caches and plan a trip, but this time you are using Google Maps to give you accurate enough maps to find the caches without GPS enabled devices.
- You will also want access to a computer, ideally with a printer.
- As with any hike, let others know where you will be, hike with a buddy, and prepare for weather and site conditions. Check out ways to stay safe using Safety-Wise at <http://gsrv.gs/safetywise>.
- Ensure that your activities are accessible to everyone. Ask in advance if any special accommodations need to be made. If you have questions regarding specific adaptations, please contact River Valleys at 800-845-0787.

Resources

- This lesson plan has been adapted from the Junior Skill-Building Badge set for the *It's Your Story-Tell It!* Geocacher Badge, which can be used for additional information and activities.

Getting Started

Time Allotment: 15 minutes

Materials Needed:

- Optional: Girl Scout Promise and Law printed out on poster board

Steps:

1. Welcome everyone to the meeting.
2. Recite the Girl Scout Promise and Law. Use repeat-after-me or say it as a group if girls know it by heart.

Girl Scout Promise	Girl Scout Law
<i>On my honor, I will try:</i> To serve God and my country, To help people at all times, And to live by the Girl Scout Law.	<i>I will do my best to be</i> honest and fair, friendly and helpful, considerate and caring, courageous and strong, and responsible for what I say and do, <i>and to</i> respect myself and others, respect authority, use resources wisely, make the world a better place, and be a sister to every Girl Scout.

3. Play a game so girls get to know each other better. Use the example below, if needed.
 - Here or There: Move to an open space where girls can move around and hear you. Tell the girls to imagine they are going on a trip, and they will have to decide between two locations or types of trip. Those who prefer the first choice you will give them will move to your left, while those who prefer the second will go to your right. After everyone moves to one of the two sides, have them briefly share with their fellow travelers what they like best about this destination. Repeat with another destination pair, and continue as desired.
Example trip pairs: biking in summer or skiing in winter; pizza party or ice cream sundae party; Rocky Mountains or Atlantic Ocean; Mexico or Australia; deep ocean submarine or rocket to space

Activity #1: We're Geocaching!

Badge Connection: Step 4 – go on a geocache adventure

Time Allotment: 30+ minutes

Prep Needed:

- Choose a site for geocaching based on the information you looked up at the last meeting. Plan for information on 3 caches for most trips, though you may not get to them all. Have maps printed, or if possible, have geocache coordinates loaded into GPS receivers.

If other family members are bring receivers or smart phones, make sure all have the right type of coordinates, and everyone can find the appropriate screen on their device. (If you are using typical geocache receivers and learned to use them at the last meeting in Activity #2, just follow those directions.) Coordinates may be in UTM form, or some sort of latitude/longitude form.

UTM :	15T E 493276 N 4975587
Lat/Lon Decimal:	44.93368 -93.08522
Lat/Lon DDD MM.MMM:	N 44° 56.021 W 093° 05.113
Lat/Lon DDD MM SS.SSS:	N 44° 56' 01.248" W 93° 5' 06.792"

Check that everyone has the correct coordinates before heading out. Websites such as <http://gsrv.gs/1EndYhm> can convert between coordinate forms.

- Send permission slips for the field trip, get appropriate drivers and chaperones, and tell families where you will be and for how long.

Materials Needed:

- GPS receivers, or smartphones with GPS apps, or printouts from Google Maps based on coordinates
- Copies of coordinates

- If at a park, bring back up activities if caches found immediately: Frisbees, play balls, etc.

Steps:

1. See the information on travel bugs in the second activity below, if you are hunting for bugs already in caches.
2. Go over some basic etiquette and hiking safety before heading out. Tell the girls the boundaries of where they can go, and assign groups and chaperones. Say that, since everyone wants to find the cache, we want to give others in the group a chance to spot it on their own. If you think you see the cache, stop your group and wait until the other groups have caught up. When it looks like everyone has seen it, you will choose a group to show where they think it is.
3. If your group brought a trade item, you can trade one for one in the cache, if there are any. Most caches are not big enough to have trade items for a whole troop (check the “size” icon before choosing a cache, if possible); you can’t take more items than you leave, but you can choose to leave more than you take. Record what you left, so you can enter that into the website when you return.

Activity #2: Pack Up Your Travel Bug

Badge Connection: Step 5 – take part in a travel bug’s travels

Time Allotment: 10 minutes, as part of the rest of the adventure

Prep Needed:

- Check geocaching.com to see if any of the caches you are going to will have a travel bug. If so, find out what the goal is for each one.
- If you won’t have a travel bug in your area, order one from www.geocaching.com’s store and follow the instructions on the website for starting your own bug.
- Gather materials and supplies.

Materials Needed:

- Travel bug, with keychain or token
- Info on what travel bugs are in the caches you will be visiting
- Pen and paper, or smartphone and geocaching.com account – to record finds

Steps:

1. Gather the girls together before they start hunting for caches. “A travel bug is a small object that geocachers move from cache to cache to help it complete a journey. You don’t keep them, like a trade item or swaps, and the official ones each have a special code number on them so people can track where they are using a geocache website. But each one has a goal, such as getting to Switzerland and back, or visiting all 50 states, or getting to as many national parks as possible in one year. You only take the bug if you can move it along its journey. If you can’t help it along, leave it for another cacher to find.”
2. Let the girls know what bugs will be in the caches they are hunting for. Make sure that they show the bug to the group when they find it, and get everyone’s opinion on whether they can help move the bug on its way.
3. If you are starting a travel bug, have the girls discuss what their bug’s goal will be. Once they’ve decided, record their answer and the bug’s activation code, and place it in one of the caches.
4. Afterwards: If one of the girls or their families already have a geocaching.com account or want to be owners of the bug, let them go to the website and activate your bug with the code on the website. Otherwise, go back to geocaching.com and activate the bug yourself.

Alternative Activity #1: Indoor Cache Maps

Badge Connection: Step 4- go on a geocaching adventure

Time Allotment: 30 minutes

Prep Needed:

- Gather materials and supplies.

Materials Needed:

- Graph paper

- Measuring tape
- Pencils, colored pencils, pens
- Rulers
- Snack size Ziploc bags
- Masking tape
- Figures, tokens, game pieces or other small items that can fit in the Ziploc
- Big paper and marker, or whiteboard/chalkboard

Steps:

1. If anyone in the group is unfamiliar with your meeting site, take a quick tour of the spaces you will be allowed to use for this activity.
2. Divide into groups of three or four girls. Have the groups choose a token to be their geocache mascot for the activity. They will also need a Ziploc baggie and a small piece of tape.
3. First, talk to the girls about drawing a floor plan or map to scale. Explain that architects, designers, engineers and artists use this skill. They can even use this skill to rearrange their bedroom! Show girls as a group first how they will do this activity.
4. Have one girl walk from one side of the room to the other, in a straight line, counting her footsteps as she goes. Ask her what her final step count was.
5. With a piece of graph paper, count the number of squares length-wise and width-wise. Compare the number of steps it took the girl to walk across the room with the number of squares on the graph paper. Decide if each square can represent one step or if you need to create a scale ratio.
 - For example, suppose the girl told you it took her 37 steps to cross the length of the room. Let's say your graph paper only has 20 squares across, so it needs to be scaled to fit the paper. Instead of each square representing one step, try having each square represent 2 or 3 steps. When we take 37 divided by 2, we get 18.5. With 20 squares on the paper, this scale ratio works! Draw a line covering 18 ½ squares. (If it still didn't fit, continue to divide by higher numbers until it fits)
6. Do the same thing going in the other direction – girl walks number of steps, draw to scale on graph paper, and so on. Draw an outline of the room, based on these dimensions.
7. Explain to girls they will use this form of measuring and drawing to scale to make a map of the entire room or area, including things/furniture in the space. Instead of guessing where to put a door or window, measure it by the number of steps it is (length, width, depth) and record this on their graph paper. Note: the ratio must be the same for the entire drawing; each square must always represent one step or two steps, etc.
8. Assign groups to a room or small area. The girls' task is to create an obsessively accurate sketch map. Girls need to work together to create a detailed map of their area. They can sketch individually if they prefer but in the end, only one paper will be handed to someone else to follow.
9. After groups finish their highly detailed sketch map, they will choose a spot to hide their geocache mascot. With the masking tape, tell groups to write a secret word or symbol and stick it to their geocache mascot. Put the mascot in the baggie and hide it in the designated spot. Have groups record the mascot's location on their map. Each group should know what their mascot and secret word are, but no one else.
10. When all the maps are done, bring everyone together again. Have one representative of each group come to the center with their completed map. Mix up the maps and hand each group a map from a different group.
11. Challenge the girls to locate the mascot on their new map they were just handed. If they find it, they should record what the mascot was and the secret word or symbol. Continue to exchange maps for several rounds until they have located all of the caches or until time runs out.
12. Bring everyone back together. Have a representative from each group name their cache and ask people if they know the secret word or symbol, which shows that they really found the cache. How many caches were actually found by every group?
13. Collect the maps to use again for the next activity. Leave the caches in place for now.

Alternative Activity #2: There's a Bug in My Cache

Badge Connection: Step 5 – take part in a travel bug's travels

Time Allotment: 15 minutes

Prep Needed:

- Gather materials and supplies.

Materials Needed:

- Poker chips, key chains, or 3"x2 ½" pieces of index card to be travel bugs
- Writing utensils – something that will write on the travel bug.

Steps:

1. Explain to girls what a Travel Bug is.
 - "A travel bug is a small object that geocachers move from cache to cache to help it complete a journey. You don't keep them, like a trade item or swaps, and the official ones each have a special code number on them so people can track where they are using a geocache website. But each one has a goal, such as getting to Switzerland and back, or visiting all 50 states, or getting to as many national parks as possible in one year. You only take the bug if you can move it along its journey. If you can't help it along, leave it for another cacher to find."
2. Give each group a travel bug token. This will start with the group's original cache in the room they drew the map for. Tell girls to choose a goal for their bug. Examples might be to travel to three different caches, to travel to the kitchen and home again, to be united with another cache, and so on.
3. Tell each group to write the goal and home mascot on their travel bug and put it in their home cache baggie.
4. Now do the same finding activity as before, only this time, after getting to a cache, the team takes the bug and tries to get a map of a cache that will help the travel bug reach its goal.
5. Check in after three rounds. How many travel bugs have made it? How many more rounds do you need to get all the travel bugs where they belong?
6. Clean up all the caches and return the bugs and mascots.

Activity #4: Snack Chat

Badge Connection: Questions link to multiple badge steps

Time Allotment: 10 minutes

Steps:

1. While enjoying snack, here are some things for girls to talk about:
 - We used maps to help us find "hidden treasure." What other things do we use maps for? How are some of those maps different from one another?
 - Tell about a time when you were looking for one thing, and were surprised by something else.
 - What is one place you've never been, either near or far, where you would really like to go?
 - What's one place you know so well that you could draw an expert guide map of it?

Wrapping Up

Time Allotment: 15 minutes

Materials Needed:

- Optional: Make New Friends printed on poster board

Steps:

1. Instruct girls to get into a Friendship Circle. Have girls stand in a circle and cross their right arms over their left, holding hands with the person on each side of them.
2. Sing "Make New Friends."

Make New Friends		
Verse One	Verse Two	Verse Three
Make new friends, but keep the old. One is silver, the other is gold.	A circle is round, it has no end. That's how long, I will be your friend.	You have one hand, I have the other. Put them together, We have each other.

3. After the song, ask everyone to be quiet.
4. Assign a girl to start the friendship squeeze by gently squeezing her neighbor's hand with her right hand. Then, that girl squeezes with her right hand. One by one, each girl passes the squeeze until it travels around the circle. When the squeeze returns to the girl who started, she says "Goodbye Sister Girl Scouts" and the girls unwrap and face outward instead of inward.
5. Optional: Have girls make a wish after their hand has been squeezed and before they pass the squeeze along. Girls can also put their right foot out into the circle when they receive the friendship squeeze, so that everyone can see it travel along the circle.

More to Explore

- Field Trip Ideas:
 - Visit one of the Minnesota State Parks that is a geocache demo site, and learn more about caches in the park.
 - Try other hiking and exploring activities that use maps or clues of other kinds.
 - Visit a store that sells GPS units and ask about the different types and their best uses, or attend a camping gear expo or demonstration.
- Speaker Ideas:
 - Invite someone who uses GPS-related equipment for work and have them tell the girls about the equipment and how it's used. Examples include wildlife field biologist, EMT dispatcher, delivery driver, landscape architect, environmental engineer, airline pilot, and forester.
 - Invite someone who has tried geocaching, orienteering, and letterboxing, and ask about the similarities and differences.

Suggestions

Do you have any suggestions to improve this activity plan? Do you have ideas for other possible badge-earning activities? Please email troopsupport@girlscoutsvr.org.

Family Follow-Up Email

Use the email on the next page as a template to let families know what girls did at the meeting today. Feel free to add additional information, including:

- When and where you will be meeting next
- What activities you will do at the next meeting
- Family help or assistance that is needed
- Supplies or materials that girls will need to bring to the next meeting
- Reminders about important dates and upcoming activities

Hello Girl Scout Families:

We had a wonderful time today learning about maps, direction finding, and treasure hunts and have earned the Junior Geocacher Badge.

We had fun:

- Learning how to use different tools to know where we are
- Being part of a safe hiking team
- Creating a travel bug to share with others

Continue the fun at home:

- Create a treasure hunt for the family around your home, yard, or neighborhood.
- Have your Girl Scout help with map navigation the next time you are in the car or taking a walk.
- Look through the *Girl's Guide to Girl Scouting* with your Junior to find other activities you can try at home.

Thank you for bringing your Junior to Girl Scouts!