Title	Solar Eclipse Resources: Llbrary of Congress
Developed by	TPS Western Regional Team
Grade Level	K-12
Essential Question	How have people around the world viewed a solar eclipse over time?
Contextual Paragraph	The Aug. 21, 2017, eclipse will be the first total solar eclipse visible in the contiguous United States since 1979 — and the first that has traversed the entire continent coast-to-coast since June 8, 1918. The moon's shadow will cut an approximately 70-mile-wide path diagonally across the country from Oregon to South Carolina. Solar eclipses have fascinated people through history. Explore primary sources to find out how headlines, explanations, science and viewing has changed over time.

Eclipse, 1911 / Eugène Atget	Library of Congress: The Total Solar Eclipse of 2017	Eclipse of the sun, 1846 : April 25	The geography of the great solar eclipse of July 14 MDCCXLVIII: exhibiting an accurate map of all parts of the Earth	Diamond ring of the solar eclipse - Jan. 24, 1925	Library of Congress Blog on Exploring Eclipses Through Primary Sources: Earth, Moon & Sun
Crowd of people looking at eclipse in Paris, France in 1911.	C. Alex Young spoke about the science and wonder of total solar eclipses.	A drawing of the eclipse in April of 1846.	This map shows the path of the eclipse and includes 24 diagrams showing the eclipse as seen from different cities.	Diamond ring of the solar eclipse - Jan. 24, 1925	A reading and collection of resources from the Library of Congress for students and educators
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Meet-konstige vertoning van de grote en merk-waardige zons-verduistering.	Almanac Page: 18th Century	Great solar eclipse. To be seen every day at West's observatory, No. 7 Pear St. Philadelphia. NB No postponement on account of weather / D.C. Johnston.	Student e-book on the Cosmos	Title page of "An Astronomical Diary, or Almanack,for 1777by Nathaniel Law"; illus. with solar eclipse of Jan. 9th	To "shoot" the sun. Capt. Edward T. Pollock (left) and Capt. F.B. Littell, scientists of the U.S. Naval Observatory in Washington
Map showing the stages of the eclipse.	Page from 18th Century almanac: illus. of solar eclipse	Print shows an advertisement for West's Blacking Climax	A collection of resources on the cosmos in an easy to use e-book from the LIbrary of Congress	Front page of an almanac made in 1777 and referencing an eclipse in January	Two scientists who would be following the course of the eclipse in a dirigible in 1925
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El Paso herald., June 01, 1918, HOME EDITION, Comic Section, Image 22	Topeka State Journal	El Paso Herald	New York Times	Tacoma Times	What Science Discovered from the Great Eclipse
.Article from Chronicling America on the eclipse.	June 6th, 1918 article	June 8, 1918	The Sun Goes in for Daylight Savings, June 2, 1918	Weather Issues in Washington State	An article in the 'Washington Times' from October 27, 1918
SUN IS IN FULL ECLIPSE, VISIBLE HERE ON JUNE 8 ASTROLOGRES MARE GREAT PLANS FOR ITS STUDY EVENING SKYMAP FOR JUNE 1918 1918	SUNT TOTAL SCREENS WILL DE THE SIG STEPT JUNE 1 The state of the stat	SO THE PROPERTY OF THE STATE AND AS IN A STREET OF THE STATE AS IN A STREET OF THE	THE CON COLS IN FOR DAVILIGHT SAVING	One Cent The Tacoma Times Americans Strike Another Blow Token's for the many MARINES ATTACK Worder of the Time Times Worder of the Times Times Branched Water of the Times Times Water of the Ti	Cience Discovered. (non the Great Lelipse The Barbara Street Street Street Street The Street Street Street The Street Street The Street Street The Street
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Almost Total Eclipse of the Sun this Afternoon	Eclipse Warning	Next Eclipse will be here in 2017	Chickens Go To Roost as Eclipse Darkens Sky	Here's How Newspapers Around the Country Covered the 1918 Eclipse	
An article in the 'Chattanooga News' from June 8, 1918 Source: The Chattanooga News/Library of Congress	An advertisement in the June 7, 1918 edition of the 'East Oregonian' Source: East Oregonian/Library of Congress	A headline in the 'Topeka State Journal' from June 8, 1918 Source: Topeka State Journal/Library of Congress	A headline from the 'Richmond Times-Dispatch' from June 9, 1918 Source: Richmond Times-Dispatch/Librar y of Congress	'Complete article on historical views of the Eclipse	
ALMOST TOTAL ECLIPSE OF SUN THIS AFTERNOON BETWEEN 5:30-6:18 Rays Will Make Myriad Crescents On the Earth—Mere Man No Longer Quakes With Fear at This Celetial Theomoreous, but Readines His Relative Integrificance in a Universe of Billions of Worlds.	Eclipse Warning! Grant Committee Co	IN ECLIPSE TODAY Kansas in Path of Event Rarely Seen in America. Next Total Eclipse Here Will Be in 2017.	CHICKENS GO TO ROOST AS ECLIPSE DARKENS SUN Deep Darkness Sweeps Over Strip of Northwest Fifty Miles Wide. SCIENTISTS WATCH PROGRESS Gloom Envelops Land, and Electric Lights Were Turned on Indoors, While Street Cars and Automobiles Burn Headlights.		
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Foundations Annotations

Curriculum Connections

Language Arts

Social Studies

Science

Math

Curriculum Standards

These standards are possible suggestions. Use of primary sources can be adjusted by the educator to meet standards at many other grade levels.

Language Arts (Common Core State Standards)

CCSS.ELA-LITERACY.RI.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-LITERACY.RI.6.3

Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

CCSS.ELA-LITERACY.RI.6.6

Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.

CCSS.ELA-LITERACY.RI.6.9

Compare and contrast one author's presentation of events with that of another

Next Generation Science Standards

MS-ESS1-1: Develop and use a model to describe phenomena of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

MS-ESS1-3: Analyze and interpret data to determine similarities and differences in findings scale properties of objects in the solar system.

C3 Standards in History

<u>D2.His.1.6-8</u>. Analyze connections among events and developments in broader historical contexts.

<u>D2.His.3.6-8.</u> Use questions generated about individuals and groups to analyze why they, and the developments they shaped, are seen as historically significant.

Content and Thinking Objectives

Content Objectives:

Students will understand and be able to describe how people from other eras viewed the eclipse

Students will be able to define eclipse, and describe the interaction of the earth, sun, and moon in this scientific process.

Students will be able to identify the phases of the moon and how the rotation of the moon affects partial or full eclipse

Thinking Objectives:

Students will be able to compare and contrast how the eclipse has been depicted both globally and in the United States over time.

Students will be able to analyze a primary source and determine scientific information being shared with the reader.

Students will be able to use complex text to investigate the eclipse in the present and the past.

Inquiry Questions, Activities and/or Strategies

Sample inquiry questions and activities include:

Inquiry Questions

- In what ways have cartographers depicted the eclipse on a map?
- Why would the common citizen be so interested in an eclipse?
- How was an eclipse described in newspapers during different time periods in the United States?
- How was hyperbole used in the description of the eclipse by writers in the 20th century?
- How are animals and nature affected during an eclipse?

Inquiry Activities

- Using the primary source set, ask students to identify images that depict the eclipse and how it occurs. Have them verbally describe the process or write about it.
- Using items from the primary source set and secondary sources, ask students to decide what people have thought about the eclipse in the past and discuss how perceptions have stayed the same or changed.
- Using primary sources, have students investigate how the eclipse was used as "scientific propaganda." in the early 20th century.

Inquiry Strategies

Using one of the Library of Congress primary source analysis sheets (appropriate to the source – document, image, cartoon, etc.), ask students to analyze a primary sources in the collection.

Assessment Strategies

Assessments may take many forms. Listed below are suggestions that could be employed.

Have students analyze the components of a historical map showing the eclipse, and determine the audience for the map and purpose of each component.

Have students compare and contrast newspaper articles about the eclipse from different time periods in history, and determine the point of view and purpose of the article.

Students can read and analyze a series of historical documents to determine the facts known about the eclipse during the early 20th Century.

Have students create viewing glasses or set up a camera to capture the phases of the eclipse in your area. Identify C1, C2, C3 and C4. Create a movie to share findings with class and on social media.

Other Resources

Web Resources

NASA Eclipse Resources: https://eclipse2017.nasa.gov/

NPR Eclipse Resources:

http://www.npr.org/sections/thetwo-way/2017/06/30/535048940/a-total-eclipse-will-sweep-the-u-s-in-august-and-people-are-going-nuts-for-it

Bill Nye the Science Guy Eclipse Resources: https://www.youtube.com/watch?v=ij76tWTcEgg

Brain Pop Science Resources: https://educators.brainpop.com/bp-topic/eclipse/

National Air and Space Museum Eclipse Resources: https://airandspace.si.edu/events/your-eclipse-0

National Park Service Resources: https://eclipse2017.nasa.gov/nps-resources

Reference List of Resources: https://docs.google.com/document/d/1Cx8LuRtOPU0GJxm6Qf_zJc5HqtA0Rdvivz1OzVeAIWA/edit?usp=sharing

Secondary Sources

A comprehensive list of webinars, podcasts, and webcasts from the American Astronomical Society:

https://eclipse.aas.org/resources/podcasts-webcasts

Historic Photos of Eclipse Watching:

The time-honored, eye-searing tradition of staring directly at a solar eclipse

https://qz.com/1046068/watching-solar-eclipses-throughout-history-photos-of-a-time-honored-tradition/

Art and the Eclipse:

Viewing the eclipse across history

https://www.theatlantic.com/science/archive/2016/09/an-artists-view-of-an-eclipse/498548/