

girl scouts 
of the green and
white mountains



SOLAR ECLIPSE

PATCH PROGRAM

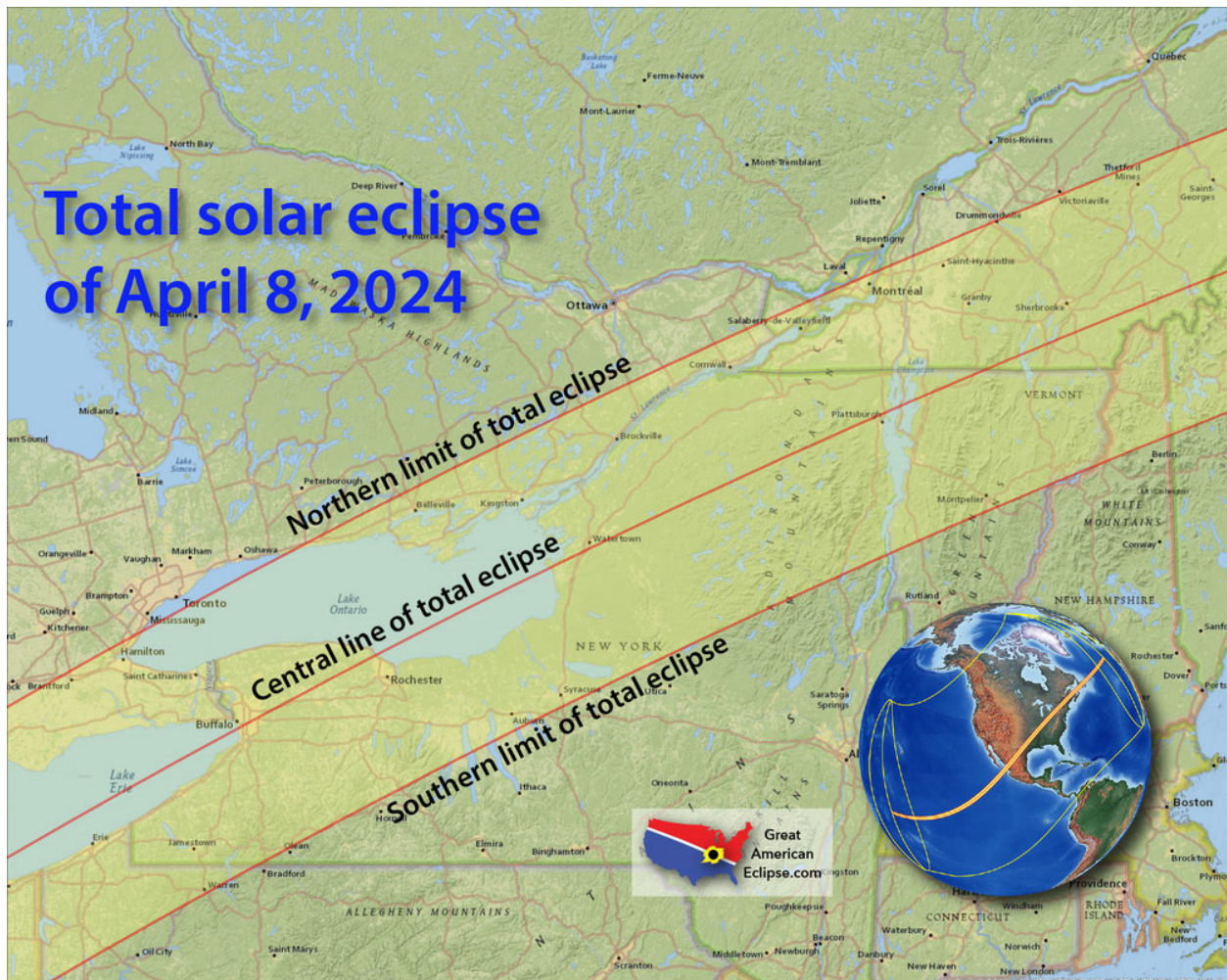


GIRL SCOUTS OF THE GREEN AND WHITE MOUNTAINS
Serving New Hampshire and Vermont

Experience a rare solar eclipse

Did you know it takes an average of 375 years for a total solar eclipse to happen in the same location? This year, on April 8, the path of a total eclipse will occur in northern Vermont and New Hampshire. Girl Scouts can make the most of this incredible opportunity by earning our limited-edition Solar Eclipse patch offered in partnership with Moon Over Vermont, traveling to the path of totality, or simply by learning about eclipses and experience it through media coverage.

Girl Scouts of the Green and White Mountains is partnering with [Moon Over Vermont](#), an online resource for all things total solar eclipse, which offers educational, creative, and informative content to shine the light on their state during the event, as well as a merchandise line to commemorate this rare sight.



Step 1

What is an eclipse?

An eclipse happens when one object in space blocks another from view. In a solar eclipse, the Moon passes between the Sun and Earth. This prevents the Sun's light from reaching Earth. As the Moon passes in front of the Sun, the Moon's shadow sweeps across Earth. The sky gradually grows darker. If the Sun's light is completely blocked, the Moon appears as a black disc.

Read or watch a video online that explains how a solar eclipse works. Complete one of the following activities to better understand how a solar eclipse works.

Choose one:

- Create a model to show how the Sun and Moon paths cross to create an eclipse. You can find examples online for how to create a model of the Sun, Earth and Moon. If you create a model, try using a flashlight to recreate the shadow as it is cast on the Earth.
- Draw a diagram or poster to show how the Sun, Moon and Earth create an eclipse. You can find examples online. Be sure to label your diagram and include arrows to show how they move in orbit.
- Create a human model to show how an eclipse happens. Have members of your troop or family take different roles, Moon, Earth, Sun. Position yourselves so that when you orbit you recreate the shadow on the Earth. You could try in a dark room with a bright flashlight for the Sun.



Step 2

Being able to see a solar eclipse is an exciting and sometimes once-in-a-lifetime experience! Areas in the path of totality will often hold events and celebrations. They often welcome people from near and far who travel to view the eclipse. The solar eclipse 2024 will be visible in certain parts of the United States, including Vermont and northern New Hampshire.

Total solar eclipses are rare events, although they occur somewhere on Earth every 18 months on average. It is estimated that they recur at any given place only once every 360 to 410 years, on average. Look online to see a map of the path of totality for the April 2024 solar eclipse. Where will the path be closest to you? How long would it take to travel to see the eclipse?

Read about how a town or state in the path is preparing for the eclipse. Visit websites like Moon Over Vermont to see what is planned for the 2024 eclipse.

Choose one:

- Eclipses have been viewed differently over the years. Read or talk to someone about their experience of an eclipse in the past. What can they remember? You could watch videos, read newspaper stories or other accounts of past eclipses to learn more.
- Using resources online, plan an imaginary trip to see the 2024 eclipse. You could check out events and locations near you or choose somewhere else along the path of totality. How would you get there? Where are great local places to view? Are organizations and businesses planning special activities for the day or week?
- Using what you found online from other organizations preparing for the eclipse, create your own poster or video to share with others how they can participate in this rare event. Share the poster or video with friends or family so they can learn more about the upcoming eclipse.



Step 3

We are able to read and learn about eclipse today because of the work of scientists for hundreds of years. Scientists who study objects in the sky, including planets, galaxies, black holes, and stars are called astronomers and astrophysicists. Research online to learn about a female scientist who is currently involved in astronomy or has done research in the past. You can read an interview with a professor of astronomy on the Moon over Vermont site or check your local library for books about astronomers. Complete one of these activities to share what you learned.

Choose one:

- With a friend or family member, pretend that you are being interviewed as the astronomer who you read about. Have the friend ask you questions and do your best to answer as you think the astronomer would. Think about how they started their career, their biggest discoveries and how they shared their findings.
- Create a trifold pamphlet to share the story of the astronomer you researched. You could include drawing or facts you have learned. Share the brochure with your Girl Scout troop or family.
- Interview a current scientist or astronomer to learn about the field today. Ask questions to better understand their work, how they prepared for a career in science and what recommendations they might have. What do they love about their career?



Step 4

It is important to understand how to safely experience a solar eclipse. Except during the brief total phase of a total solar eclipse, when the Moon completely blocks the Sun's bright face, it is not safe to look directly at the Sun without specialized eye protection for solar viewing. **Viewing any part of the bright Sun through a camera lens, binoculars, or a telescope without a special-purpose solar filter secured over the front of the optics will instantly cause severe eye injury.** Talk with an expert or research online the safety procedures you need to follow to view an eclipse. Discuss them with an adult to make sure you understand how to protect your eyes. Then complete one of these steps to be ready to safely view the eclipse.

Choose one:

- Make a pinhole projector or another form of indirect solar viewer. You can find instructions online for a variety of different models.
- Learn about ways to stay safe from the sun during eclipse and in daily life. Create a poster to share with your community to promote Sun safety in general or during a solar eclipse.
- Decorate your own pair of solar eclipse viewing glasses ready to wear in March. If you don't have a pair, you can design a pair on a piece of paper. What would you include? Share your decorated glasses with your troop so they learn how to safely protect their eyes.

Love learning about space?

Try the Space Science badges
with your troop!



Step 5

It's time to experience the solar eclipse! If you are able to travel to a location to view the eclipse, make plans with your family for the day. What do you need to bring with you? Do you have an alternative location if there is cloud cover. How can you create something to remember the event?

If you can't experience the eclipse in person, find a different way to be a part of the event. Watch coverage online or on television. Read accounts or talk to someone who participated. You could watch a livestream online of the eclipse in several different locations along the path of totality. Think about how you can remember the event. Draw a picture as a souvenir or purchase a T-shirt to remember the day.

Take Action

These are optional, but great ways to expand your learning and engagement with the solar eclipse!

- Be a citizen scientist! Visit the NASA website for ways to participate as a local Citizen Scientist. You'll help collect valuable data that will be combined with others to make a difference.
<https://science.nasa.gov/eclipses/citizen-science/>
- Volunteer at local eclipse events. Search online for opportunities or reach out to organizations in your area that might be planning celebrations.
- Share what you have learned about the solar eclipse with others who might be interested.



Resources

Moon over Vermont

<https://www.moonovervt.com/>

Our partner for this patch program and a great local resource for eclipse information. Special t-shirts and merchandise with Luna the cow available for purchase too.

NASA 2024 Total Solar Eclipse

<https://science.nasa.gov/eclipses/future-eclipses/eclipse-2024/>.

Resources on science, safety and more.

Obscura Burlington, the City of Burlington's official Total Solar Eclipse Celebration

<https://loveburlington.org/obscura-burlington>.

Information about City of Burlington celebrations open to the public.

Fairbanks Museum Solar Eclipse

<https://fairbanksmuseum.org/solar-eclipse/>.

Fairbanks Museum is offering a special discounted rate for Girl Scout youth during the months of March and April. Wear your GS sash or vest and pay \$5 for admission. Check their website for exhibits and special events for the eclipse!

Great American Eclipse

<https://www.greatamericaneclipse.com/vermont-2024-eclipse>.

Information on a national level including maps of path of totality.

**Interested in learning
how to present activities
with children focused
on the eclipse?**

Join free trainings being offered by NH Cooperative Extension and 4-H. Learn more and register at bit.ly/eclipsewithkids.

SOLAR ECLIPSE

ORDER FORM

Troop Age Level(s): Daisy _____ Brownie _____ Junior _____
 Cadette _____ Senior _____ Ambassador _____

Troop Leader: _____

Street: _____ City: _____ State: _____ Zip Code: _____

Day Phone #: _____ Night Phone: _____ Cell: _____

_____ # of patches @ \$3.50 each: \$ _____

*Shipping/handling: \$ _____

Total enclosed: \$ _____

VISA and MasterCard are also accepted.

Please charge my (circle one): **VISA** or **MasterCard**

Card #: _____ Expiration Date: _____ / _____ CVC _____

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(A signature is required on all Credit Card orders)

*For shipping and handling rates, please go to www.girlscoutsgwm.org/shop.

If you have any questions, please contact Customer Care at 1-888-474-9686. You may also email Customer Care at customercare@girlscoutsgwm.org.

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