



# ECLIPSE

## SCIENCE HAS ITS DAY IN THE SUN

A solar eclipse happens when the moon blocks the path from Earth to the sun — a position that casts a shadow. The moon is about 400 times smaller than the sun, but it is also about 400 times closer. As a result, they appear to be about the same size in the sky. Because the moon revolves around Earth on a changing angle, it passes directly in front of the sun only two or three times a year.

The Aug. 21 eclipse, according to the Associated Press, was the most observed and the most photographed eclipse in history. Individuals in all 50 states were able to experience at least a partial solar eclipse.

The next total eclipse to high parts of North America is about five years away. On April 8, 2024, an eclipse will be visible along a path from Texas to Maine.

PHOTO BY SCOTTY GATHRIGHT

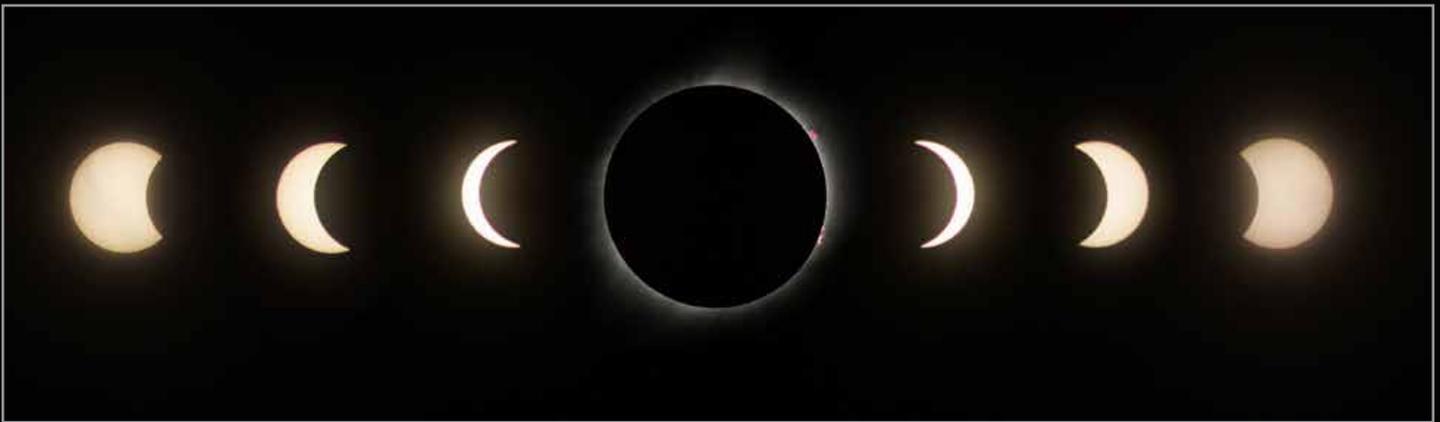
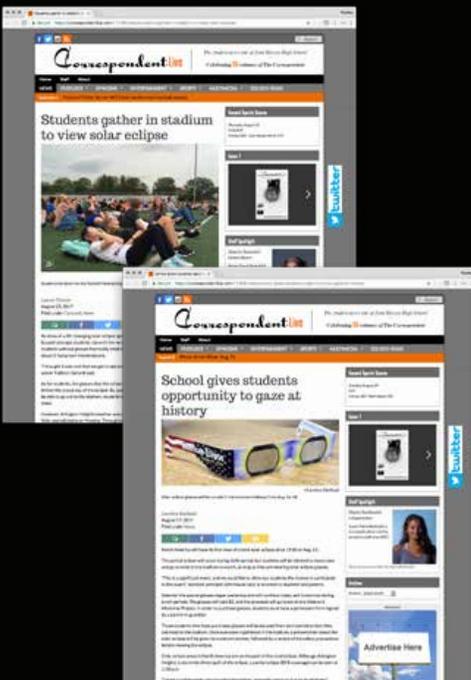


Photo by Scotty Gathright, freelance photographer, San Antonio

**TIME LAPSE** | I started early on just going out to Canyon Lake and taking long exposures of star trails, and that led me to covering all of the meteor showers. Hot or cold, I was out there shooting all that I could. Then, roughly three years ago, I was able to shoot the lunar eclipse from my backyard. That was amazing to see and capture. My wife remembered how much I enjoyed it and surprised me with a trip to capture the solar eclipse as a birthday present. I captured the stages using a 70-300mm f/4-5.6 lens. I used Canon 300mm 2.8 USM ii to capture the images of totality. Needless to say, I am completely prepared for the next one here in Texas.



**JOHN HERSEY HIGH SCHOOL (ARLINGTON HEIGHTS, ILLINOIS) PHOTOGRAPHER AND EDITOR CAROLINE STIEFBOLD** | “I learned that what I expected to be happening at this event didn’t occur. I thought students would be sitting in the bleachers. Instead, they were lying on the football field so I had to change my vision. Our coverage ended up being better than expected because our visuals took an unexpected, positive turn, and students’ excitement about the eclipse led to a lot of readers checking out the story.”

**REPORTER LAUREN THEISEN** | “It was hard to judge things based on something that I haven’t seen before.”

**KITTA MACPHERSON, ADVISER, ST. BENEDICT’S PREPARATORY SCHOOL (NEWARK, NEW JERSEY)**  
 In our five-week, summer-term Introduction to Journalism class, we have been working with many students who are unfamiliar with news-style writing. One of our students was able to, within the scope of the class, produce an eclipse advance highlighting the efforts of our science department.  
 We pulled a photo from nasa.gov so NASA would receive credit. Normally we credit a government organization for its photos. As taxpayers, that is a courtesy, not a necessity.



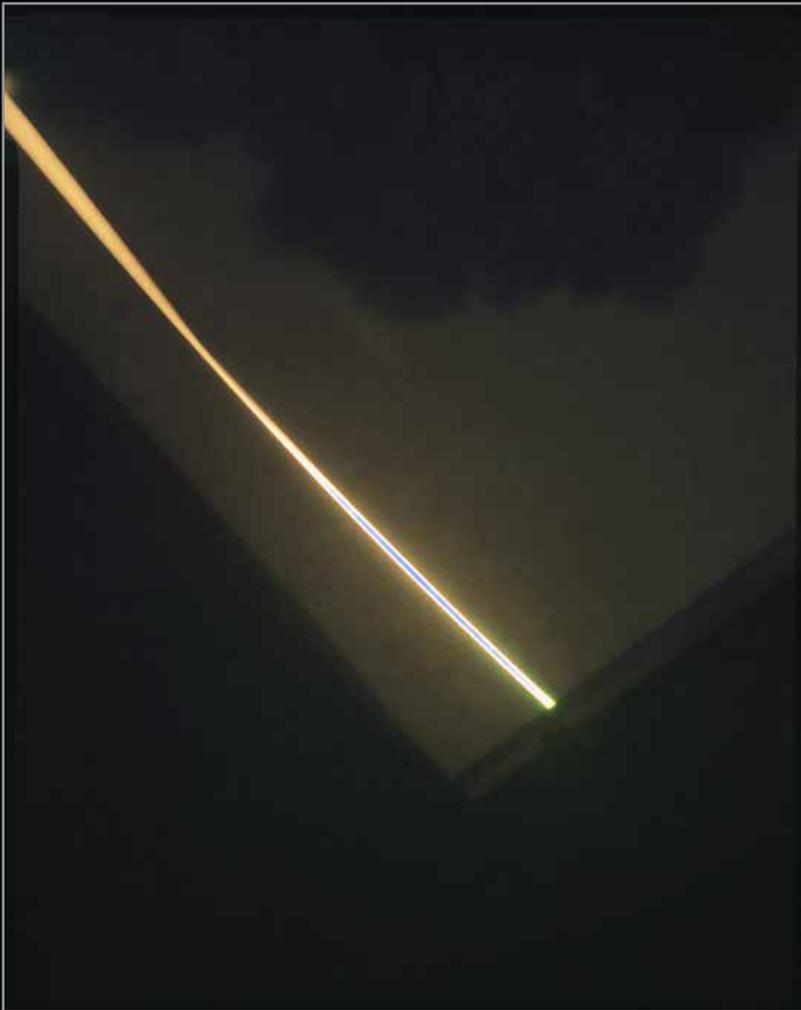


Photo by Frank Lopez, instructor, Greenhill School (Dallas)

**SOLARGRAPH** | Since my tenure at Greenhill, I have been truly interested in STEAM-based learning. Wherever I can, I introduce the properties of STEAM and how we can integrate various methods of learning and teaching. I appreciated how we were able to experience this rare event in many unique and wonderful ways.

This presentation is a solargraph that I produced of the eclipse.

- Using a 4-by-5 large format camera, I placed gelatin silver paper (otherwise known as black-and-white paper) into a film holder.
- I used a 19th-century Ross brass lens (Civil War era) as my lens of choice for this image. The older lens allowed a lot of light to pass through and gave a different effect upon the imagery (the swirl of bokeh) that modern lenses do not convey.
- My eight-hour exposure enabled the action of the sun to “develop” effectively the silver that exists on the paper. The streak of light is the sun, and the thinnest part of the pattern is the eclipse itself. The bright blue effect upon the streak is the initial exposure of the sun and is a result of the most amount of light entering the lens before the eclipse occurred. Because of the formula of the coverage for the lens, the light begins to fall off at the edges. The fall-off results in a lessening of this effect after the eclipse occurred.
- Any more light upon the paper negative would have actually burned the paper. I actually had one example that burned right through the paper where the sun was concentrated. The action is much like a magnifying effect when the lens amplifies the intensity of the light.
- I scanned the paper negative and quickly preserved the paper in sodium sulfite to prevent any further exposure to the image. Gelatin silver paper is meant to work only in a darkroom, not daylight. No other chemicals were used.



Photo by David Jackson, instructor, William Amos Hough High School (Charlotte, North Carolina)

**DO IT YOURSELF** | I used a Nikon Coolpix P500 shooting at 1/30 second at F3.4, ISO 400 through the eyepiece of an Orion Skyquest XT6 reflector telescope by holding the camera up to the eyepiece. I fashioned a solar filter from a piece of solar film from Seymour Solar and a GMC Safari hubcap that slipped over the opening of the reflector telescope. It worked perfectly, but the Nikon’s autofocus did not work well. I could clearly see two sunspots through the same eyepiece, but they did not show up on the photo.



Photos by Matt Stamey, multimedia specialist, Santa Fe College (Gainesville, Florida)

**A DIFFERENT VIEW** | I used a 50mm while holding a pair of eclipse shades across a corner of the frame. I wasn’t concerned with a tight shot of the sun. I wanted some context in the frame as well. However, the filter I had ordered for my long glass didn’t show up.

I shot the event on the campus of Santa Fe College on the first day of class. I shot a lot of the students watching the eclipse.

We put a pinhole in a piece of plywood and projected the sun onto the face of a student. The portrait is at the peak of about 98 percent in Gainesville, Florida.



Photo by Libby Mullican, Mill Valley High School (Shawnee, Kansas)

**KATHY HILL HABIGER, MJE, ADVISER, MILL VALLEY HIGH SCHOOL (SHAWNEE, KANSAS)**

It's hard to plan for something no one has ever experienced. We decided early on not to worry about photographing the actual eclipse. We left that to the professionals. We decided to extend our coverage beyond our high school to nearby elementary schools to have more photo opportunities and to showcase how the district was using the eclipse as a learning opportunity. We also tried to anticipate the camera settings for each point during the viewing. For example, it was supposed to be nearly night during totality so that was tricky to plan for.

The biggest thing the students learned is that Mother Nature is not kind sometimes. Cloudy weather for a solar eclipse is not what we planned on or hoped for, but it is what we got. The photographers learned that no matter what, you keep shooting. Students did not have much to look up at consistently during the viewing time, but the photographers took photos of whatever students were doing, including playing games with their classmates or simply hanging out and waiting. The photographers felt special about shooting something that most people experience only once in a lifetime, and they were proud to post the story and photos on deadline on our website so that the community could see how the district handled the event and what our students experienced that day. We also have nearly everything we need to produce the yearbook spread about the eclipse.

**PAUL DAVID DELOS SANTOS, ADVISER, CHAPARRAL HIGH SCHOOL (LAS VEGAS)**

The original plan was to send out four of my Journalism 1 students to cover the eclipse that the science classes were going to cover and one Journalism 2 student, who wrote the second background story. The main goal of the Journalism 1 students working on a rare four-person byline was to gain comfort for students who have never done a journalistic article in their lives and to build teamwork. The Journalism 2 student, a copy editor who loves science, wanted to try writing again.

When we realized it was going to rain, we had a brief meeting to adjust the angle to a focus on how students felt about the eclipse. We also provided one story about how an ideal eclipse would have looked. It was received well by the students and our reader base. It was the highest read story of our launch and reached more than 1,200 people on Facebook.

The important lesson to learn: When covering an event, the staff must be aware that circumstances may change. The unpredictable can produce interesting stories as well as the expected results. The circumstances also illustrated the importance of communication between staff members. It was a low-stress assignment that gave my Journalism 1 students confidence and a published article while validating my Journalism 2 student's abilities to write a story.

**CHAP NEWS**  
**CHAP NEWS**

**Understanding the solar eclipse**

Quelvia Anderson, Copy Editor  
August 22, 2017  
Filed under News

A total solar eclipse was visible across the United States on Aug. 21 for the first time since 1918.

Named "The Great American Eclipse," the eclipse's path of totality moved diagonally from east to coast, starting in Oregon and ending in South Carolina.

Few in Las Vegas, however, got to see the eclipse due to cloudy skies. Chaper of students who were in science classes in third and fourth period were taken outside, hoping to see the eclipse, but due to the clouds, the eclipse wasn't visible until right before it ended.

"It's just kind of ironic that the one day that we're trying to see the sun there's no sun," physics teacher Brittany Backden said.

In anticipation of the eclipse, the science department purchased instruments to study the sun, such as a special lens for the school's telescope, and hundreds of eclipse sunglasses. The equipment was not used for the event, but science department chair Sergio Lopez said the tools will be used to further study the sun at a later date.

**What is a solar eclipse?**

According to NASA's website, "Sometimes when the moon orbits Earth, it moves between the sun and Earth. When it's happens, the moon blocks the light of the sun from reaching Earth. This causes an eclipse of the sun, or solar eclipse. During a solar eclipse, the moon casts a shadow onto Earth."

**Why study solar eclipses?**

It is important to study solar eclipses because it will allow astronomers to study the outer realm of the Sun, known as the corona. Being able to understand more about how the Sun works, and how solar flares (brief eruptions of intense high-energy radiation from the sun's surface) emerge, can help protect astronauts in space.

Tags: Chaparral High School, Clark County School District, Las Vegas, Solar Eclipse

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**CHAP NEWS**  
**CHAP NEWS**

**Mother Nature causes disappointment on eclipse day**

Yvonne Chacón, Daniela Rangel, Verónica Sanchez, and Caylin Weaver  
August 22, 2017  
Filed under News

A total solar eclipse visible to people in the United States has not happened in 99 years – almost a century ago. Sadly, Chaparral High School was not able to see the eclipse due to unwanted cotton balls in the sky Aug. 21.

While others around Las Vegas were able to view the eclipse, nothing but disappointment was experienced by students at Chaparral thanks to Mother Nature ruining the much-anticipated day.

"I'm very disappointed but we weren't going to see the full total eclipse anyways, but we would've seen a cat's eye because we're not on that arc or path of totality," said science teacher, Uvette Gonzalez-Franco.

Several students were disappointed due to the missed opportunity to view the once in a lifetime experience.



**MALLOREY DAUNHAUER, BLOOMINGTON HIGH SCHOOL SOUTH (INDIANA)**

Daunhauer said she wanted to do an alternative story form that would better capture people's reactions rather than what a photo or story could accomplish. "I wanted people to look for the video and then say, 'Hey! I'm in that video.'"

**KATHLEEN MILLS, ADVISER, BLOOMINGTON HIGH SCHOOL SOUTH (INDIANA)**

We had some nice comments from students and faculty about the video, and we certainly saw a spike in our web traffic after we posted it.

**VIDEO:** [www.bloomingtonsouthoptimist.org/5661/showcase/here-comes-the-sun-south-views-solar-eclipse-video/](http://www.bloomingtonsouthoptimist.org/5661/showcase/here-comes-the-sun-south-views-solar-eclipse-video/)



**JANE BANNESTER, RITENOUR HIGH SCHOOL (ST. LOUIS)**

We had two students in charge of complete video coverage of the eclipse. We had another who focused on interviews. We also used photos/video from multiple students from the day.

Students worked on a do-it-yourself camera filter. We started a month prior looking/talking with local photo shops. Basically, we were out of luck in purchasing the filter for the events. We also investigated rumors about when and how we could use our cameras. Staff members argued about what they heard you could or could not do. NASA was the most accurate site we relied on.

**VIDEO:** <https://youtu.be/ED9uyzqGW5c>