

SENIOR ECO EXPLORER BADGE

Badge Purpose: When you've earned this badge, you'll have researched different environmental issues and taken at least one trip to see how an area is impacted.

Activity Plan Length: This plan should be completed at your own pace.

Activity	Materials Needed
Meet an Eco Explorer <ul style="list-style-type: none"> Learn about an eco explorer from history and a present-day eco explorer. 	<input type="checkbox"/> Computer with internet access <input type="checkbox"/> Notebook <input type="checkbox"/> Pencil
Biodiversity, Local and Global <ul style="list-style-type: none"> Research local biodiversity significance ranks and explore biodiversity on a global scale. 	<input type="checkbox"/> Computer with internet access <input type="checkbox"/> Notebook <input type="checkbox"/> Pencil <input type="checkbox"/> Rainforest checklist <input type="checkbox"/> (Optional) Camera
Plan an Eco Explorer Trip <ul style="list-style-type: none"> Plan a trip to investigate an eco-issue in person. 	<input type="checkbox"/> Various (depends on trip)

Activity #1: Meet an Eco-Explorer

Badge Connection: 1 – Meet an eco explorer

Materials Needed: Computer with internet access; notebook; pencil

- Choose one (or more!) of the following eco-explorers from history to learn about:
 - Nellie Bly
 - Isabella Bird
 - Dervla Murphy
 - Sarah Winnemucca
 - Dian Fossey
 - Bessie Coleman
 - Ruth Harkness
 - Rachel Carson
 - JoAnn Tall
 - Gloria Hollister
- Learn about a present-day eco-explorer by meeting one in person, over the phone, or email. If you can't reach your favorite eco-explorer, get to know their story by reading a book or article, or by listening to a podcast interview.
- Here are a few ideas:



- Cassie DePecol: First woman on record to set foot in the world's 196 nations and did so while collecting water samples for Adventurers and Scientists for Conservation.
- Mollie Beattie: Served as the first woman director of the U.S. Fish and Wildlife Service and oversaw the successful reintroduction of the gray wolf into northern Rocky Mountains.
- Ann Bancroft: Grew up in St. Paul, Minnesota and was the first woman to cross both polar ice caps to reach the North and South poles. She has also taken part in expeditions to draw attention to the problem of climate change and the importance of clean water.
- Check out the [Tough Girl Challenges](#) Podcast for more ideas.

Activity #2: Biodiversity, Local and Global

Badge Connection: Step 2 – Explore biodiversity and Step 3 – Investigate a global ecosystem issue

Materials Needed: Computer with internet access; notebook; pencil; rainforest checklist; (optional) camera

1. **Biodiversity** is the variety of plant and animal species in an area. Using the Internet, books, or by talking to an expert, answer the following questions:
 - Why is biodiversity important?
 - What are some environmental factors that could affect biodiversity?
 - What can people do to protect biodiversity?
2. Learn about biodiversity significance ranks and check out areas near you using the Areas of Biodiversity Significance in Minnesota map found on this website:
https://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html
3. Head out on a hike to observe a biologically diverse area near you. Designate an area such as the space between two trees or from one point in the trail to another to observe. Observe the biodiversity of this space by recording all the different types of plants and animals that you observe. Don't forget to look for insects! You can tally how many species you notice and/or take photos to identify them later.
4. Next, explore biodiversity on a global level. Tropical rainforests are some of the most biologically diverse ecosystems on the planet, even though you may live far away from them, you benefit from them every day. Go through the rainforest checklist (at the end of the activity plan) to see how you rely on the rainforest! And read more about rainforest biodiversity here:
<https://www.nationalgeographic.com/environment/2018/08/news-biodiversity-tropics-climate-change-solutions/>

Activity #3: Plan an Eco Explorer Trip

Badge Connection: Step 4 – Plan a trip to explore and work on an issue and Step 5 – Share what you learned

Materials Needed: Various (depends on trip)

Prep Needed:

- Investigate an environmental issue that you care about. You could continue your exploration of rainforest deforestation from Activity #2 or you could explore another issue like water pollution, invasive or endangered species, or climate change.
1. Reach out to an environmental organization, government agency, or parks service that specializes in your chosen issue. Ask for suggestions about how to get involved and make a difference. Use expert advice as the basis for planning your trip.
 2. While planning your trip, consider the environmental impact of your travel plans. How will you keep potentially fragile ecosystems that you visit safe? How will you mitigate negative effects such as fossil fuel emissions? How will you be sure to follow Leave No Trace Seven Principles?
 3. Take your eco explorer trip!



4. When you return, create a presentation that summarizes the importance of your work, what you learned, and how others can get involved! Present to a relevant community, such as a group of younger Girl Scouts, your City Council, or school.

More to Explore

- Field Trip Ideas:
 - Visit a wildlife preserve.
 - Visit a site that has provisions to protect endangered species.
- Speaker Ideas:
 - Invite an eco explorer (like those identified in Activity #2) to your troop meeting to talk about their job.
 - Invite a DNR or National Parks Service professional to your troop meeting to talk about everyday actions people can take to protect the natural environment.



Rainforest Checklist

Which of these items do you or your family utilize on a regular basis?

- Coffee
- Bananas
- Avocados
- Acai berries
- Cinnamon
- Vanilla
- Black Pepper
- Cocoa (Chocolate)
- Palm Oil (found in many shampoos, soaps, cosmetics, and foods)
- Brazil nuts
- Medicines (25 percent of all modern medicines are derived from Rainforest plants)
- Oxygen! (As much as 20 percent of the planet's oxygen is produced by the Amazon rainforest alone)

Did you know? According to the Rainforest Alliance, 30 percent of the world's forests have been destroyed, while another 30 percent have been degraded. Agriculture is responsible for more than 70 percent of deforestation in the tropics. Using the Internet and other resources, make a list of three ways that you, as an individual, can support rainforest health. Then, expand to think about three ways your family, school or community could make a difference. Lastly, think about broad changes that could happen on a regional, state-wide, national, or international level.

Individual

- 1.
- 2.
- 3.

Family, School, or Community

- 1.
- 2.
- 3.

Region, State, Country, or World

- 1.
- 2.
- 3.

(Adapted from: <https://www.rainforest-alliance.org/articles/tropical-forests-in-our-daily-lives>)

