

Dear Teachers and Educators,

There are two solar eclipses coming up in the next school year! These are great opportunities to teach about the Sun and Moon, and to get your students excited about science. The DOME Planetarium would like to help you prepare for these events so that your students can enjoy them.



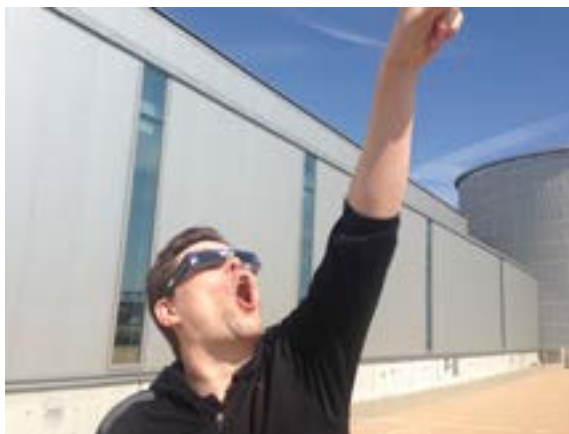
On **October 14, 2023**, there will be an annular solar eclipse. During an annular solar eclipse, the Moon covers the Sun, but because the Moon is farther from Earth than average, it appears smaller and doesn't cover the Sun completely. This ring-of-fire eclipse will be visible along a narrow path from western Oregon to southern Texas, but here in Central Illinois we will experience a partial solar eclipse, with the Moon blocking about 60% of the Sun. You will need eclipse glasses or other safe viewers to watch this eclipse.

On **April 8, 2024**, there will be a total solar eclipse visible in a narrow path across the United States. If you are in this path of totality, you will see the Moon entirely block the light of the Sun in the middle of the day for about 3 minutes. In Central Illinois, the Sun will be 94% eclipsed. We are about a three-hour drive from the path of totality from the Peoria area. If you do not travel to that path, you will need eclipse glasses or other safe viewers to watch this eclipse.

Why should you encourage your students to observe these eclipses?

Observing the Sun, our star, can be safe and inspirational. Solar eclipses are a rare natural phenomenon that invite a feeling of wonder and ignite curiosity.

Experiencing an eclipse is a way all people can participate in science. You can observe the eclipse itself, and learn about our Sun and Moon in the days leading up to the events. We have lesson ideas linked at the bottom of this letter.



Eclipse Times in Central Illinois:

Saturday, October 14, 2023, Annular Solar Eclipse

Time	Phase	Event
10:33:33 am Sat, Oct 14		<i>Partial Eclipse begins</i> The Moon touches the Sun's edge.
11:58:08 am Sat, Oct 14		<i>Maximum Eclipse</i> Moon is closest to the center of the Sun.
1:23:19 pm Sat, Oct 14		<i>Partial Eclipse ends</i> The Moon leaves the Sun's edge.

Monday, April 8, 2024 Solar Eclipse (Partial in Peoria)

Time	Phase	Event
12:47:03 pm Mon, Apr 8		<i>Partial Eclipse begins</i> The Moon touches the Sun's edge.
2:03:50 pm Mon, Apr 8		<i>Maximum Eclipse</i> Moon is closest to the center of the Sun.
3:19:08 pm Mon, Apr 8		<i>Partial Eclipse ends</i> The Moon leaves the Sun's edge.

Both of these eclipses are ideally viewed by traveling to the narrow path that crosses the United States, where the Sun will be covered (or mostly covered during the annular eclipse) by the Moon. In Peoria, both eclipses will be partial – the Sun will only be partially covered by the Moon. You may have students interested in traveling to the eclipse paths, or you might be interested yourself! If so, check out the paths here.

[October 14 Annular Solar Eclipse Path](#)

[April 8 Total Solar Eclipse Path](#)

Safe Viewing:

It is not safe to look directly at the Sun without eye protection. However, you CAN safely watch this eclipse with inexpensive solar viewing glasses, or projection methods.

Use only eclipse glasses from reputable manufacturers that are verified to meet the ISO 12312-2 international standard. Regular sunglasses are *not* strong enough to protect your eyes from looking directly at the sun. You can also use pinhole projectors, view the eclipse through tree shadows, or use #14 welding glass to look at the Sun. We highly recommend buying eclipse glasses for your students! They are simple to use and safe. You can purchase them from various online stores; just make sure they meet the ISO standard. If you would like to purchase them from the museum, we will sell bulk orders of 100 or more eclipse glasses at \$2 a pair. Email Renae Kerrigan at rkerrigan@peoriariverfrontmuseum.org to arrange this.



Lesson Plans and Activity Ideas Related to the Eclipses

Observing a solar eclipse can spark great curiosity about astronomy, physics, and the natural world. Here are some resources for teaching about eclipses and the Sun and Moon.

[NSTA Solar Eclipse Guide for Educators](#)

[How do Eclipses Work](#)

[Many eclipse related activities for educators](#)

[NSTA Preparing for the Eclipse and Science Standards \(Young Children\)](#)

[NSTA Preparing for the Eclipse and Science Standards \(Middle School\)](#)

[NSTA Preparing for the Eclipse and Science Standards \(High School\)](#)

[Toilet Paper Solar System](#) (distance and scale of planets)

[Big Sun, Small Moon](#)

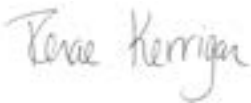
[Eclipse Chalk Art](#)

[Make Your Own Sun Clock](#)

Resources the Peoria Riverfront Museum can provide:

- We can help you purchase eclipse glasses! We will sell them for \$2 each if you are ordering 100 or more.
- Observe the partial solar eclipse with us on October 14! We will have an event with activities and solar observing. [Learn more on our website.](#)
- We have a planetarium show, *Eclipse: The Sun Revealed*, that you can view with your class if you [schedule a visit.](#)
- Is your school a part of our Every Student Initiative? Contact [Alyssa Mueller](#) to schedule your donor-sponsored visit soon!
- We have a mobile planetarium we can bring to your school if you cannot visit the museum in person. [Learn more here.](#)
- View more on our [Educator resources page!](#)

Happy Eclipse Viewing! Please reach out with any questions. We hope you have a great time learning about eclipses with your students.



Renae Kerrigan
Curator of Science | Planetarium Director
Peoria Riverfront Museum