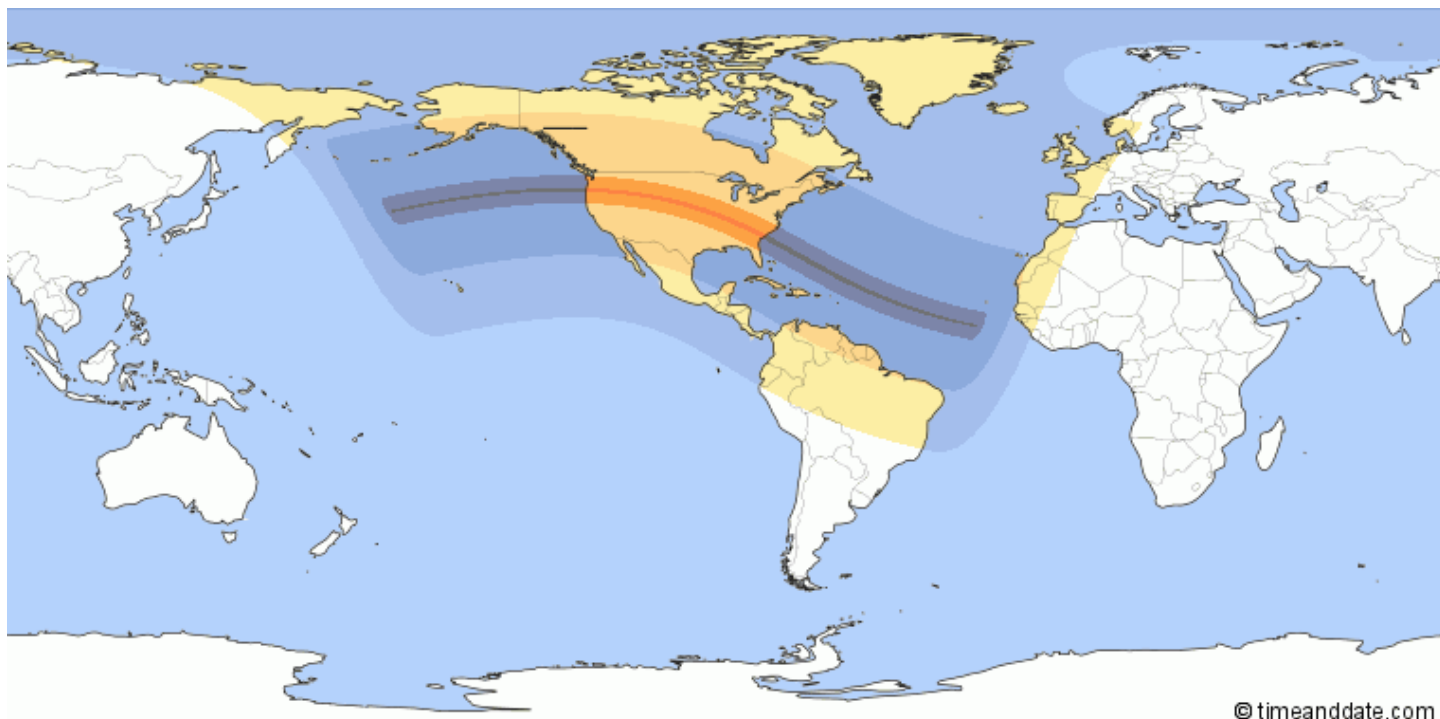


The Great American Solar Eclipse August 21, 2017



There is a solar eclipse August 21, 2017 over the continental US. All parts of the 48 contiguous US will see either a partial or total eclipse. **How can we educate ourselves and Payton's community about eclipses and how to safely observe this one?**

This is the first total eclipse on the US mainland since 1979 and the first on American soil since 1991. Thus, it is the first total eclipse or partial eclipse most students will have the opportunity to see. The total eclipse will be visible along a 68-mile wide, 2,500-mile long stretch of the US and a partial eclipse will be visible from all of the 48 contiguous US. The total eclipse path is within a 4-5 hour drive of Chicago (St Louis, Mo or Carbondale, Il).

WE WANT TO SHARE THIS UNIQUE OPPORTUNITY WITH OUR COMMUNITY! In order to do so, you will explore the science behind eclipses, both lunar and solar. You will identify the particulars of the August 21, 2017 eclipse over the USA. You will use this knowledge to design and implement educational experiences related to the eclipse for the Payton community of your choosing (students, staff, parents & families, and neighborhood). You will analyze and evaluate your peers' designs, as well as receive and utilize feedback on your designs. At the end of the school year (before graduation) you will also participate in the passing out of eclipse glasses to students and staff at Payton for use during the summer.

We will make a working group for each community. Our working groups will address the particular needs of our different communities and design experiences tailored to those needs. You will choose one group to work with. The sizes of the groups will be different and you will be expected to work with others. We will have one large meeting of both periods of astronomy so everyone in a working group has one chance to discuss and outline experiences. This mandatory meeting will be **Tuesday, March 14, 2017** and will start at 10:36am (the beginning of period 6B or the 2nd half of 2nd) and end at 12:13 (the end of period 3A or the 1st half of 3rd). If this includes your lunch, just bring it to room 322. Otherwise it will be treated as an in-school field trip. After the implementation of your educational experience, you must write a reflection about your experience (see reflection guidelines).

Most of the educational experiences for Payton students will take place during the two weeks prior to Spring Break. If you will be gone during that time on a trip, take that into account when signing up for working groups.

Payton Communities and Possible Outlets for Educational Experiences

Students - Enrichments 3/27-4/6 (at least 7 - information, planetarium, making/using devices to view eclipse, etc); Payton News Network videos; Newspaper articles; Posts on Payton's Twitter, Instagram, Facebook acct; Astronomy Club 4/19/17; Banner to hang on first floor; Lunchtime events

Staff - Seminar Day PD 4/21/17, 5/3/17; Email; Department meetings

Alumni - Newsletter; Facebook

Parents - FOP meeting 4/4/17, 5/2/17; Parent Newsletter articles

Neighborhood - 3 elementary schools; 4 churches; 1 library; 2 parks: Presentations, Flyers

Selling Eclipse glasses - Closer to the end of the school year, we will facilitate selling eclipse glasses to families of students and staff. Glasses will be freely given to students and staff May/June 2017.

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|---|--|---|---|
| 3/6 B | 3/7 O | 3/8 B - Planetarium Intro - simulate eclipse - Product Description | 3/9 O - <i>Community Application Google Form Due by 3:30</i> | 3/10 B - Eclipse Science |
| 3/13 O | 3/14 B - Mandatory Large Group Meeting 6B-3A - <i>Check-in: Community Group Planned Experience</i> | 3/15 Seminar | 3/16 O | 3/17 B - Work Day - <i>Check-in</i> |
| 3/20 O | 3/21 B - Work Day - <i>Peer Review</i> - <i>Check-in</i> | 3/22 O | 3/23 B - Work Day - <i>Final Experience Description Google Form Due</i> | 3/24 O |
| 3/27 B | 3/28 O | 3/29 Seminar | 3/30 B | 3/31 O |
| 4/3 B | 4/4 O | 4/5 SAT Jr Only | 4/6 B | 4/7 No School |

Dates in bold are the weeks that most of the educational experiences will occur. Additional dates will occur tailored to specific community groups.

In summary ...

Each student will help design an educational experience for a particular community. (15 points)

Each student will help implement that experience with that community. (12 points)

Each student will write an individual reflection *after* the implementation of their experience. (15 points)

Each student will help with the ordering/distribution of eclipse glasses at the end of the school year. (10 points)

Assessing The Great American Solar Eclipse Educational Experiences

Design Components - 15 points: You will be scored for this milestone the weekend of March 23 when your *Final Description Google Form* is completed. Answers to the following questions should be found in that form and in the three Work Day check-ins. For each question asked below, up to 3 points can be given according to this scale:

- 3 points - clear, consistent, convincing evidence or developed opinion cited in answer
- 2 points - limited evidence and/or unsupported opinion cited in answer
- 1 point - little or no evidence or opinion cited in answer
- 0 points - no answer given

1. Does this experience share, teach, or allow the audience to experience something related to the August 21, 2017 eclipse?
2. Is this experience appropriate for the targeted audience? Is there too much or too little information? Is the information too hard or too easy to understand?
3. Does this experience sound engaging for the audience? Will it get them interested in viewing this unique event?
4. Is the experience “doable” by the group (actually capable of being done)?
5. Is there evidence that you are contributing to this design?

Implementation of Educational Experience - 12 points: This will be based on the completed Experience Implementation Form you fill out after your experience actually happens. For each question listed below, up to 3 points can be given according to this scale:

- 3 points - clear, consistent, convincing evidence or developed opinion cited in answer
- 2 points - limited evidence and/or unsupported opinion cited in answer
- 1 point - little or no evidence or opinion cited in answer
- 0 points - no answer given

1. Did the experience actually take place?
2. Did the experience run smoothly for the community members? Were they engaged?
3. Is there evidence that the community targeted learned about the 8/21/17 eclipse and how to view it safely?
4. Is there evidence that you helped implement this experience?

Reflection - 15 points: Each individual must write a reflection. See Reflection Guidelines for discussion of each question below. For each question, up to 3 points can be given according to this scale:

- 3 points - clear, consistent, convincing evidence or developed opinion cited in answer
- 2 points - limited evidence and/or unsupported opinion cited in answer
- 1 point - little or no evidence or opinion cited in answer
- 0 points - no answer given

1. What connections did you make during this process?
2. What can you share about the learning process you experienced?
3. What are you/did you learn?
4. What mistakes and/or successes did you experience?
5. What are your eclipse viewing plans?

Reflection Guidelines

Reflection – Each student must write his or her own reflection. This reflection is an exploration of your learning experience during this project. Think about what you did, what you learned, what questions you had and/or have during all aspects of the project. Think about the community you worked with and the methods you used to share information with them. You should expect to go into depth about the following five points. The typed reflection is due the day after your Educational Experience.

• To make connections (3 points)

Reflective writing helps you develop and clarify the connections between what you already know and what you are learning or what you learned during this project. What connections have you made between the information or experiences in this project and what you knew before or what you see or hear outside of this project? What connections did you make about eclipses, or about the community you worked with or about the process you used to design or implement the experience?

• To examine your learning processes (3 points)

Reflective writing encourages you to consider and comment on your learning experiences— not only WHAT you've learned, but HOW you did so. What did you learn about eclipses? About the community you worked with? About designing experiences for others? What do you think of how you learned it?

• To clarify what you are learning (3 points)

Reflecting helps you to clarify what you have studied, integrate new knowledge with previous knowledge, and identify the questions you have and what you have yet to learn. What did you learn and what new or still unanswered questions do you have?

• To reflect on mistakes and successes (3 points)

Reflecting on mistakes can help you avoid repeating them and reflecting on your discoveries helps identify successful principles to use again. What was successful, what needed work?

• Your eclipse viewing plans (3 points)

What are your plans to view the eclipse? Where will you be on August 21, 2017? Which part of the eclipse can you expect to see at that location, total or partial? How will you view it, what devices will you use?

When you write, consider that...

___ your audience is only your teacher, so be honest. Your personal perspective is what is valued.

___ reflection is NOT the same thing as summarizing.

Only summarize the content of the material or experience when it is necessary for the reader to understand what you are saying and the comments you make.

___ you should expect to go into depth.

The length of a reflection is dependent not only on the topic and the amount of material or length of the experience, but also on the depth of your integration of the ideas and connections you make to other material and experiences.