



Eclipse Books and Authors Webinar

September 18, 2023

The webinar will begin at 11:00 am Mountain Time and will be recorded



Welcome and Introductions

Facilitators:

Claire Ratcliffe Adams
Education Associate
Space Science Institute

Sky ReidMills
Education Program Assistant
Space Science Institute





Authors

When the Sun Goes Dark

Andrew Fraknoi and Dennis Schatz

Total Solar Eclipse: A Stellar Friendship Story

Jayme Sandberg

American Eclipse

David Baron

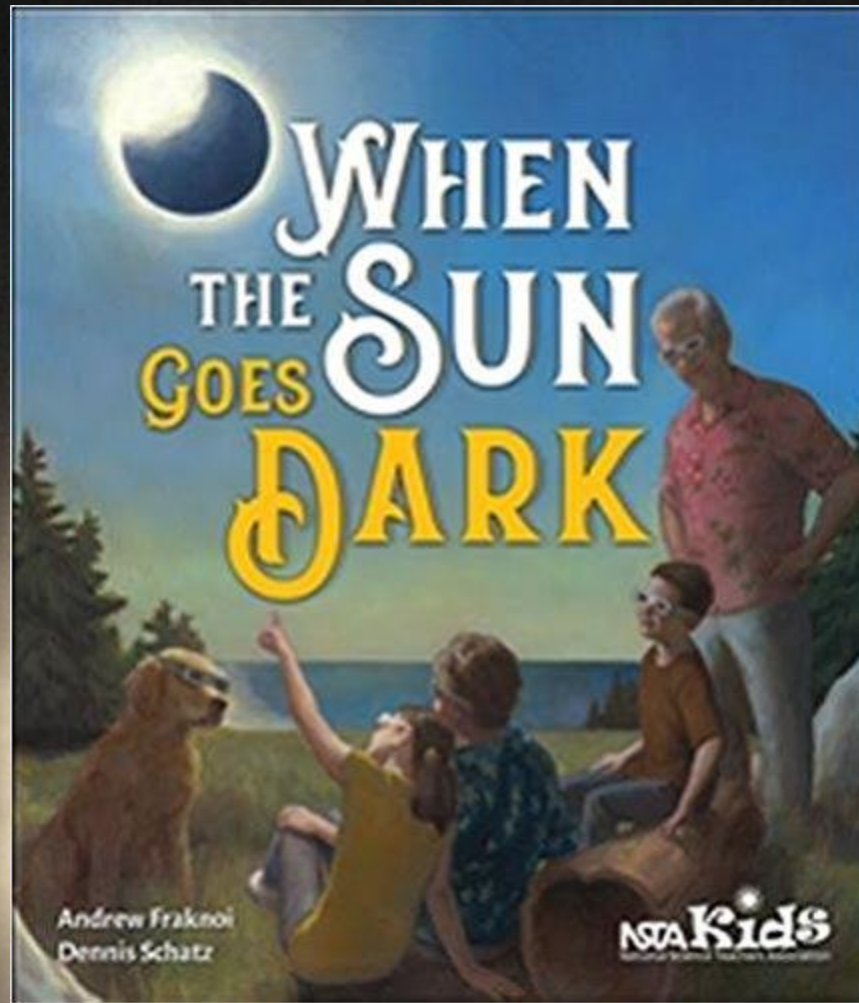
Totality!

Jeff Bennett

Icebreaker

What is your favorite book relating to a STEM topic?

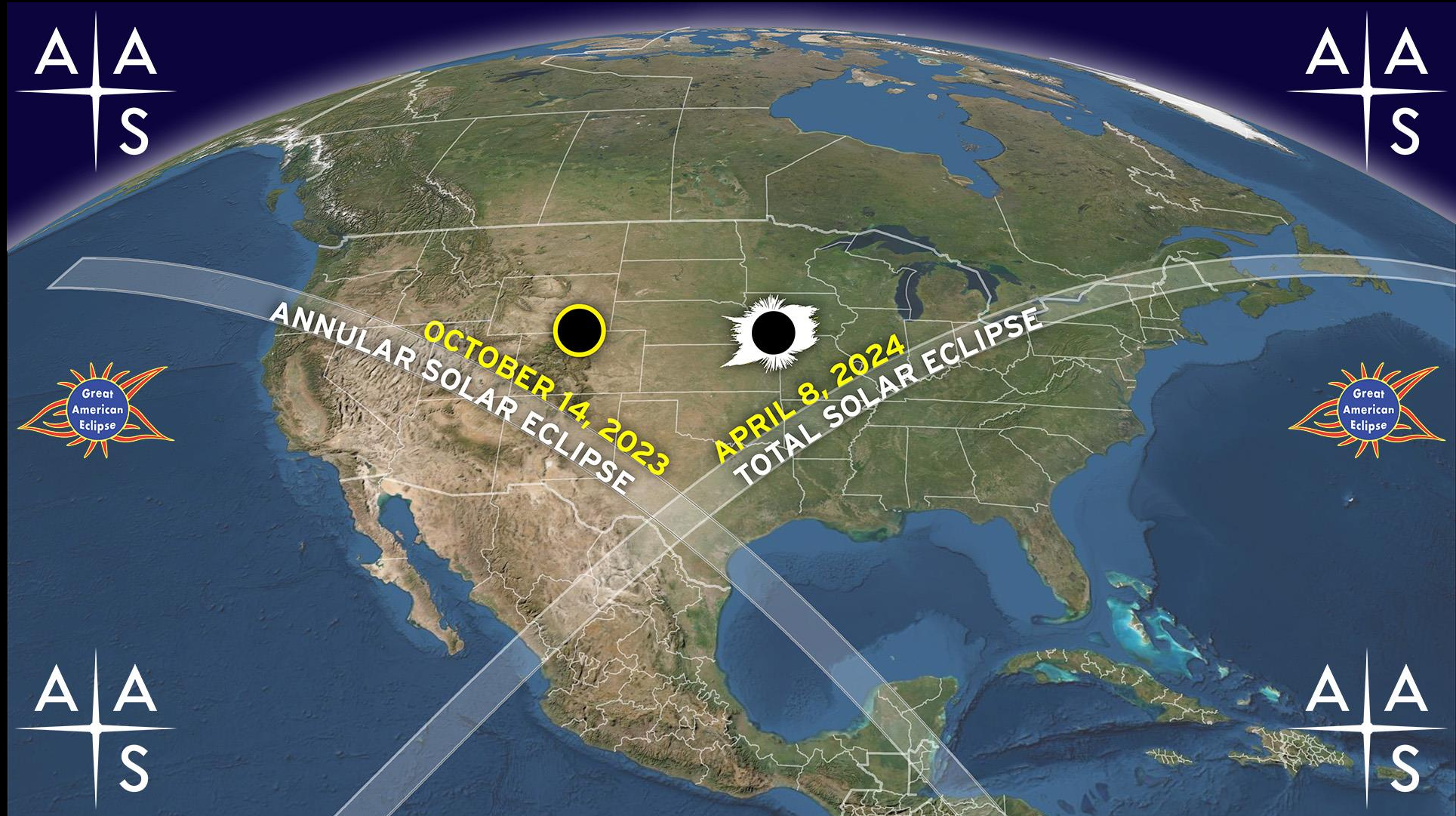




Andrew Fraknoi
Dennis Schatz

National Science Teaching Association Press

Two North American Eclipses in a Row



The STAR Library Network presents

SOLAR ECLIPSES of 2023 and 2024

A North American “Double-Header”

**A Guide for Public Libraries and
Their Communities**

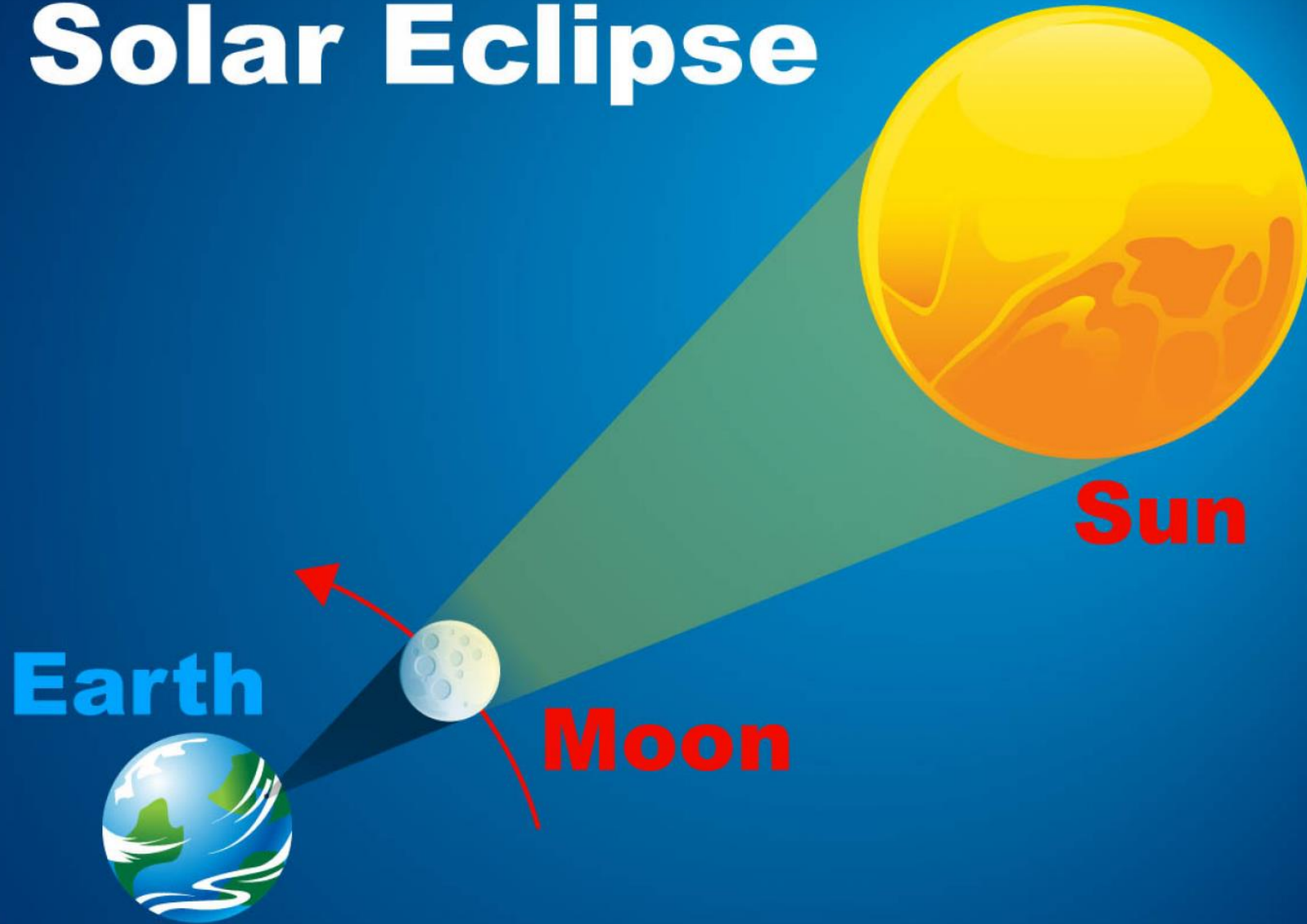


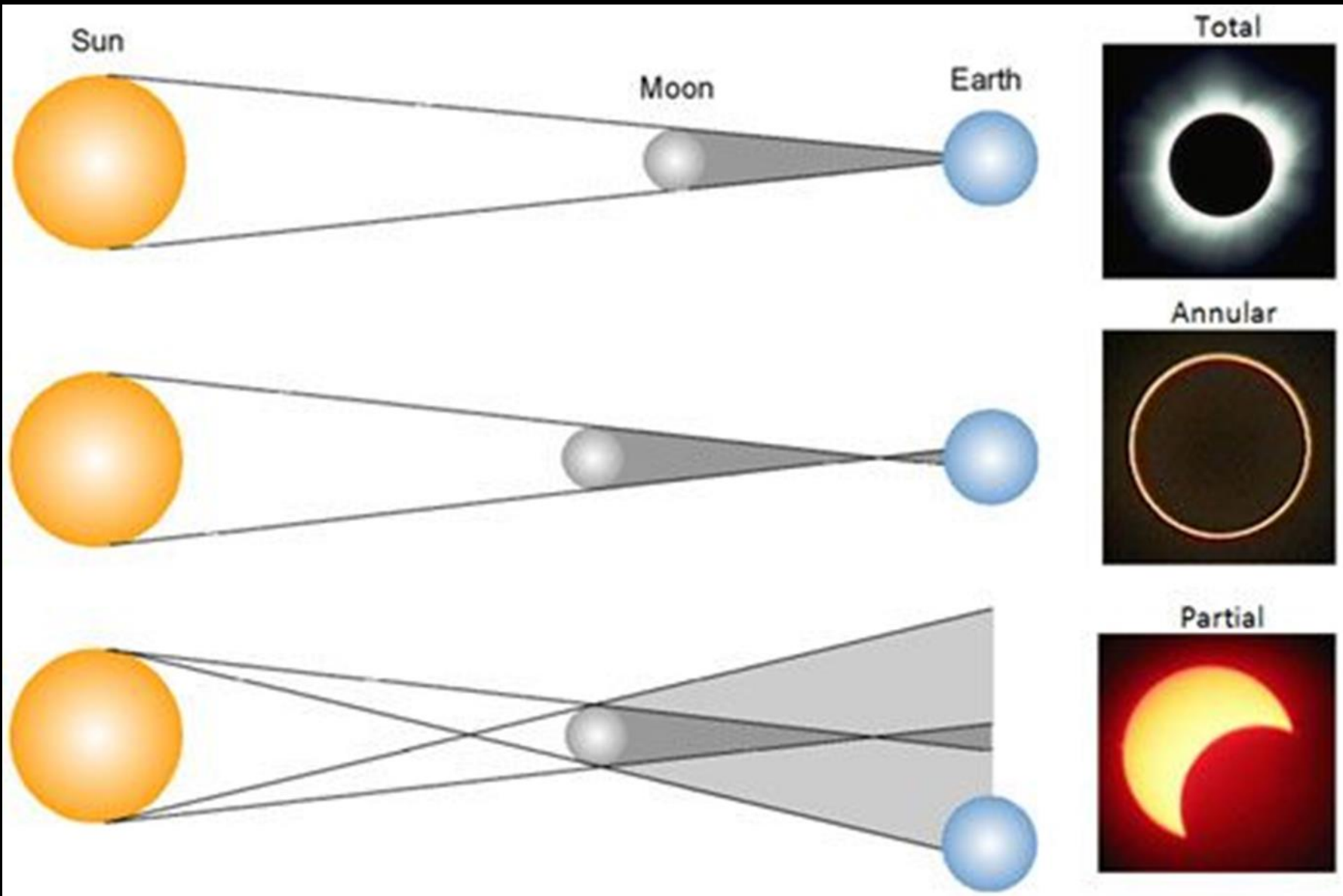
by Andrew Fraknoi (*Fromm Institute, University of San Francisco*)
and Dennis Schatz (*Institute for Learning Innovation*)

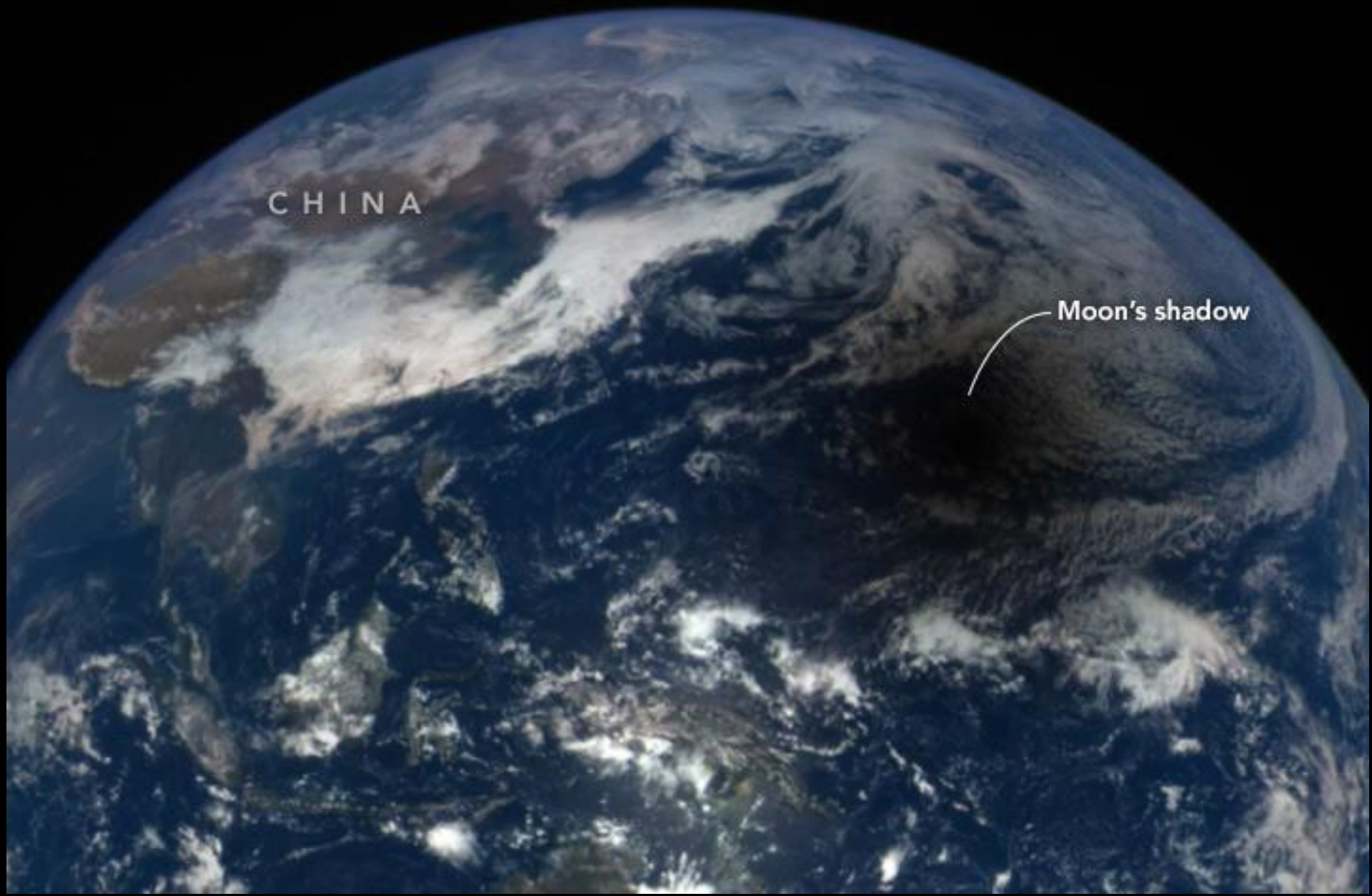


**Find this at:
[http://bit.ly/
eclipsesforlibraries](http://bit.ly/eclipsesforlibraries)**

Solar Eclipse







CHINA

Moon's shadow





**Who will see some kind
of eclipse in 2023-24?**

U.S. = 332 million

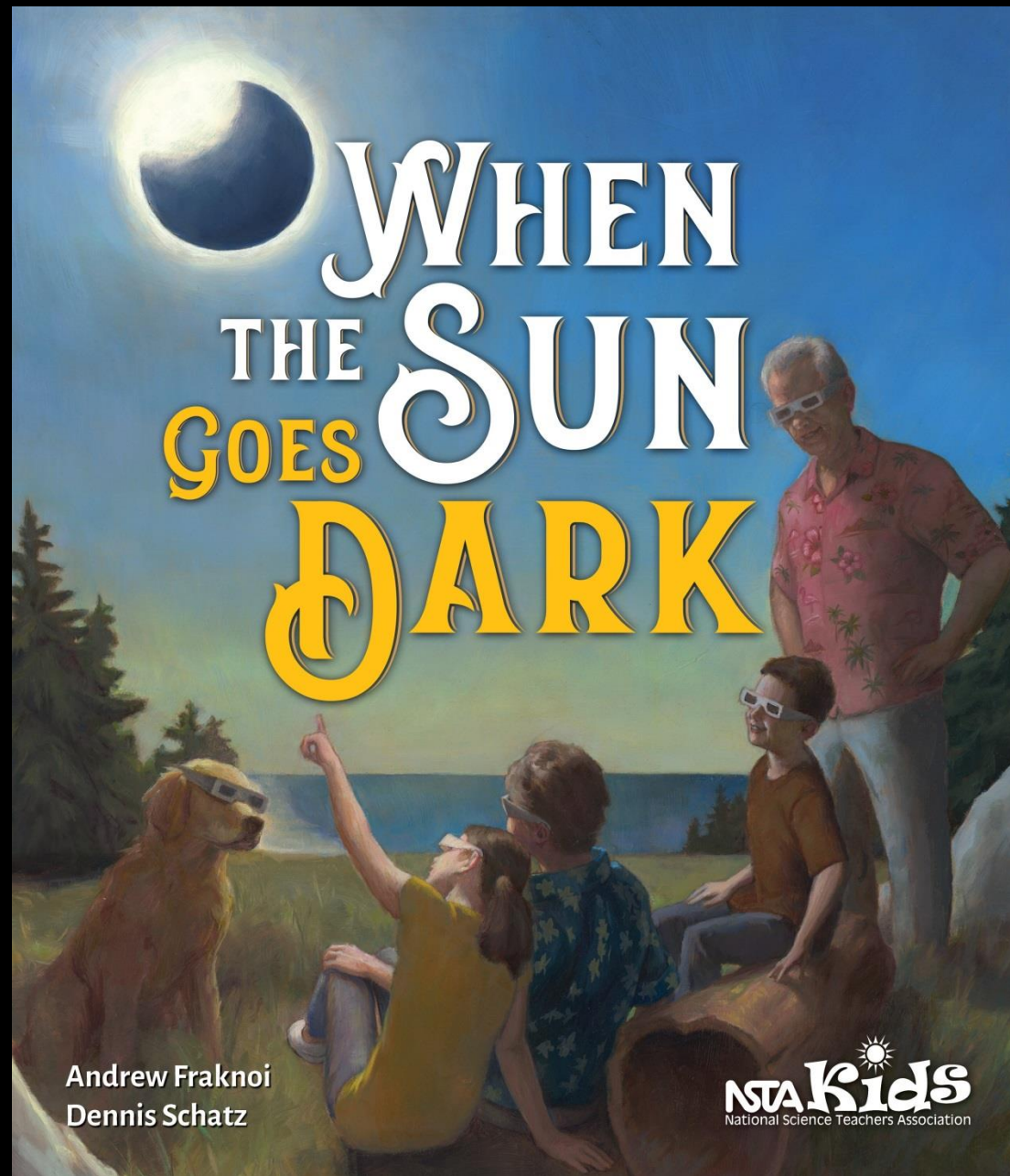
Canada = 37 million

Mexico = 129 million

TOTAL = 498 million

For kids
and
grandkids.

From the
National
Science
Teaching
Association
Press





Grandma was telling us about the big event during their trip. First, the Sun looked like it had a little bite taken out of it. They had to use special glasses to be able to look at the Sun without hurting their eyes. Then that dark bite out of the Sun got bigger and bigger. When the Sun was almost covered, it looked like a diamond ring for a second. After that, not only the Sun but also the sky turned dark. The birds even stopped singing. The stars came out in the middle of the day. All of the people watching with my grandparents oohed and aahed because there was a halo of light around the Sun that was very beautiful.

"The darkness only lasted four or five minutes," Grandma said.

Then everything that had happened before went backward. They quickly needed their glasses

again because more and more of the bright Sun became visible. They could see the bite taken out of the Sun again, but now it got smaller and smaller until the whole Sun was back.

Grandma called the event a solar *e-clips*. I've heard of e-mail and e-books, but I didn't know what an *e-clips* was. But I didn't want to look ignorant in front of my pesky little brother, so I didn't say anything.

After dinner, I sat next to Grandma on the couch in the living room and asked her to tell me more about solar *e-clips* and what they were. She chuckled at the way I said *e-clips*, emphasizing the *e*.

She told me, "Most people say *eclipse* with the emphasis on the *clipse* part of the word."

So now I knew how to pronounce it, but I still didn't know what caused an eclipse or why people traveled thousands of miles to see one.





Now Grandma told us to move the balls around our heads a little bit at a time, going from right to left. As I slowly took the ball around, the side facing me started getting lit up a bit by the lamp's light.

Grandma told us to stop moving the tennis balls for a minute, then said, "That's what happens to the Moon. As it goes around the Earth, we see different amounts of sunlight reflecting off its surface."

As I moved the tennis ball Moon farther around my head, the ball showed more and more light. When the ball was on the opposite side of my head from the lamp, I held it high and could see it all lit up.

"What do we call it when the lit-up side of the Moon is facing the Earth?" Grandma asked.

Sammy didn't know, but after I thought about it for a minute, I thought I knew. "Is that a full Moon?" I asked.

Grandma gave me a thumbs-up, but out of a corner of my eye, I could see Sammy sticking his tongue out at me. He didn't like it when I got an answer faster than he did. But it's not my fault I'm older.

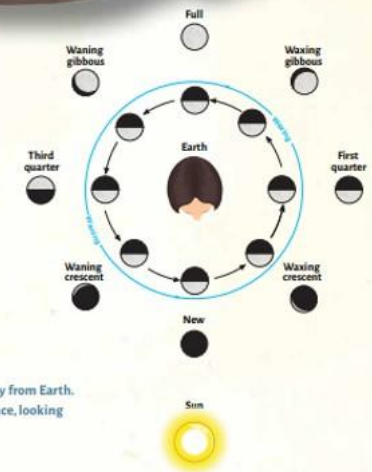
Grandma told us that the time it took for the Moon to go from new Moon to full Moon and back to new Moon is close to what we call a month. I was used to connecting months to events on Earth, like vacations, but I thought it was OK for months to be connected to something in space, too.

We moved the balls around our heads and saw different portions of the Moon lit up in different

locations. In two places, the Moon was half lit up and half dark; in other places, we just saw a sliver of light, which Grandma called a *crescent Moon*.

After Sammy and I had explored for a while, Grandma said, "The different portions of the Moon lit up by reflected sunlight are called the *phases of the Moon*."

That was a good new word to know, but even after Sammy and I had taken the tennis ball Moon around the Earth about five times, I still wasn't sure how this was connected to eclipses.



RIGHT: The outer circle of Moon diagrams shows what is visible in the sky from Earth. The inner circle of Moon diagrams shows what would be visible from space, looking down from above the Earth-Moon system.



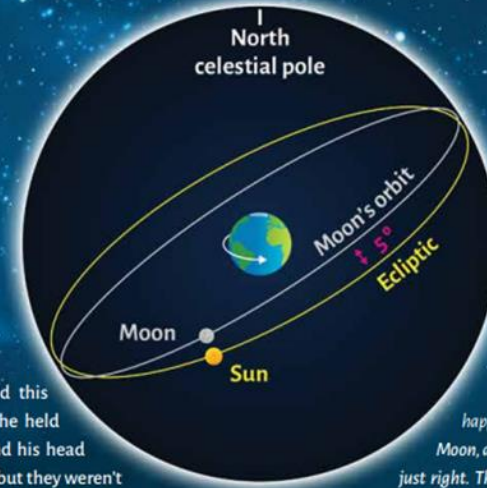
Next, Grandpa did this odd thing where he held both hoops around his head at the same time, but they weren't lined up. The purple one was above the yellow one on one side and below it on the other side, and they only touched in two places.

Grandpa told us that's what happens with the paths of the real Moon and Sun in the sky. The Moon is usually above or below the Sun by a small amount. If they are not lined up exactly, the Moon can't pass directly in front of the Sun, and there won't be an eclipse.

"How often do the Hula-Hoops cross?" Grandpa asked me and my brother.

We both said, "Twice" at the same time, which made all four of us laugh.

"What do you think happens when the Moon and Sun arrive together at one of the two places where the Hula-Hoops cross?" Grandpa asked us.



I thought, *Eclipses happen when the Sun, the Moon, and the Earth are lined up just right. The only place that lineup can happen is where the hoops cross.* So I said, "Eclipses," and Grandpa gave me a big smile.

Grandpa then told us, "It turns out that the Sun and the Moon arrive at the crossing points *together* only twice a year. So we have a kind of 'eclipse season' roughly every six months when eclipses of the Sun and the Moon happen somewhere on Earth."

I had to think about that. First of all, this was the first time Grandma or Grandpa had mentioned that the Moon could have eclipses, too. I wanted to ask more about that later. Also, two times a year still seemed like a lot of eclipses. So I asked Grandpa why they went on a long trip to see an eclipse of the Sun if they happen twice a year.

“When the Sun goes Dark” is a the perfect book for this age level to support learning about eclipses and lunar phases. Rather than a presentation of dry facts, astronomy content is developed for the reader through the narration of a character in a story, as she learns about astronomy through conversations with her grandparents and younger brother.

Julia Plummer

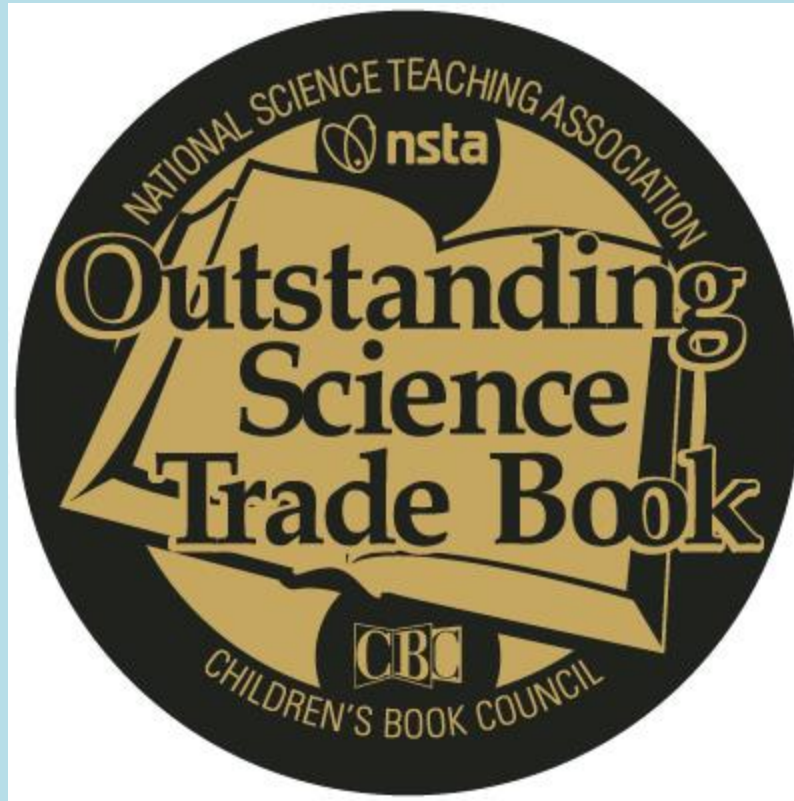
Professor of Science Education



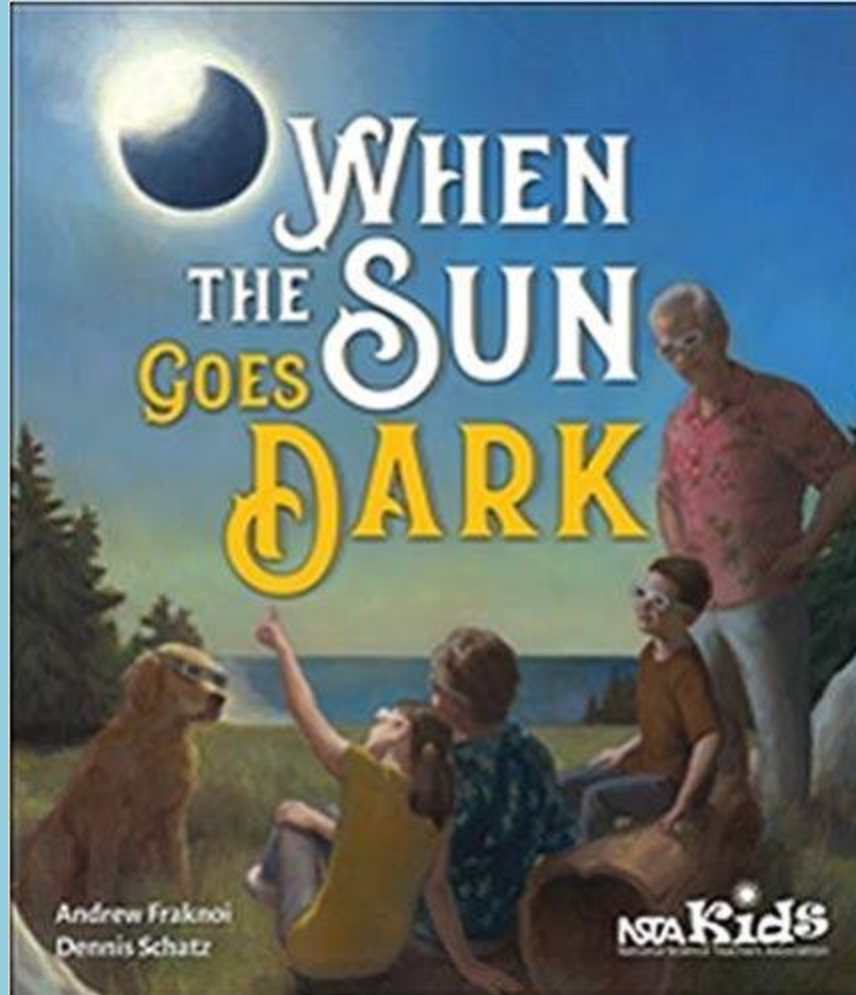
“I can't imagine a better book for youngsters who want to understand the Earth-Moon system and who are preparing for [a] Solar Eclipse.”

**Tucker Hiatt
Former Science Teacher**






**NAMED AN OUTSTANDING SCIENCE TRADEBOOK
FOR STUDENTS 2017**



Can be ordered from NSTA Press: <http://bit.ly/sungoesdark>
or the
Independent Publishers Group:
<https://www.ipgbook.com/>



**We wish you clear skies
for both eclipses.**

Programming Ideas



clearinghouse.starnetlibraries.org

Activity: Why Don't Eclipses Happen Every Month?

Time: 20 minutes

Age group: Tweens and Teens

- 3D Models of the Earth, Moon, and Sun demonstrate solar and lunar eclipses.
- Illustrates why we do not see eclipses at every full and new moon.



Total Solar Eclipse

A Stellar Friendship Story

A new children's picture book exploring the awe-inspiring phenomenon of a total solar eclipse and the unexpected ways we shine together.

Backmatter: Glossary, solar viewing safety, total eclipse memory page

Age: 4-8+, **Grade:** K-2+

Release: July 14, 2023 (*It's All Stories LLC*)

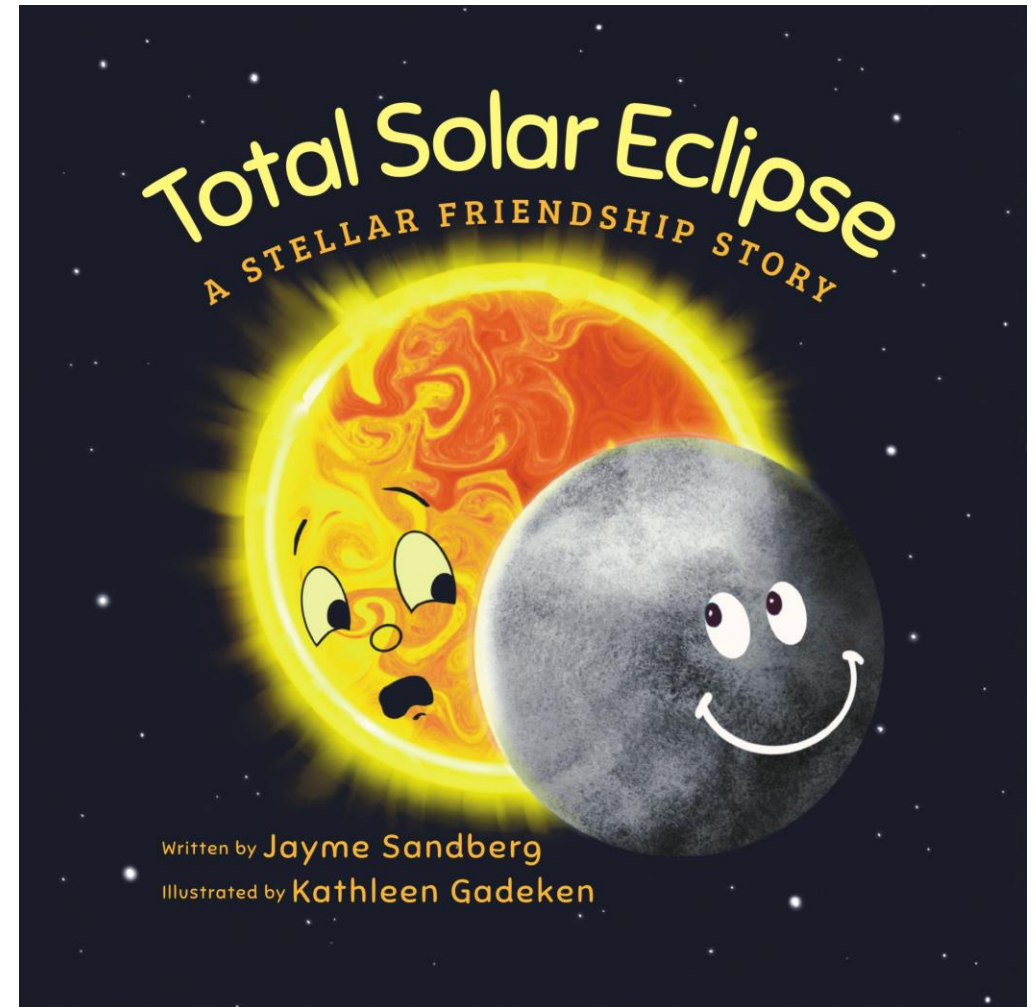
Length & Size: 32 pages, 8.5" x 8.5"

Categories: Fiction, Space, Science & Nature, Friendship

www.SolarEclipseBook.com



It's All Stories



"The book goes beyond safety and the science of an eclipse. It's also about envy, friendship, and what fun it can be for two, not just one, to share center stage."

-Marsha Diane Arnold,
multi-award-winning picture book author

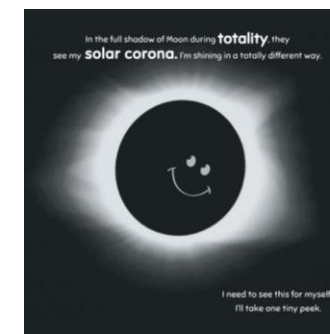
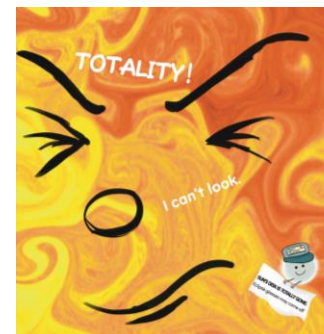
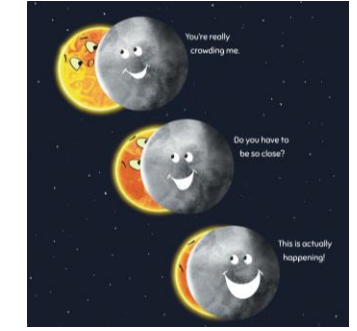
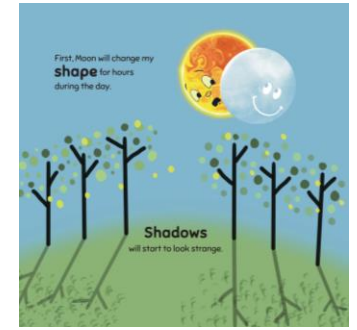
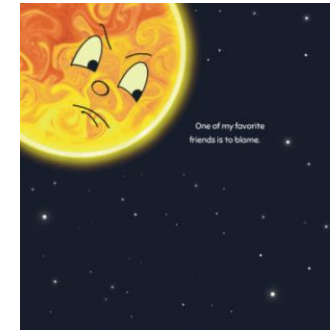
Sun is seriously out of sorts about the total solar eclipse

Will Earthlings go blind watching it? What will they think when Sun's dependable light suddenly vanishes in the daytime? How could Moon betray their stellar friendship?

Sun tries to calm its nerves with help from Comet Delivery, but isn't ready to hear what Earth and Moon have to say.

When totality finally arrives and Moon completely hides Sun from millions of Earthlings in its shadow, no one is more surprised than Sun: ***Moon helped it shine in a totally different way.***

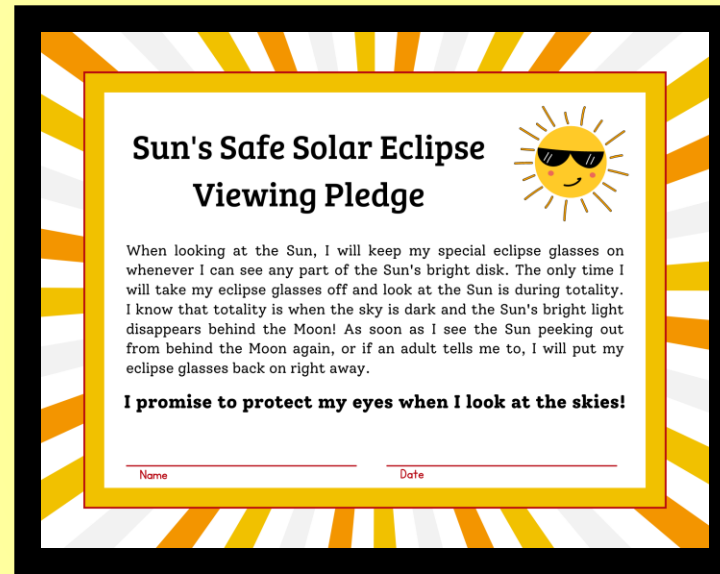
In addition to better **understanding solar eclipses**, the fiction story offers relatable **social emotional lessons** in communication, teamwork, and self awareness.



Educational Resources and Activities



Coloring page



Safety Pledge



Stellar StoryWalk® Toolkit



STELLAR STORYWALK®

What is a StoryWalk?

Early Literacy + Physical Activity + Family Time = FUN

Where can I put a Stellar StoryWalk?



What about copyright?



How much does it cost altogether? \$150-\$400

Can I get a sponsor?



HOW-TO

Page Preparation:



Creating the Signs

1



2



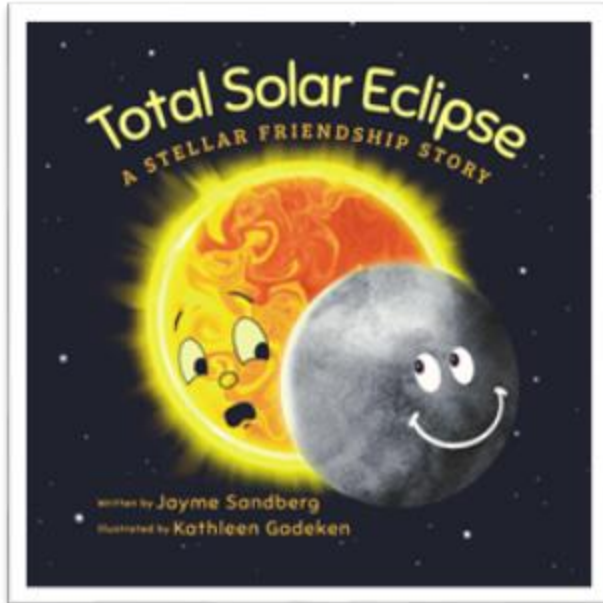
3



Hints, Tips & Tricks



Thank You!



Hardcover (\$23.99):

- ISBN: 979-8-9882841-0-9
- [SolarEclipseBook.com](https://www.SolarEclipseBook.com) (limited stock)

Paperback (\$11.99):

- ISBN: 979-8-9882841-1-6
- [SolarEclipseBook.com](https://www.SolarEclipseBook.com) (limited stock)
- Online book retailers (POD)

Stellar StoryWalk toolkit (\$29.95):

- [SolarEclipseBook.com](https://www.SolarEclipseBook.com)

Questions, Bulk Orders & Requests:

- Jayme@itsallstories.com
- [SolarEclipseBook.com](https://www.SolarEclipseBook.com)
- (402) 937-0905



@SolarEclipseBook



It's All Stories

Programming Idea

Moonbear's Shadow

- Move a flashlight around an object to make and experiment with shadows
- Connect to a storybook about a little bear exploring his shadow!



American Eclipse

David Baron



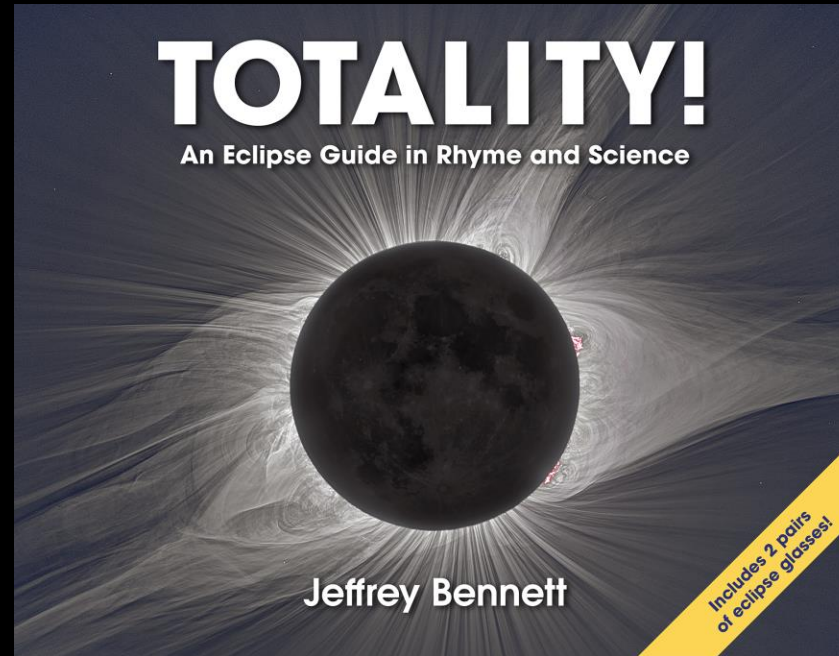
Programming Ideas

Please share:

What eclipse program ideas do you have for adults?



USA Annular/Total Eclipses — Outreach with the Totality App (and Book)



Jeff Bennett
jeff@bigkidscience.com



The FREE Totality App

Download for iOS/Android

(info/links at bigkidscience.com/eclipse)



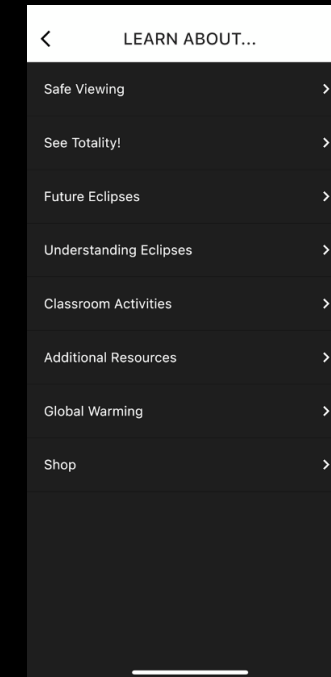
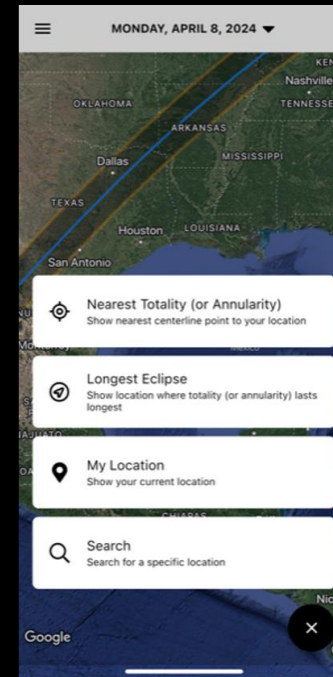
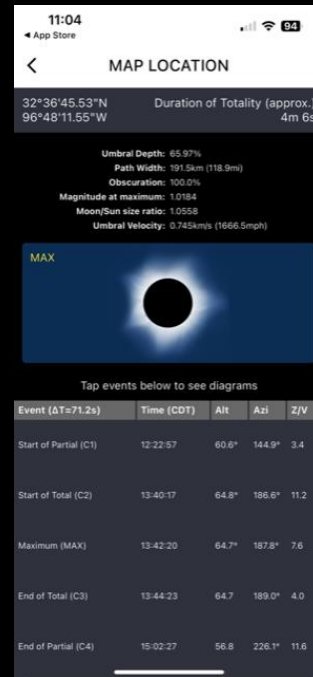
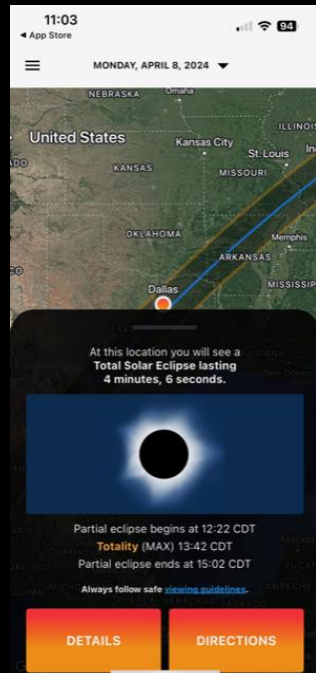
- Now an app of the **American Astronomical Society**
- Free, no ads
- Interactive maps for trip planning
- Details of what you'll see at any location
- “Learn” screen with videos, activities, ...
- Language support: Spanish, French, Portuguese

*Created as a public outreach effort by Jeff Bennett/Big Kid Science
then donated to AAS.*

Eclipse code by Xavier Jubier

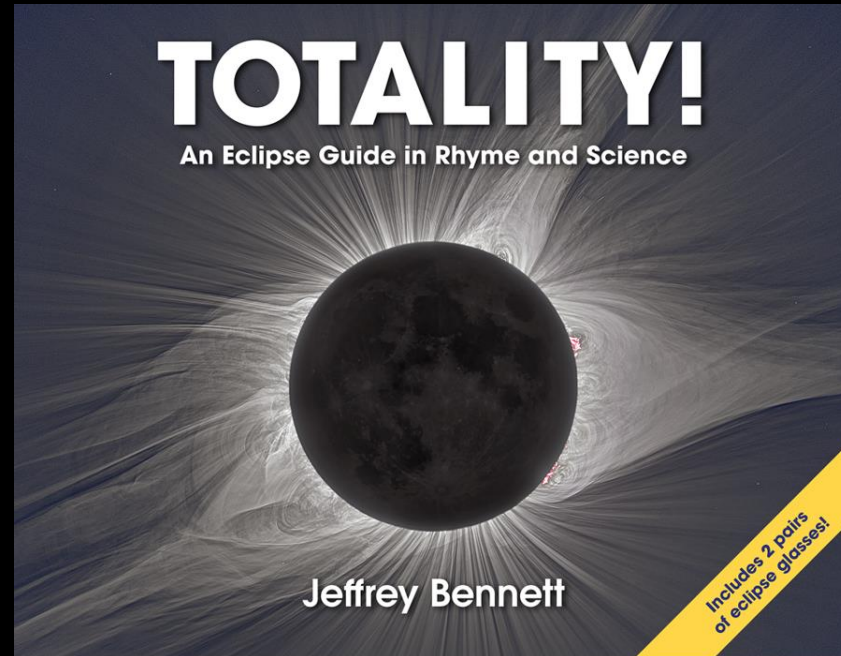
App code by Germinate, LLC

Overview...



Note: Be sure to watch videos via Learn screen, as well as classroom activities, etc. ... AND Eclipse Q&A at medium.com/@jeffreyobennett

Totality! An Eclipse Guide in Rhyme and Science

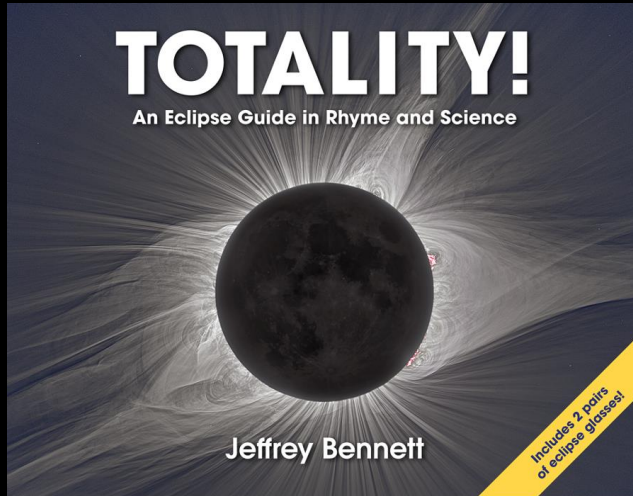


Retail \$20 (ebook \$7)

- **Order from any bookseller**
- **30% discount if you buy direct
(see bigkidscience.com/books)**



About the Book



AWARDS

Story Time From Space Selection — Launched to ISS
2023 Children's Book Council Teacher Favorites
2023 Children's Book Council Librarian Favorites
Nautilus Book Awards Silver Medal
Colorado Book Award

A unique combination of rhyme and science:

- A couplet on each page
- Illustrations and “Big Kid Box” explain science details
- Plus Activities, Glossary, science summary

Suitable for all ages!

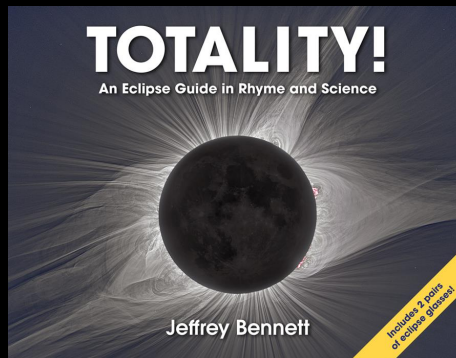


Story Time From Space



Imagine astronauts reading stories from space to children and families around the world, in an exciting new program that combines literature with science education...

Now you can stop imagining, because it's here...



Coming soon to the Video Library

- *Totality!* book reading
- Plus astronaut science demo

www.storytimefromspace.com

Also from Jeff Bennett/Big Kid Science

Children's Science Titles (Also Available in Spanish, Japanese)



Public/High School/College Titles



Free Middle/High School
Earth & Space Science
(grade8science.com)

Free School Visit Program
(BigKidScience.com – School Programs)

www.bigkidscience.com



Q&A