

Dark Sky

Girl Scouts Nation's Capital Patch Program



Activities based upon the Girl Scouts Central Texas Dark Skies Patch Program. This program was made possible by support from the Fairfax County Park Foundation and Fairfax County Park Authority.

www.fairfaxparkfoundation.org

| www.fairfaxcounty.gov/parks



About the Program

This patch will help you understand the importance of dark skies and how you can protect this resource. You will learn about light pollution, see the effect of light pollution yourself, learn how you can make changes to reduce light pollution, and share what you have learned with others.

The program consists of three categories: Discover, Connect, and Take Action.

Grade Level Requirements

| | |
|----------------------------------|---------------------------------|
| Daisies & Brownies | 2 activities from each category |
| Juniors & Cadettes | 3 activities from each category |
| Seniors & Ambassadors | 4 activities from each category |

Purchase Your Patch

Patches are available in Girl Scouts Nation's Capital shops. They can be purchased in store or ordered via phone (202-274-3312) or email (gsshop@gscnc.org).

If patches are not in stock, please contact emercurio@gscnc.org

Discover

- Research light pollution. What is it? What are its causes? What are the main types of light pollution? Does your county or city have regulations for outdoor lighting?
- Learn about the Bortle Scale of Light Pollution. Where do you think your hometown falls on the Bortle Scale? Once you have a guess, look up the real answer on lightpollutionmap.info.
- Use [Light Pollution Map](#) to see what light pollution in your state looks like. Can you locate your home on the map? Do you live in an area with dark light night skies?
- Can you think of animals that might be affected by light pollution? Research how nocturnal animals are adapted to low light environments. How do you think light pollution might affect these animals? You might consider looking into bats, sea turtles, or birds.
- Do you think light pollution affects people? Find out! If so, how? Does the color of light make a difference? Why?
- Visit [Cities at Night](#) and see if you can find a picture of your hometown at night. Can you find pictures of major cities in our area like Washington, Alexandria, or Baltimore? You can also search for a picture of your state as a whole. What else do you think you see on the map? Are you surprised by what the pictures of earth look like at night?

Connect

- Go sit outside at night. Avoid looking at lights or the light from screens such as laptops or cell phones. After about 15 minutes, does the night sky seem to change?
- Try to go outside in a place like a big city that has high light pollution and look at the sky. Record your observations of the night sky in this environment. Now try and find a place with lower light pollution, like the countryside or a remote park. Record your observations of the night sky here. Compare what you saw in the city and the country. What was different?
- Find out what an International Dark Sky Association Park is. There are no officially designated International Dark Sky Association Parks in Maryland, but there are five in Virginia, and three in West Virginia . Can you find out which ones they are? Try to visit one of the parks, or a non-designated park that has dark skies, and do some stargazing. Can you see more stars and constellations from these parks than outside where you live?
- Go on a night hike, ideally somewhere you are familiar - how does the area differ during the night from the day? How would light pollution affect this area? Can you identify light pollution?
- Take some crayons and write on a notecard. Take the notecards outside at night and try to guess what color the crayon is. Were you able to tell what color it was? Research how light affects your vision.
- Learn about night sky photography. Can you take pictures of the stars with a camera or phone?

Take Action

- Can you think of ways you can reduce light pollution? Investigate if you can make simple changes to reduce your impact on the night sky. Work with an adult to see if you can change lightbulbs, use timers, or reduce light pollution in another way.
- Make a presentation, video, or play to inform your friends or other community members about light pollution and dark skies. Share why reducing light pollution and protecting the night sky is important.
- Write a letter to a local newspaper sharing what you've learned and encouraging other people in your community to make changes to protect the night sky.
- Write to city officials to encourage them to implement dark sky friendly changes around your town.
- Attend or throw a [star party](#).
- Become a Citizen Scientist with [GLOBE at Night](#) to record light pollution in your area.
- Observe [International Dark Sky Week](#):
 - April 24-30, 2022
 - April 17-23, 2023

Resources

- <https://www.fairfaxcounty.gov/parks/topics/dark-skies>
- [Globe at Night](#)
- [International Dark Sky Association](#)
- [Light Pollution Map](#)
- [Virginia State Parks' International Dark Sky Parks](#)
- [Maryland Dark Sky Parks](#)
- [West Virginia International Dark Sky Parks](#)