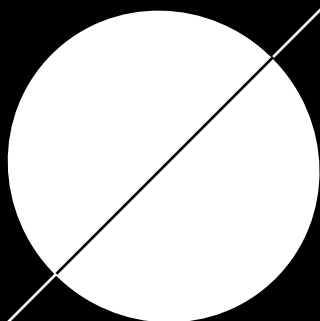
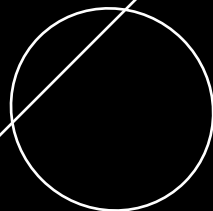
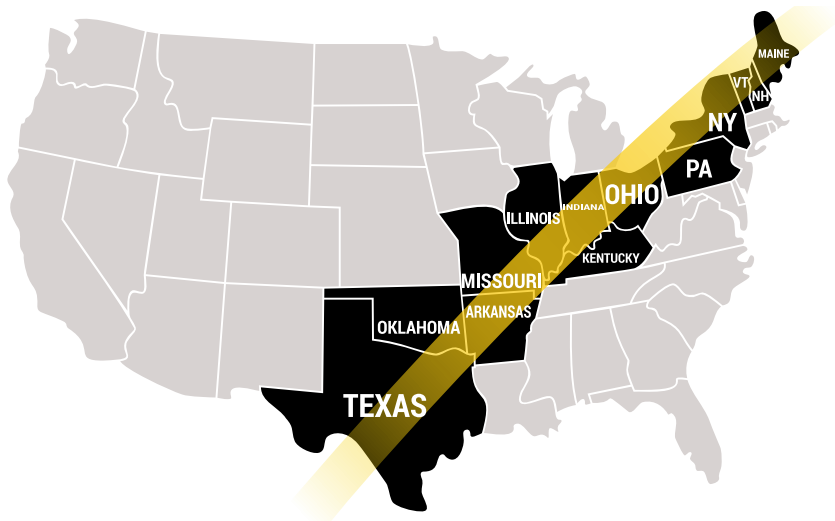


Countdown to  
**2024**



TOTAL  
**Eclipse**

On **Monday, April 8, 2024**, a total solar eclipse will traverse North America, casting its shadow across Mexico, the United States, and Canada. This rare event places thirty-one million Americans directly in the path of totality. Remarkably, the next North American total solar eclipse of such magnitude won't happen again until 2045.



In light of this extraordinary celestial event, our Design 5505 Information Design class (for non-designers) has focused our project on exploring and celebrating the solar eclipse. We invite everyone to welcome the new year by joining us in uncovering fascinating insights about the eclipse. Through the power of visual storytelling, we aim to reveal and share the incredible aspects of this astronomical wonder.

Course Instructor +  
Editor of this Book:  
Yvette Shen

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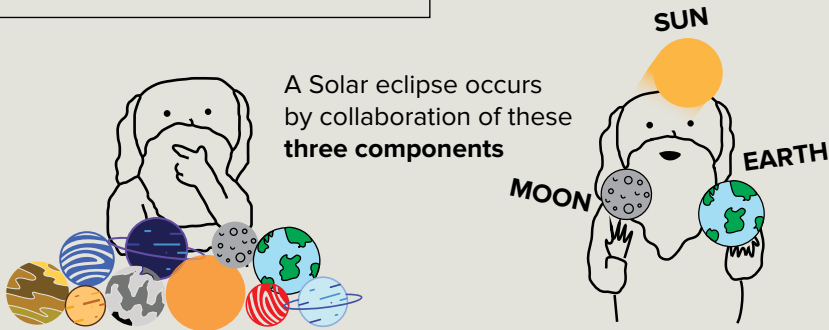
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### Eclipse @ OSU

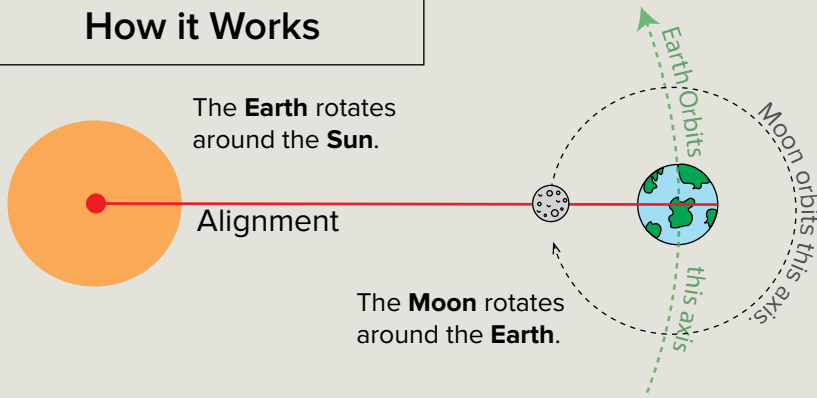
by Cody Collins  
& Julia Dreiling

# Understanding Solar Eclipses

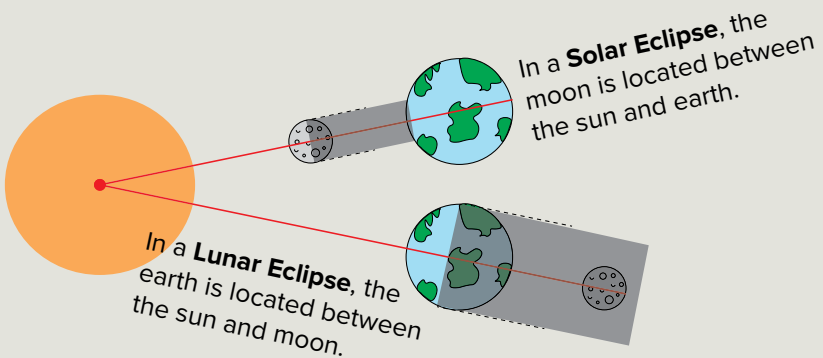
## The 3 Components



## How it Works

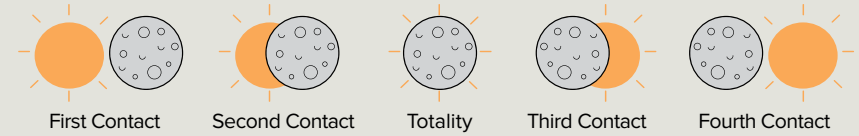


## Solar vs. Lunar Eclipse

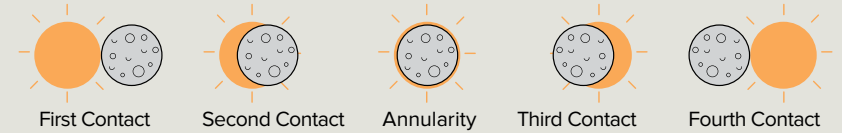


# Different Types of Solar Eclipse

## Total Solar Eclipse



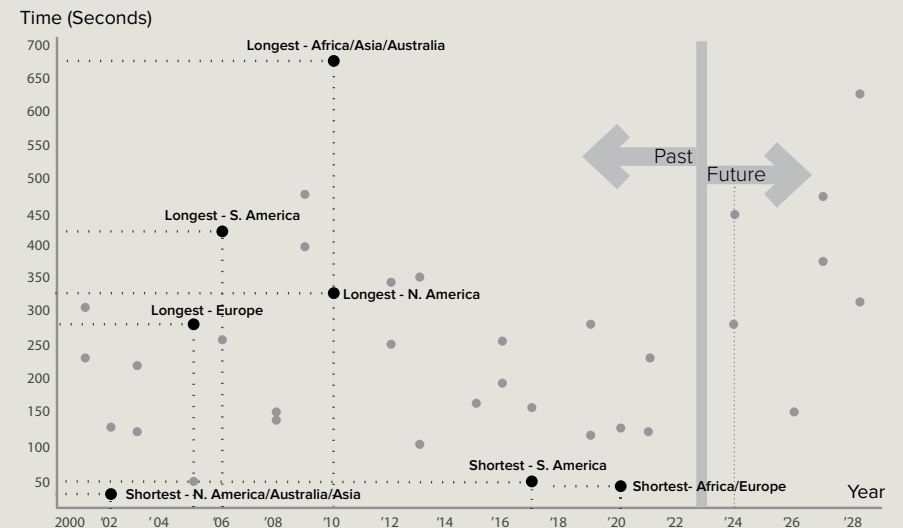
## Annular Solar Eclipse



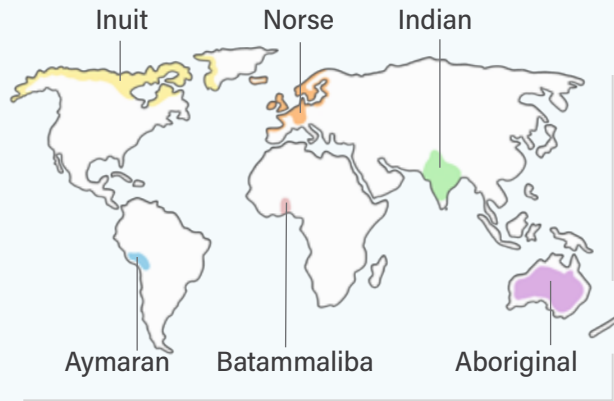
## Partial Solar Eclipse



# Duration of Solar Eclipses Since 2000



# Global Solar Eclipse Myths



**1500 – 1200**

1. Rahu tries to steal nectar of immortality.

2. Rahu is beheaded as punishment.

3. His head flies into the sun, swallowing it.

**Rahu, a demon spirit**

**500 – 200**

1. The sun, moon, and stars get into an argument.

2. Because of this, the sun falls sick.

3. People light fires on hillsides to warm the earth in place of the sun.

**sun, moon, and stars**

**1900**

1. The sun woman is in love with the moon man.

2. He does not feel the same, so he runs away.

3. When he escapes her, she covers the world with darkness.

**sun woman, moon man**

**1600 – 1700**

1. Sun and moon argue because of conflict on earth.

2. People must resolve their conflicts.

3. Therefore, the sun and moon also resolve their conflicts.

**sun, moon, and earth**

**1100**

**1000**

1. Loki is put into chains.

2. For revenge, he creates wolflike giants.

3. One of the wolflike giants swallows the sun.

**Loki, god of mischief**

**500 – 200**

1. Malina and Annigan get into an argument.

2. Annigan chases Malina, forgetting to eat and getting smaller.

3. Annigan catches up to her.

**Malina and Annigan (siblings)**

**Relative Origination Date\***

← BCE | CE →

Eclipse allegedly occurs

\*Dates are rough estimates that may lack accuracy. The Aboriginal Australian myth time estimate is based around the Mandjindja people, though Aboriginal groups as a whole have lived in Australia for over 65,000 years.

# Scientific Phenomena Observed

during a Total Solar Eclipse

start observing here!

partial eclipse begins

Earthshine

Sunlight reflected off the Earth onto the Moon's surface can be seen along with the wispy edges of the corona.

The quality of Earthshine provides information about the composition and density of Earth's atmosphere.

Corona

The hot, dim, outer layer of the sun's atmosphere is called the corona. The corona can only be seen during a total eclipse.

Experiments performed on the corona

During totality, NASA performed 3 experiments to better understand the sun's corona.

1

NASA used specialized balloons to capture the eclipse from a unique perspective while also performing experiments.



3

WB-57 jets were able to track the total eclipse from the air and record it for 7.5 minutes.



2

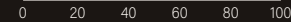
7.5 minutes



NASA used 61 telescopes on the ground that were able to capture the complete phases of the eclipse for 82 minutes.



82 minutes



Baily's beads

Seconds before and after totality, sunlight shines through irregularities on the Moon's surface. Astronomers can use stars to predict these irregularities.

total eclipse begins

totality (maximum eclipse)

total eclipse ends

Chromosphere

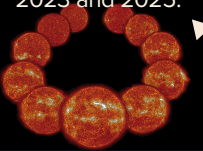
The Sun's red lower atmosphere can only be seen during a total solar eclipse, where scientists observe solar flares that can impact satellite communication.

Diamond ring

The appearance of the first or last of Baily's beads allows scientists to understand variations in the Sun's brightness.

Sunspots

The sun has an 11-year cycle of sunspot activity, and it will reach its time of greatest activity between 2023 and 2025.



11 years

Studying sunspots is vital to prevent major climatic changes on Earth.

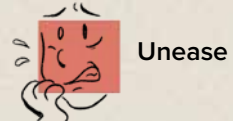
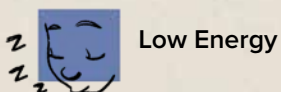
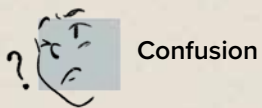
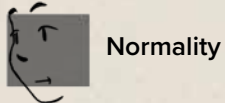
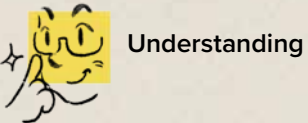
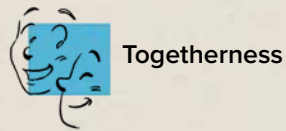
partial eclipse ends



# Nature's Responses to a Solar Eclipse

By Intelligence

## COLOR KEY



TOTALITY



### Humans



During the lead-up to the eclipse, there are more tweets from those who aren't as awestruck.



As the eclipse nears totality, there's a significant rise in awe-filled Tweets from people within the eclipse's path, reflecting a heightened sense of collective experience.

### The Social Effects of An Awesome Solar Eclipse



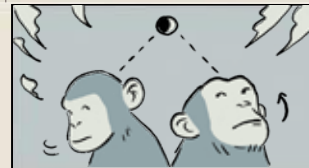
Following the eclipse, there is a decrease in tweets expressing awe or a greater focus on the collective.

### Chimpanzees

### Effect of Solar Eclipse on the Behavior of a Captive Group of Chimpanzees



Solitary females & females with infants are the first to climb to higher ground.



More chimpanzees join in climbing and orient themselves toward the sky.



They peer upwards, one juvenile even standing and gesturing towards the eclipse at totality.



The chimpanzees climb back down and return to their normal behavior.

### Honey Bees

### Observations on the Behavior of Animals During the Total Solar Eclipse of August 31, 1932



At first, the honey bees are hard at work as usual.



However, once the sky darkens, the anxious bees stop working and return to the hive in large numbers.



At peak totality, there is complete silence and not a bee to be seen! There is no movement for a while.



Finally, after some time the bees dare to slowly venture back out into the world.

### Big Sagebrush

### Hydraulic and Photosynthetic Responses of Big Sagebrush to the 2017 Total Solar Eclipse



In response to the darkening sky, the plants progressively decrease their photosynthesis and transpiration.

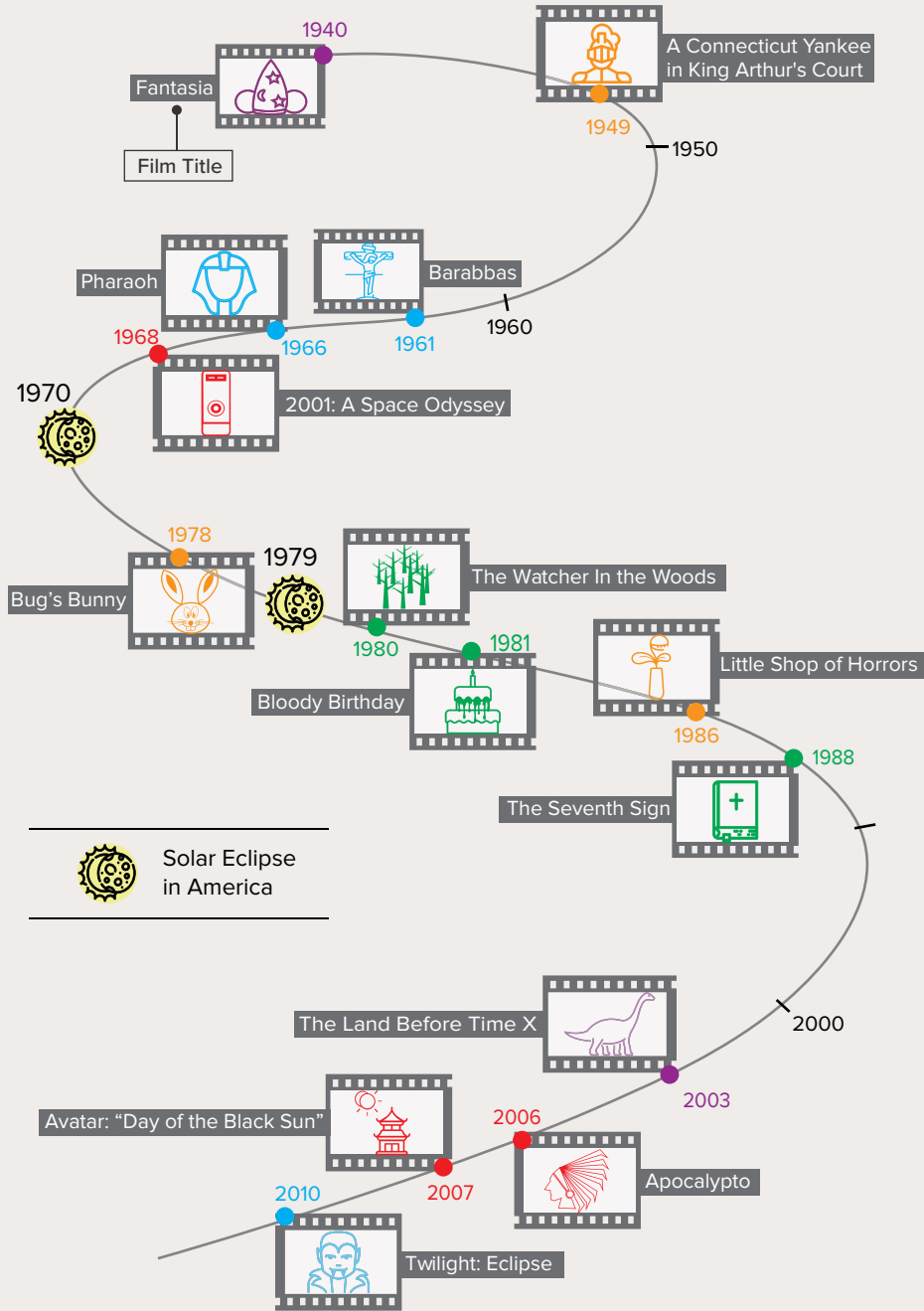


However, once the light starts to return, the plants are blindsided! this disruption to their circadianrhythm could spell bad news for already drought-ridden plants.

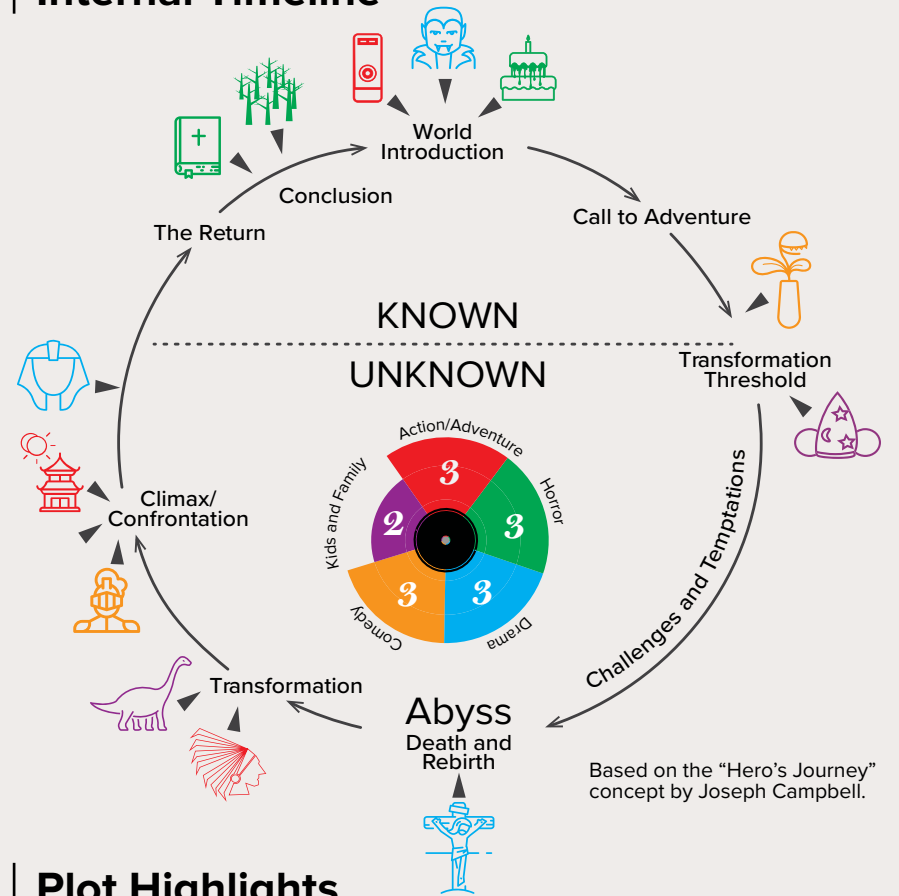
MORE Intelligence

LESS Intelligence

# Eclipse in Films | External Timeline



# Internal Timeline



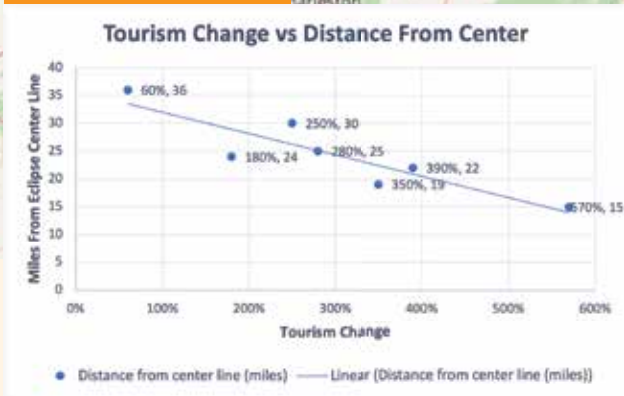
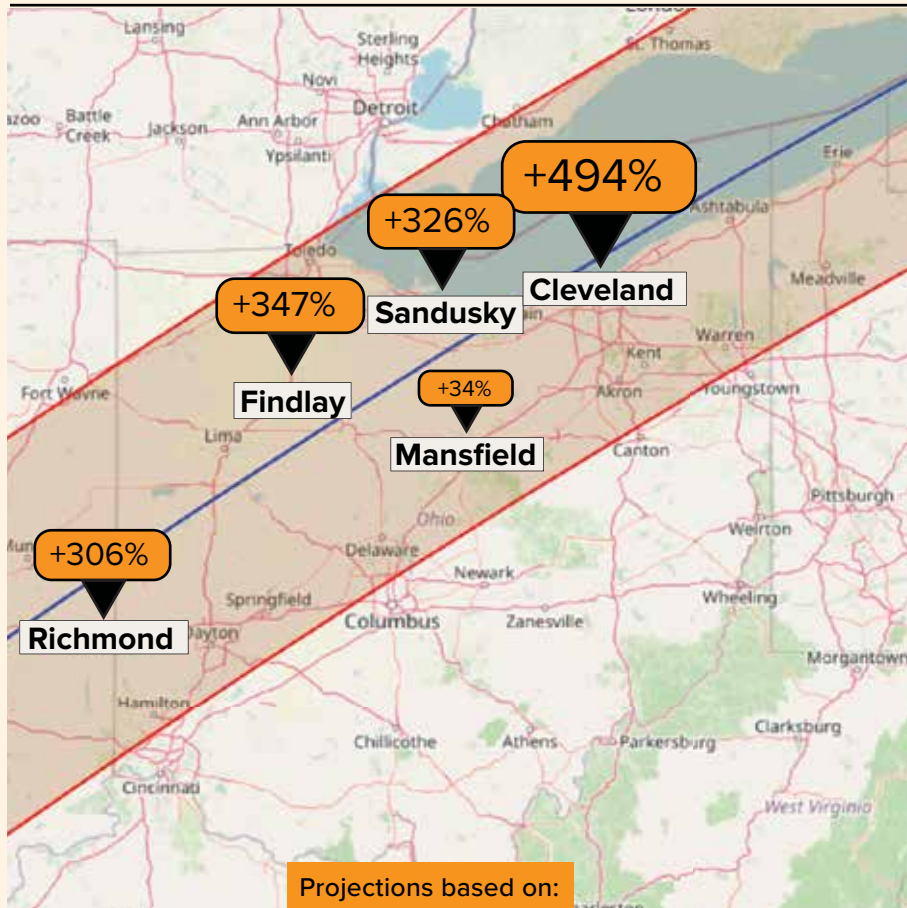
# Plot Highlights

- The establishing shot at the beginning of the film features a solar eclipse, as well as the cover art.
- The film's opening scene features a solar eclipse, which highlights the strangeness of this science fiction world.
- Film centers around three children born during an eclipse which results in them having incredibly violent personalities.
- The film's main antagonist, Audrey II, first appears mysteriously at a flower shop during a total eclipse of the sun.
- A solar eclipse follows the extinction of the dinosaurs and changes land to ocean and water.
- The filming of the crucifixion of Jesus in the movie coincided with a real-life solar eclipse.
- Main character is sacrificed to the gods, but a solar eclipse occurs, convincing his captors that the gods are satisfied, which results in his release.
- The Long-necks believe that the Sun crashes to Earth during solar eclipses, leading them to migrate to catch and restore it.
- The hero is to be burned at the stake, but he uses his knowledge of an imminent solar eclipse to convince the King that he is a sorcerer and escapes.
- A direct parody of "A Connecticut Yankee in King Arthur's Court", Bugs Bunny plays the same trick on King Daffy to escape his capture.
- The final confrontation of the series occurs during a solar eclipse, known as "The Day of the Black Sun", when the Fire Nation loses its power while the Sun is covered.
- Egyptian priests lie about a solar eclipse being related to anger of a god as an attempt to mislead the rebellious people.
- A girl becomes possessed by an alien during a ritual ceremony occurring in the darkness of a solar eclipse.
- References the seven seals in the Book of Revelation where the sixth sign is a solar eclipse followed by a catastrophic earthquake.



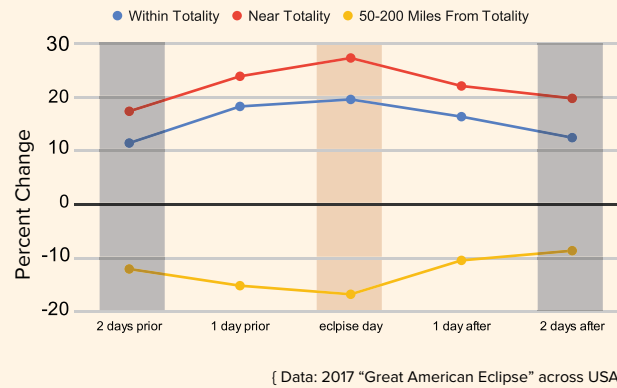
# Eclipse Economics

## Tourism Change Projections



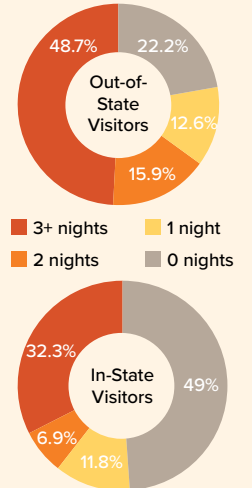
[ Data: 2017 "Great American Eclipse" in South Carolina ]

## Solar Eclipse Foot Traffic Change



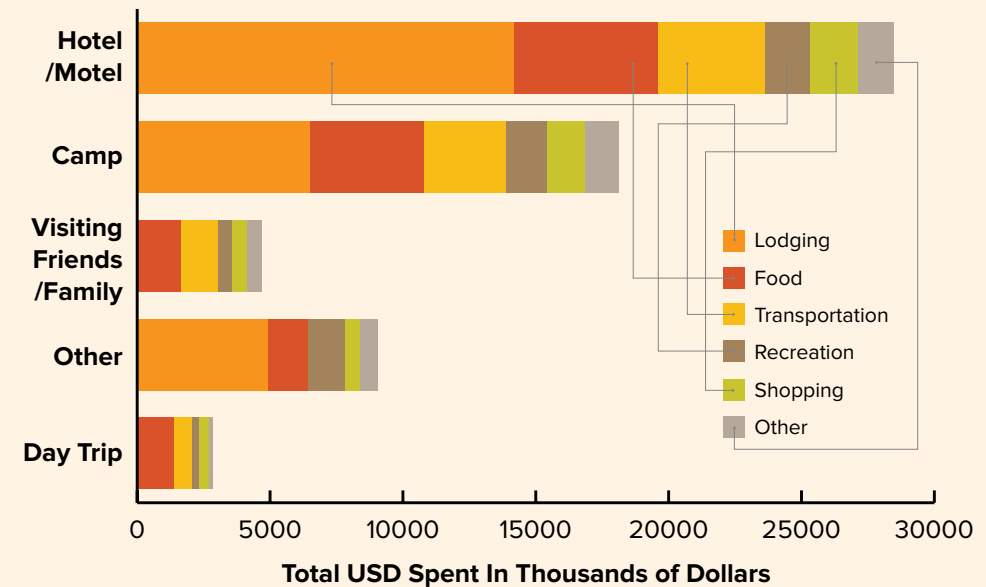
[ Data: 2017 "Great American Eclipse" across USA ]

## Nights Stayed



[ Data: 2017 Solar Eclipse Over Wyoming ]

## Total Expenditure by Lodging Type



Wyoming totaled **63.5 Million Dollars** in Revenue due to the 2017 Solar Eclipse!



# Total Eclipse Safety Guide



## ✓ Eclipse Glasses

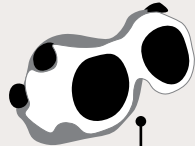


Must be made after 2014!

Costs: ~\$7 for 10 pack

No scratches or tears!

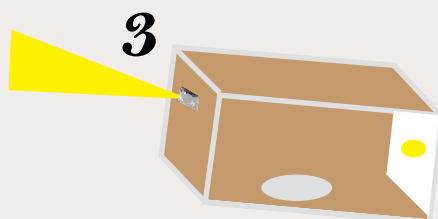
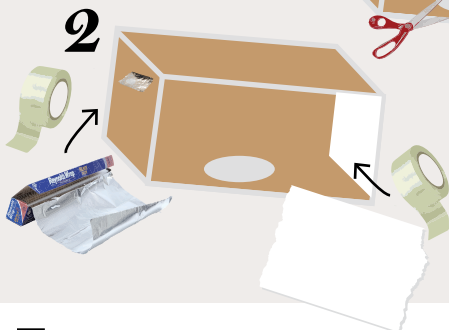
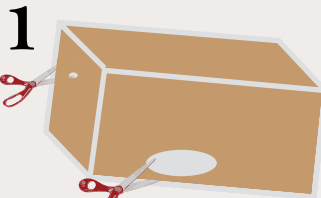
## ✓ Welders Glasses



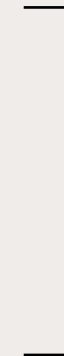
Costs: ~\$20 each

Must be shade No. 14!

## ✓ make your own Pin-hole Projector!



# Protect your Eyes at the Right Time



or



You can only look at the sun directly during the total phase



or

Use your Pin-hole Projector!



Don't forget to protect your skin!

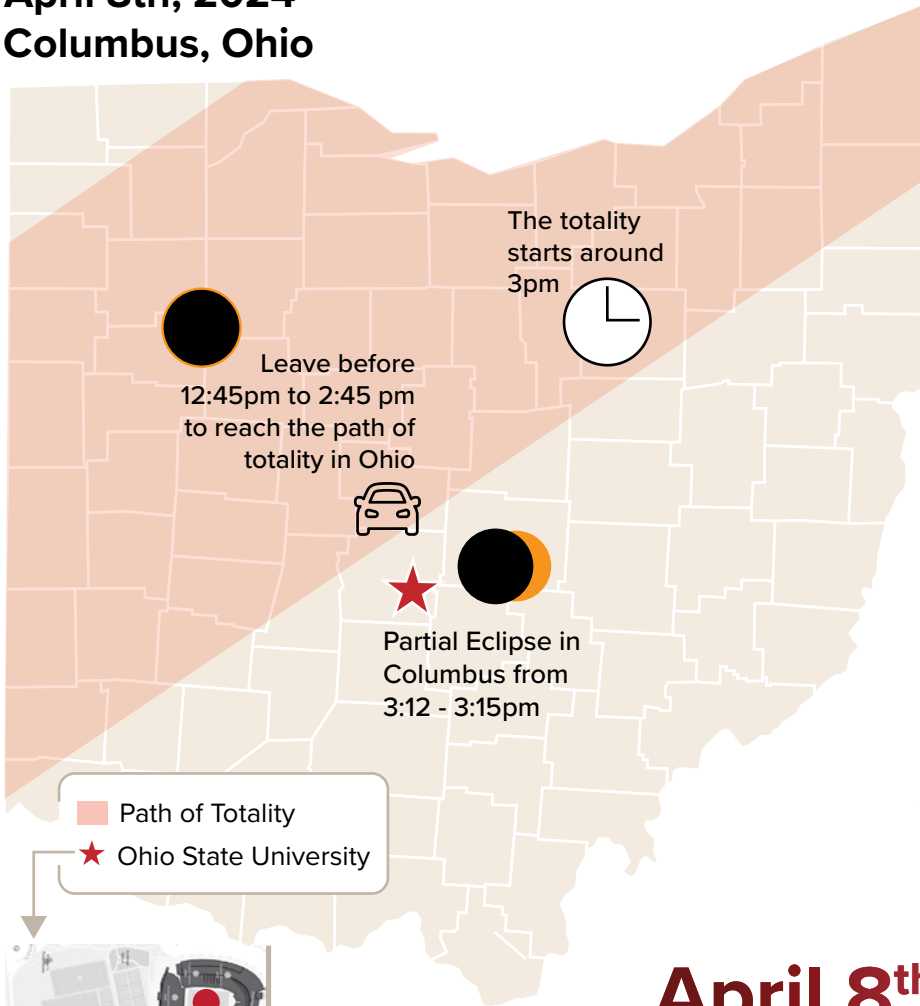
Not following these guidelines may result in Vision Loss --



Go see a doctor immediately!

# Eclipse@OSU

April 8th, 2024  
Columbus, Ohio



Path of Totality  
★ Ohio State University



Recommend viewing locations on campus:

- Horseshoe Stadium
- Mirror Lake
- The Oval

**April 8<sup>th</sup>**  
**2024**  
The greatest celestial event in your lifetime!

## Eclipses Visible From Ohio



## Potential Merchandise



**2017**

“Use a 12-pack box to view Eclipse” social media campaign!



**2024**

Coca-Cola Moon-Flavored Soda!



Official Sponsor of OSU Dining



**2006**

Lunar Eclipse shoe design!



**2024**

Solar Eclipse x OSU shoe design!



Official Sponsor of OSU Athletics



**2017**



“Chocolate-glazed” eclipse treat!



**2024**

Eclipse Donut!

Whipped cream-filled doughnut symbolizing the sun

Dark chocolate glaze representing the moon's eclipse.



Unofficial OSU Donuts

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## Eclipse @OSU

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VLab

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12.2023