Eclipse Essentials: Safe and Stylish Solar Eclipse Glasses

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.

Overview:

Keep solar viewing safe, easy, and fun with this hands-on, art-infused, 25- to 30-minute activity for audiences of all ages. Engage learners in the wonders of solar viewing by having them personalize their solar eclipse glasses.



Credit: NASA HEAT/Shannon Reed

Materials:

- ❏ Solar Eclipse Glasses (ISO 12312-2 Safety Standard)
- ❏ Paper Plate or Cardstock
- ❏ Pen or Pencil
- ❏ Scissors
- ❏ Tape
- ❏ Optional Supplies: Hole puncher, stapler, ruler, markers, crayons, glitter glue, feathers, adhesive gemstones, stickers, ribbon, etc.

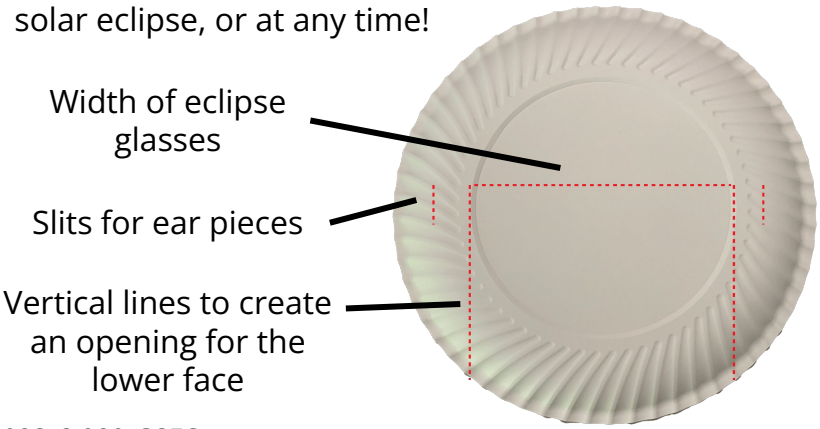
Steps:

1. Use the eclipse glasses as a template to mark the score lines on the paper plate or cardstock, following the guidelines shown in the diagram below.
2. Cut along the score lines and make the two slits for the ear pieces to slide into.
3. Slide the earpieces into each slit and adhere the glasses to the plate/cardstock by taping along the inside of the ear piece slits.
4. Optional: Modify your design to make a crown, flowers, or any shape of your choice.
5. Observe! Use the glasses to safely observe the Sun during a solar eclipse, or at any time!

Note: Decorating the paper plate or cardstock is optional.

Have learners decorate the plates prior to inserting the glasses, or protect the lenses of the eclipse glasses by covering them with paper while decorating.

Do not view the Sun with damaged or scratched lenses.





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National Aeronautics and Space Administration

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Tips and Tricks:

Safety Comes First	• Ensure that the eclipse glasses are certified (ISO 12312-2 safety standard). • Follow guidelines and safety instructions for safe eclipse viewing.
Selecting Accessories	• Consider using a variety of lightweight materials like colored tapes, stickers, or adhesive decorations. • Make sure the accessories do not impede visibility through the lenses or interfere with the effectiveness of the glasses.
Creative Stylization	• Let learners' imagination run wild and personalize their eclipse glasses with their own unique style. Have them experiment with different colors, patterns, or designs that resonate with their personal preferences and creativity. • Explore themes related to celestial events or nature for an added touch of uniqueness.
Secure Attachment Techniques	• Discover techniques to securely attach accessories to the personalized glasses without compromising safety. Consider punching holes in the ear pieces and attaching the glasses with ribbon (see images below). • Ensure that any attachments do not impede visibility through the lenses or interfere with the effectiveness of the glasses.
Maintenance and Care	• Regularly inspect eclipse glasses to ensure that the accessories are securely attached and do not pose any risks. • Store the glasses in a safe place when not in use to prevent scratches or damage.
Observe and Enjoy	• Look up! Enjoy the dynamic view, have fun, and be safe in your super cool eclipse glasses!





Credit: NASA HEAT/Shannon Reed



Credit: JAXA/NASA/SAO/NAOJ



Credit: NASA/Aubrey Gemignani

Use your decorated glasses to view two upcoming solar eclipses in North America.

Different types of eclipses have different safety guidelines. If you choose to use solar eclipse glasses for solar viewing during a partial solar eclipse or annular solar eclipse, solar eclipse glasses must be worn at all times. During a total solar eclipse, only those observers in the path of totality may remove their eclipse glasses during the brief period of totality, when the Moon completely blocks the Sun. Learn more about these upcoming solar eclipses and solar viewing safety at solarsystem.nasa.gov/eclipses.

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