

ECLIPSE 2024

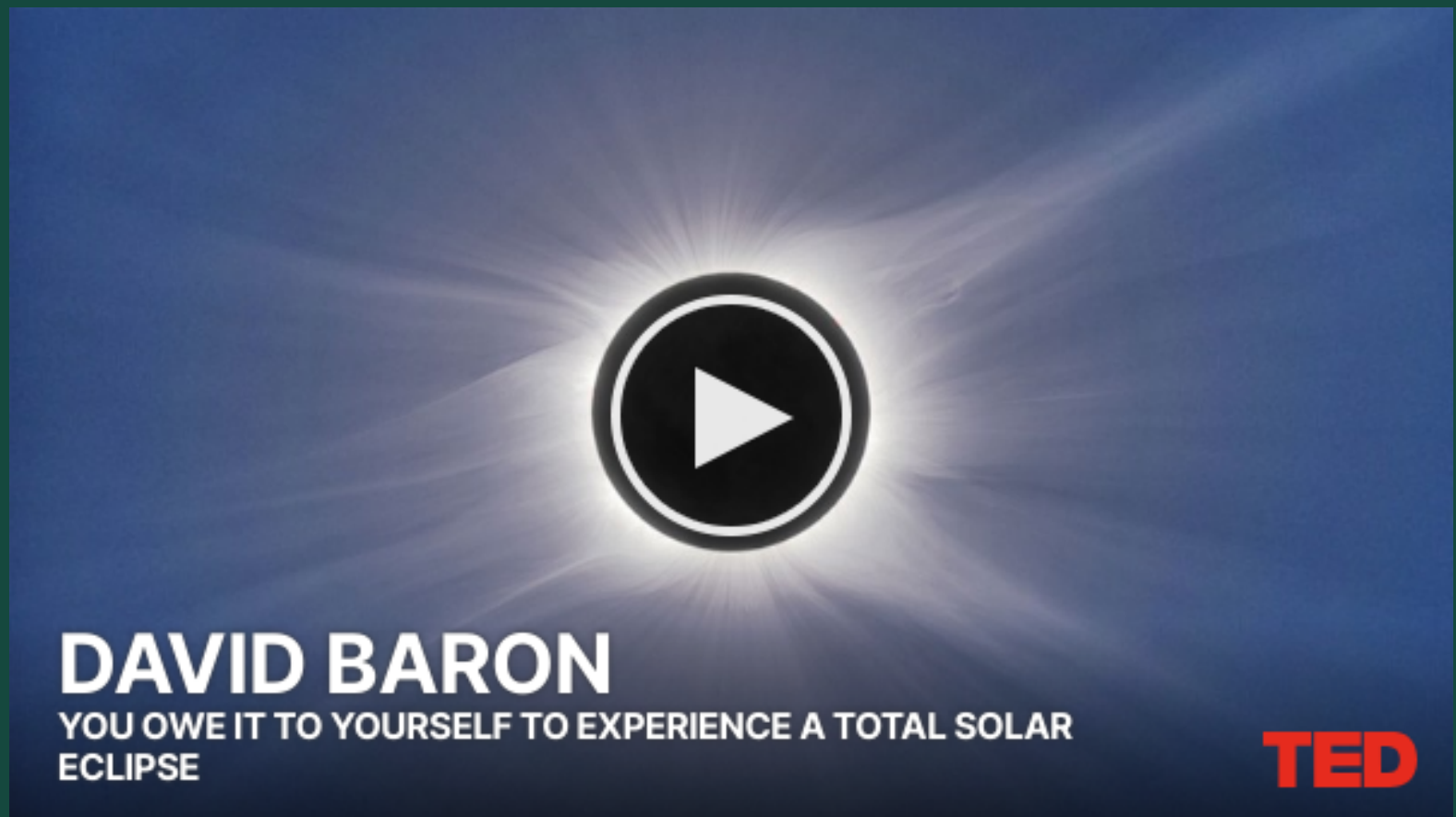
A Learning Guide for teachers,
families, and our community



QUESTION 1

Are you excited about the *April 8, 2024* Solar Eclipse? Do you know how incredibly cool it is?

- **Yes?** Go to Question 2 (or watch the video to get even more excited!)
- **No?** Watch this video...



Double click to play the video or visit:

www.ted.com/talks/david_baron_you_owe_it_to_yourself_to_experience_a_total_solar_eclipse

Question 2

Do you understand the science behind the total eclipse and how amazing it is that it actually happens?

- Yes? Check out the Solar Eclipse Kits to find one for your students or amaze yourself more with the resources below.
- No? Learn more:

1. [Solar Eclipse 2024: Info & Live Stream | Exploratorium](#)
2. [Echo Vermont Eclipse Pop-Up Exhibit](#)
3. [2024 Total Solar Eclipse in Vermont](#)
4. [Eclipse Over America | NOVA | PBS](#)





We hope you'll agree that this once-in-a-lifetime total solar eclipse is really awesome and....

you will help us share the activities and links in this learning guide! We want every student in ACSD (and beyond!) to *understand* and *get super excited* about the eclipse before it happens and then *express their experience* the day after.

Each ACSD school will receive kits with materials to build models of the total solar eclipse. The kits are age-appropriate and increase in complexity for older students. You can decide what entry point is right for your students and then go as deep or far as you (or they) want.

Solar Eclipse Kit - Level 1

Geared to PK-2nd grade



KIT

This kit will help students build a simple model of the earth, moon, and sun system. They will use their model moon to eclipse the sun. If you don't have the kit you can check out this version: [Use your thumb to "eclipse" your friend](#) which is similar to the activity that will be shared for schools, but can be done anywhere without any materials.

*Example photos thanks to Salisbury students. Kit design thanks to Exploratorium:
www.exploratorium.edu/eclipse/snacks/solar-eclipses



READ ALOUD

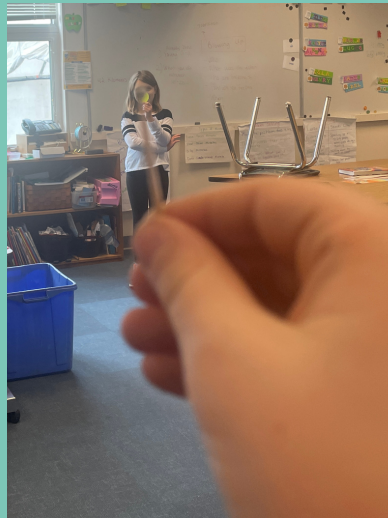
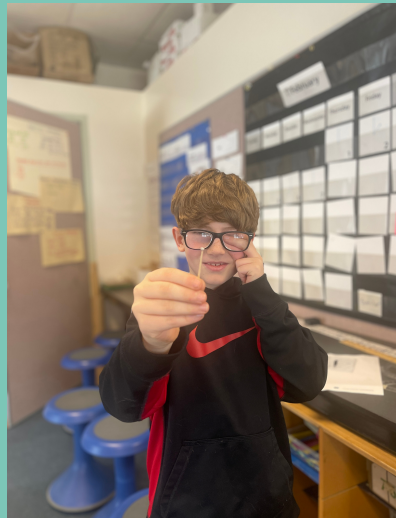
Bear Shadow by Frank Asch

This book can help kids realize that when the moon eclipses the sun it will cast a shadow on part of the earth.

Solar Eclipse Kit - Level 2

Geared to 3rd-6th grade

KITS



KIT

This kit will help students build a model that has the correct size and distance ratios of the sun and moon from the earth.

This model highlights how the moon and sun both have a size/distance ratio of 1/100: they are each about 100 times farther from earth than the sizes of their diameters.

It is only because of that ratio that, from our perspective on earth, the moon can perfectly cover the sun resulting in totality.

*Example photos thanks to Salisbury students. Materials photo and kit design thanks to Exploratorium:
www.exploratorium.edu/eclipse/snacks/cosmic-coincidence

Solar Eclipse Kit - Level 3

Geared for 6th-12th grade

KIT



This model takes some precision to build and manipulate, but students will build the moon/earth system in a cup that shows the orbit of the moon around the earth to explain why we don't have eclipses every month.

This model can also be used to show how the moon and earth system moving around the sun adds another level of complexity to eclipses.

Finally, by using their cell phone or a flashlight, students can actually model the moon's shadow moving across part of the earth's surface during totality.

*Materials photo courtesy of www.exploratorium.edu/eclipse/snacks/eclipse-in-a-cup. Actual materials may vary.

Solar Eclipse Kit - Everyone

Schoolwide Model

KITS



KIT

This kit will help students build a scale model of the total solar eclipse.

With their scale solar system, students will position the *sun* 70 meters away (you'll need a really long hall or an outdoor space). They will stand at the *earth* position and then hold their model (to scale) *moon* the approximate scaled distance apart.

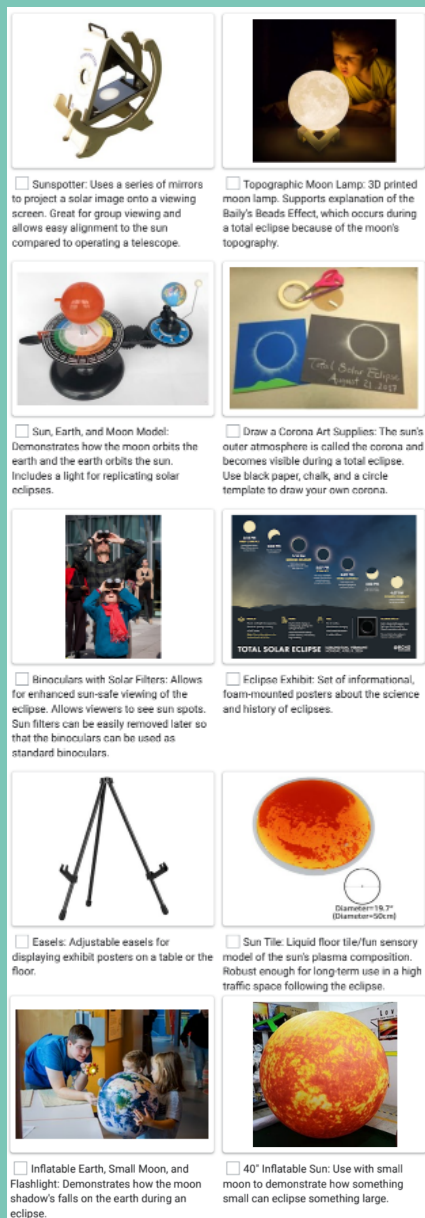
This model helps students to really see how much "space" there is and how tiny the moon is compared to the sun and how it is still able to pass right in front of it to create totality (and not any more or any less!)

*Example photos thanks to ACSD staff and students.
Materials photo and kit design thanks to Exploratorium:
www.exploratorium.edu/eclipse/snacks/eclipse-to-scale
Actual materials may vary.

Solar Eclipse Road Show

In addition to the kits, a Solar Eclipse Road Show will come to ACSD schools starting in March. See the planned schedule and materials below to see what you might be interested in exploring with your students.

Road Show Materials



Road Show Schedule:

- Salisbury & Weybridge: 2/26-3/3
- Ripton: 3/5-3/7
- Shoreham, Bridport & Cornwall: 3/8-3/15
- Mary Hogan: 3/18-3/22
- MUMS: 3/25-3/29
- MUHS: 4/1-4/7



Eclipse Day & The Day After

April 8, 2024 will be an early release day for all ACSD schools. Every ACSD student will be gifted a pair of eclipse glasses to take home before the eclipse.

Art, Music, and Spanish teachers will meet in March with a plan to create different ideas to help students express their eclipse experiences. We will provide art materials for each school and hope teachers can plan time to allow students to creatively respond and document this once-in-a-lifetime experience!



Additional Resources

Books For Adults:

- American Eclipse-by David Baron

Books for Kids:

- A Few Beautiful Minutes by Kate Fox
- Eclipse by Andy Rash
- Totality: An Eclipse Guide in Rhyme and Science by Jeffrey Bennett

Webpages:

"Eclipse 101." <https://eclipse2017.nasa.gov/faq>

"Solar Eclipses 2021-2030." <https://eclipse.gsfc.nasa.gov/SEdecade2021.html>

"Build a Sunspot Viewer." <https://www.nationalgeographic.org/activity/build-a-sunspot-viewer/>

"What to See During an Eclipse". <http://www.exploratorium.edu/eclipse/what-to-see-during-eclipse>.

One-pagers from Vermont Public (great for families and educators!):

- PreK/K-2 - The [Eclipse Learning Guide](https://assets.vermontpublic.org/files/Eclipse-pre-K-K-2.pdf) brings playful STEAM connections from ECHO's Science and Stories video series along with social-emotional considerations, and an Eclipse tag game. The activity also includes an easy to use and click-ready printable model of the Earth, Moon and Sun to reenact the Eclipse at home. <https://assets.vermontpublic.org/files/Eclipse-pre-K-K-2.pdf>
- Grades 3-5 - This [Eclipse Learning Guide](https://assets.vermontpublic.org/files/Eclipse-3-5.pdf) offers pre-teaching opportunities using podcasts and video for pre-teaching. Activities include social-emotional connections and a model activity made to use at home or the classroom representing the distance between the Earth, Moon and Sun during totality. <https://assets.vermontpublic.org/files/Eclipse-3-5.pdf>
- Grades 6-12 - This [Lesson Guide](https://assets.vermontpublic.org/files/Eclipse-6-12.pdf) will help older students explore and understand the Eclipse by creating a model of the titled lunar orbit and ecliptic-plane. This activity model uses everyday objects and connections to documentaries by Vermont Public, PBS and NOVA to describe the unique nature of this historic event. <https://assets.vermontpublic.org/files/Eclipse-6-12.pdf>

Eclipse Legends from around the world:

- [Eclipse Legends Around the World | Exploratorium](#)
- [Swallowing the Sun: Folk Stories about the Solar Eclipse | Folklife Magazine](#)
- [Multi-Cultural Eclipse Stories Website Includes \(FREE\) Audio Recordings, Activities, Resource Guide and NASA links | Wisconsin Valley Library Service](#)
- [Solar Eclipse Myths From Around the World](#)
- [Solar Eclipse Myths](#)

Mystery Science Mini Lesson: [Why are people making such a big deal about the solar eclipse?](#)

Storytime in Space Read aloud: <https://storytimefromspace.com/totality-reading-with-science-deep-dive/>

**Note:* If you are reading this Learning Guide virtually, you can click on any hyperlink. If you are reading a printed copy you can find all of the hyperlinks here: www.acsdvt.org/curriculum/eclipse-learning-guide

SPECIAL THANKS

to the AMAZING ACSD faculty and staff who worked to make these INCREDIBLE eclipse events happen for our students:

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Please reach out to any of them with questions
or contact Amy Clapp at aclapp@acsdvt.org