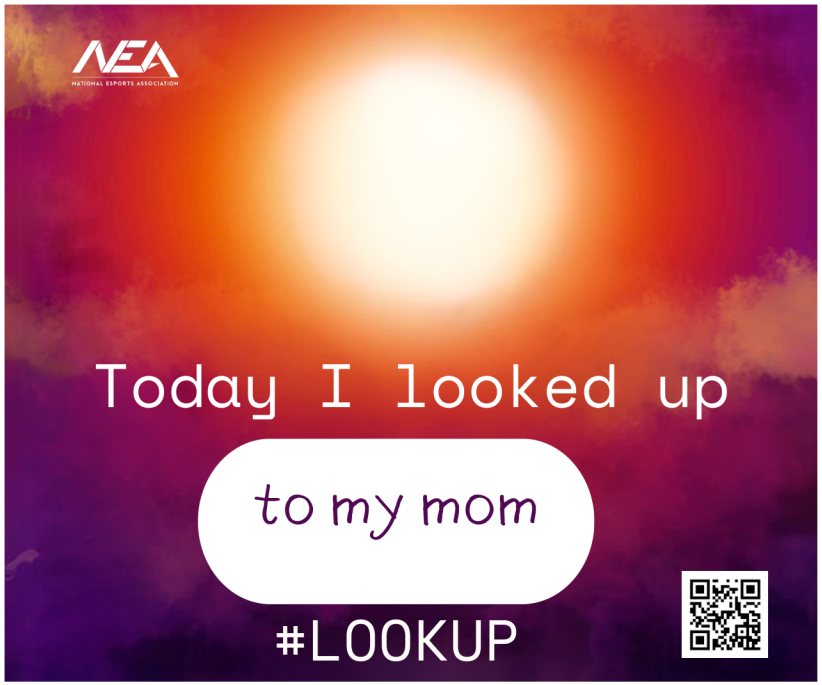
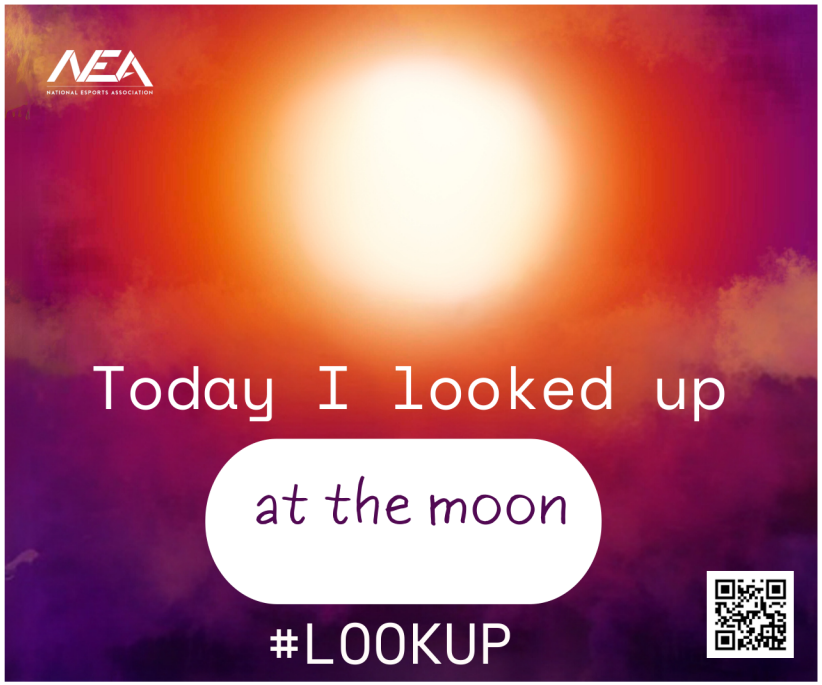

NEA
NATIONAL ESPORTS ASSOCIATION
NYC
Office of the Mayor
WWW.NEA.GG
I took the pledge to look up
NATIONAL ESPORTS ASSOCIATION

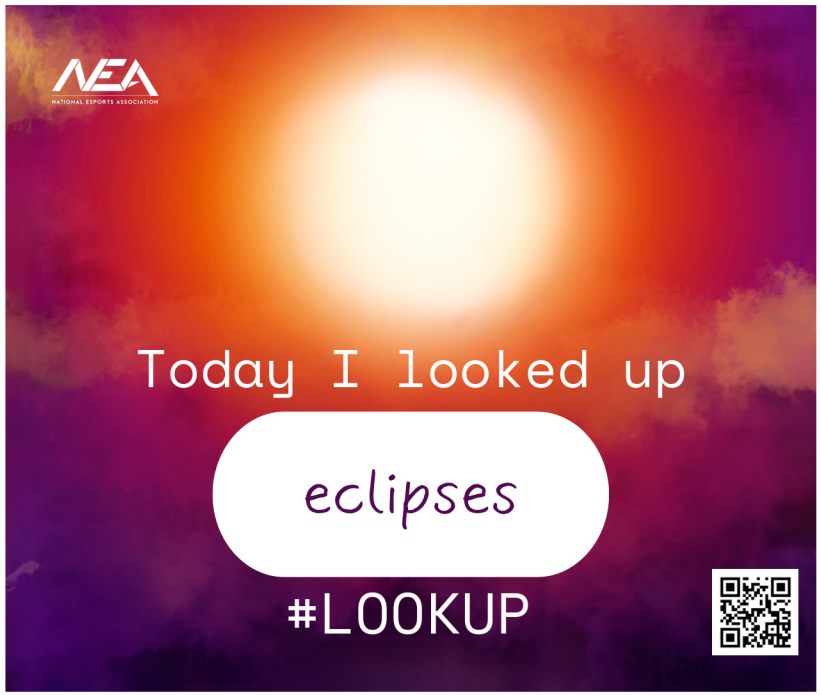
Who did you look up to today?



What did you look up at today?



What did you look up today?

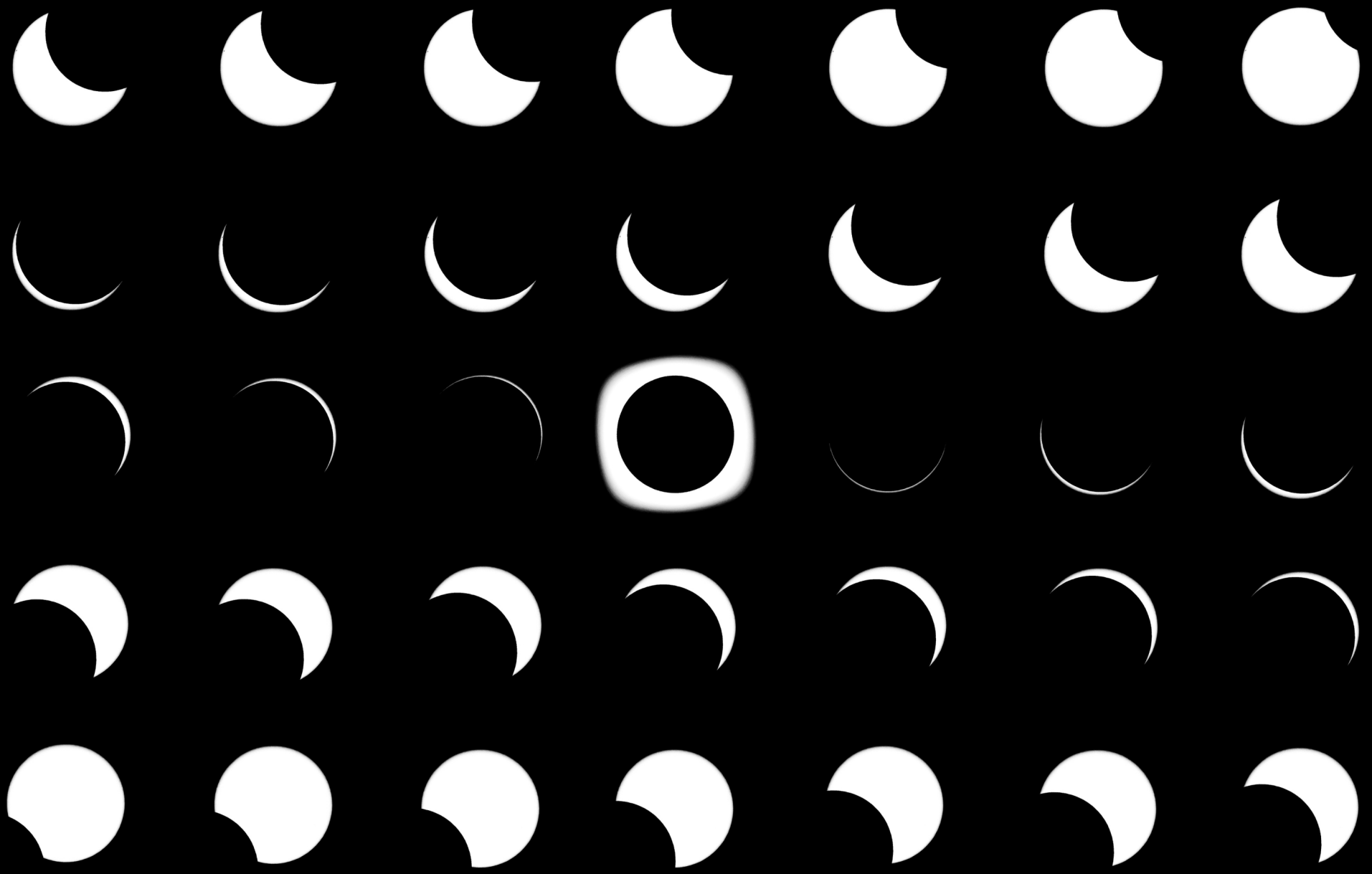


NATIONAL ESPORTS ASSOCIATION

NYC
Office of the Mayor

Today I looked up

#LOOKUP



The phases of the eclipse!

How Do I View the Eclipse Safely?

On Monday, April 8th, 2024, at approximately 3:20 PM, NYC will experience an Eclipse of the Sun. The only safe way to look directly at the sun during the eclipse is through special-purpose solar filters, such as the eclipse viewing glasses provided to from your local library. Limited supplies are available so stop by. The moon will start moving in front of the sun around 2:07 PM and last until 4:33 PM, with the closest point to totality (90% of sun covered by the moon) occurring from 3:20 PM to 3:23 PM.

Remember, it is never safe to look at the sun without solar filters, such as those provided by your local library, during any part of the eclipse if you are not in the path of totality. NYC will only experience a partial eclipse (90% of the sun covered) as it is not in the path of totality (100% of the sun covered).

Homemade filters or ordinary sunglasses, even very dark ones, are not safe for looking at the sun.

NYC
Office of the Mayor

Solar filters should have:
An ISO 12312-2:2015 certification
The manufacturer's name and address printed somewhere on the product
Do not use solar filters that are: Missing ISO certification information
Torn, scratched, or have wrinkled lenses
Coming loose from their frames
Made before 2015

NEA
NATIONAL ESPORTS ASSOCIATION

Using Eclipse Filters Correctly
Read and follow the instructions printed on or packaged with the solar filter. Always supervise children using solar filters. To look at the sun during the eclipse, follow these general steps:

Before looking at the sun, put on your eclipse glasses or hold your handheld solar viewer up to your eyes.
After viewing the sun with your solar filter, turn away from the sun before removing. Do not remove your solar filter while looking at the sun.
If you are within the path of totality, you can remove your solar filter only when the moon completely covers the sun's face and it suddenly gets very dark. As soon as the bright sun begins to reappear, reapply your solar viewer to glance at the remaining partial phases.

This document does not constitute medical advice. Readers with questions should contact a qualified eye-care professional.

Solar Eclipse Viewing Facts:

Office of the Mayor

NATIONAL ESPORTS ASSOCIATION

1) How can you safely view a solar eclipse?
Fact: Solar viewing glasses manufactured to meet international safety standards (ISO 12312-2) provide the necessary protection to view a solar eclipse. These glasses are designed to filter out harmful solar radiation.

2) When should you wear protective eyewear during a solar eclipse?
Fact: It is essential to wear protective eyewear, such as solar viewing glasses, throughout the entire duration of the eclipse. Even during partial phases, looking directly at the sun can cause eye damage.

3) What should you never use to view a solar eclipse?
Fact: Using a telescope or binoculars with solar filters is safe, but using them without proper filters can magnify sunlight and cause serious eye injury. Never use these devices without adequate protection.

4) True or False: Regular sunglasses provide adequate protection for viewing a solar eclipse. False
Fact: Regular sunglasses do not provide sufficient protection for viewing a solar eclipse. They do not have the necessary solar filters to block harmful rays, and looking at the sun through them can cause eye damage.

5) How can solar viewing glasses become unsafe for use during a solar eclipse?
Fact: Solar viewing glasses can become unsafe if they have tears, scratches, or any damage. Any compromise to the integrity of the glasses can allow harmful sunlight to reach the eyes.

Alternative viewing options

NATIONAL ESPORTS ASSOCIATION

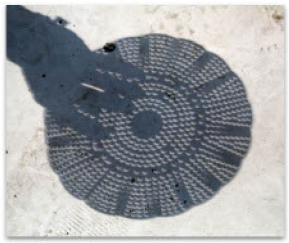
2024 Total Solar eclipse THROUGH THE EYES OF NASA

Safety Messaging
Total Solar Eclipse 04.08.24

Two options for safely viewing a partial or total solar eclipse:

- Use a pinhole projector or other indirect safe viewing methods.
- Use a solar filter, like solar viewing glasses.

Indirect Viewing Method: Project images of the Sun using your hands. Credit: AAS



Indirect Viewing Method: Project images of the Sun using a colander. Credit: NASA/Joy Ng

YES!

View the eclipse with special solar viewing glasses.

NO!

Regular sunglasses are not safe to view the eclipse.

Direct Viewing Method: Wear solar viewing glasses. Credit: NASA

Follow these safety guidelines for viewing a total solar eclipse. Credit: AAS

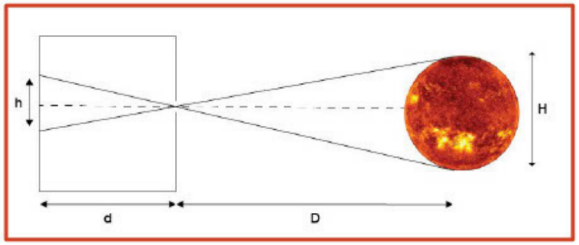
If you choose to use solar eclipse glasses with your learners, those in the path of totality may remove their glasses during the brief period of totality, when the Moon completely blocks the Sun. Put glasses on during the partial phases of the eclipse. People experiencing a partial solar eclipse will need to wear their solar eclipse glasses for the entire duration of the eclipse.

National Aeronautics and Space Administration

NASA

2024 Total Solar Eclipse U.S. Pinhole Projector Activity

Next Generation Science Standard MS.ESS1-1 - Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the Sun and Moon, and seasons.



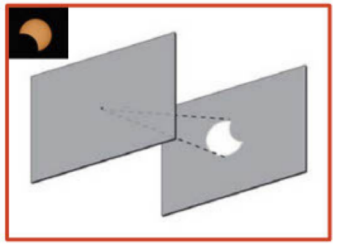
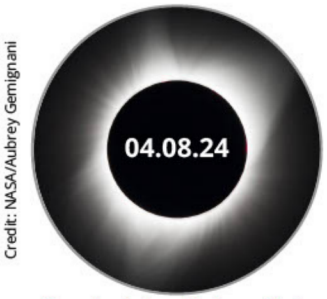


Figure 1. Left diagram shows the relationship between the height of the projected image (h), projection distance (d), distance to the object (D), and the height (diameter) of the Sun (H). See 'Educator Extensions' section for a math equation on how to calculate the Sun's diameter using a pinhole projector. The right diagram shows the shape of the Sun during the partial phase of a solar eclipse through a simple pinhole projector. Credit: NASA

Pinhole projectors allowed early scientists to view the shapes of illuminated objects, like the Sun, by shining the light from the object through a very small hole, projecting the image of the object onto the ground, wall, or other flat surface. Make this easy pinhole projector with your learners, see Figure 2, and have them experiment with the shape and size of the pinhole in this short (25- to 30-minute activity). See educator extensions for more ways to engage your learners.



Credit: NASA/Aubrey Gemignani

Your back should always be to the Sun when using a pinhole projector. Do NOT look at the Sun through the pinhole!

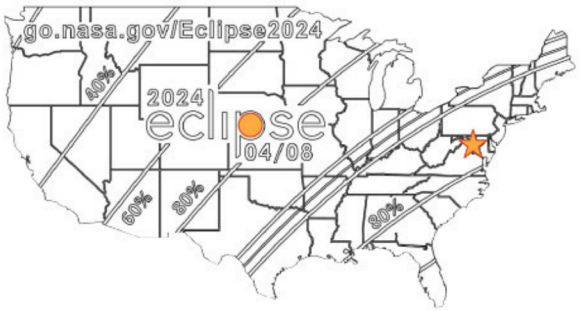


Figure 2. A 2D paper cut U.S. map for the Monday, April 8, 2024, total solar eclipse. Not to scale. See Learner Handout. Credit: NASA HEAT/J. Patrick Haas

Remember to never look directly at the Sun without proper safety equipment.

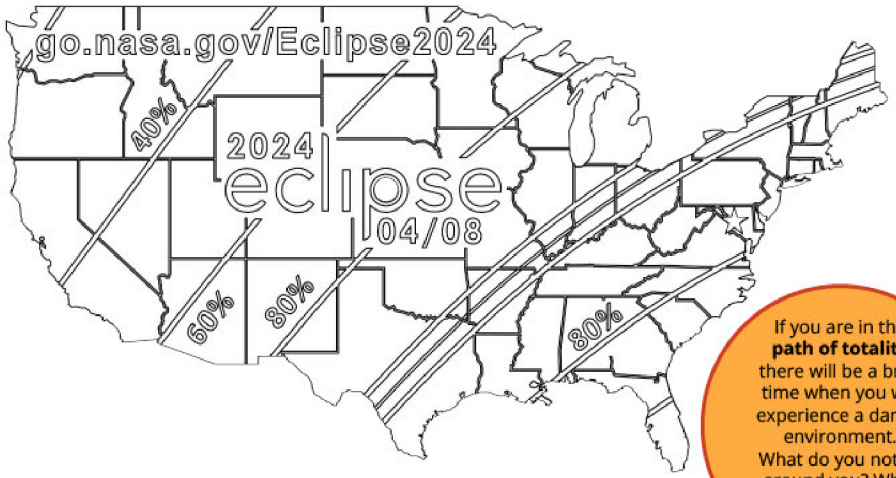
Pinhole Viewing Project

Learner Handout

Directions:

1. Cut out the 2D paper map in Figure 3 and the box containing 5 different sized circles in Figure 4.
2. Use the **circle** and the **star** hole puncher to punch out the existing shapes in the 2D paper cut map.
3. Use a hole puncher with a shape *other than a circle or star* to punch a hole in the 2D paper cut map somewhere else, such as where you live. Try a **triangle**, **square**, or a **heart**.
4. **Make a prediction!** What shape will the Sun be when it shines through each hole?
5. Standing with your back toward the Sun, hold the map approximately one meter above the ground, out in front of you, to allow sunlight to shine through the holes in the 2D paper cut map onto the ground. Do NOT look at the Sun through the pinhole!
6. Repeat the experiment with the size of the hole using Figure 4.

Predict: Will the size of the hole affect the projection?



If you are in the **path of totality** there will be a brief time when you will experience a darker environment. What do you notice around you? What do you hear? What do you feel?

Figure 3: A 2D paper cut U.S. map for the Monday, April 8, 2024, total solar eclipse. Credit: NASA HEAT/J. Patrick Haas

Materials:

- ❑ Scissors
- ❑ Hole Punchers, 5 mm:
  - ❑ Circle
  - ❑ Star
  - ❑ At least one other shape, e.g., square, triangle, heart

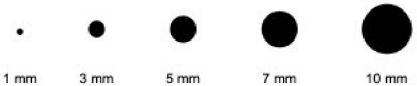


Figure 4: Experiment with sizes by cutting out these different sized circles. Credit: NASA HEAT

Print a 2D paper cut or 3D printed U.S. map pinhole projector using the link below to access files for indirect viewing, or use solar viewing glasses to observe the upcoming total solar eclipse on Monday, April, 8, 2024!

Remember to never look directly at the Sun without proper safety equipment.

Eclipse Information

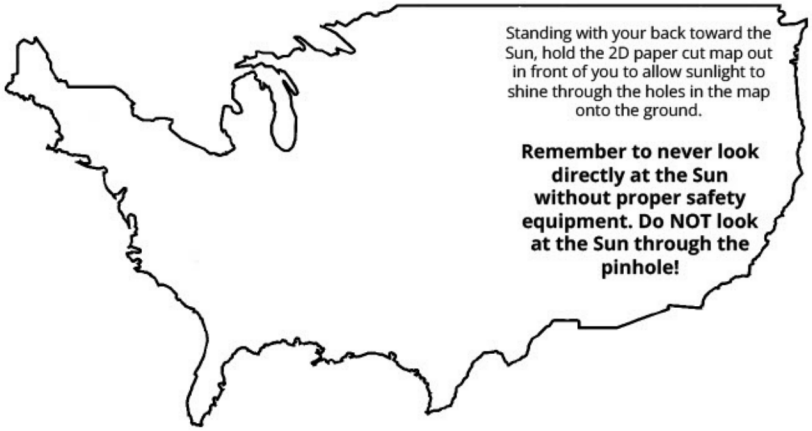
go.nasa.gov/Eclipses

2024 Total Solar eclipse THROUGH THE EYES OF NASA

Pinhole Projector Files

nasa3d.arc.nasa.gov/detail/usa-eclipse-2024

This product is supported by the NASA Heliophysics Education Activation Team (NASA HEAT), part of NASA's Science Activation portfolio.



NATIONAL ESPORTS ASSOCIATION

NP-2023-6-083-GSFC (1/2)

NEA/NASA Livestream April 8th 2-4pm

twitch.tv/EsportsNEAlive


Learn more about eye safety for eclipses,
the Look Up program, and the
National Esports Association at
nea.gg/lookup
or visit your local library


Thank you for today.