

Lesson Plan: Total Eclipse of the Art: Art, Science and Space

Collection Spotlight: Moon, Sun and Art: *Pathway, Red Circle, Pendant l'éclipse, Total Eclipse of the Sun, The Comet Book (1587)*

Subject Area: Visual Arts, Science

Grades: K-5th

Theme: Connecting personal experiences and themes in art throughout history to the science of a Total Solar Eclipse.

Student Learning Objectives:

- 1) Students will be able to identify key themes in art connecting human experiences and space (moon, earth, sun).
- 2) Students will be able to relate their understanding of science and the eclipse to their personal experiences.
- 3) Students will be able to develop a collage, drawing, or painting to articulate their understanding or personal experience of an eclipse.

Artistic Themes and Main Ideas:

For centuries, humans have been curious of their relationship to space, stars, and the moon. Humans have studied the moon, the Earth, and the sun to understand how these celestial bodies work together and create natural anomalies like Total Solar Eclipses. Humans across the planet have recreated planetary phenomenon through personal art expression.

Students will discuss sculptures like *Pathway* by John Safer, photographs like *Pendant l'éclipse* by Eugene Atget, and other works like *Total Eclipse of the Sun* by Etienne Leopold Trouvelot and *Red Circle* by Dwinell Grant to connect personal experience, scientific anomalies, and artistic expression.

Through the artworks in this lesson plan, students will get the opportunity to see how studying celestial bodies, and how humans express the study of space through art, is a fundamental theme throughout history. Students will reflect on their personal experiences with and the science behind the Total Solar Eclipse. Finally, students will choose a medium and display their personal experience with the eclipse.

Curricular Connections

Ohio's Learning Standards

Visual Arts:

VA.4.2CO- Explore universal themes expressed across arts disciplines.

VA.3.1CO- Understanding that the context impacts the creation, interpretation and perception of an artwork.

Earth and Space Science:

5.ESS.1- The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics.

5.ESS.1.a1- Compare different celestial bodies including composition and size.

5.ESS.3.a- Explain the difference between Earth's revolution and Earth's rotation.

5.ESS.3.c Identify patterns that result from Earth's revolution and rotation.

Learning Activities Sequence

Lesson Opener (5 minutes):

After reviewing the student learning goals, move to Slide 4 in the *Total Eclipse of the Art: Art, Science and Space* PowerPoint Presentation. Briefly review the slide discussing how humans have always observed the stars. Before moving on, ask students guided questions:

What does this photograph make you think or wonder?

Why do you think Eugene Atget photographed the onlookers?

Move to Slide 5. Read the text and ask students:

What do you notice about the painting on this slide?

What do you think the artist represented? Why?

Main Learning Activity (15-20 minutes):

Move to Slide 6. On this slide students will watch a video about eclipses and follow along with a guided question worksheet. Copy and paste this link into your browser:

<https://youtu.be/cxrLRbkOwKs?si=UKBdRsP9gFY67ru>

Play the National Geographic video. The video is about 5 minutes long. The video will teach students more details about what an eclipse is, why it happens, different types of eclipses and safety tips for watching the eclipse.

Guided Questions:

- *What shapes or colors do you notice in the video of an eclipse?*
- *How would you represent what an eclipse looks like?*
- *What materials would you use?*

Check for Understanding Questions:

- *What is one fact that you learned about eclipses?*
- *Why do eclipses happen?*
- *What is one safety tip for watching an eclipse?*

Move to Slide 7. Now students will be asked to look at different pieces of artwork that showcase the moon, the sun, space, or stars. Tell students that they will talk about what they see, what they think of, and what they wonder about each statue or artwork.

Guided Questions:

- *What size objects, shapes or colors do you see in the artwork?*
- *What do you think the artist is representing?*
- *What is similar about the artworks? What is different?*
- *Where do you see something from space reflected in this artwork?*
- *What do you think shows rotation, revolution or movement?*
- *What do you think shows how light affects the earth?*

Move to Slide 8. Pictured is a statue at the Dayton Art Institute. It is called *Pathway* by John Safer. Ask students what they see, think or wonder. Call on 2-4 students to briefly discuss their thoughts.

Move to Slide 9. Pictured is an artwork using color pastels. Tell students: This artwork is called *Total Eclipse of The Sun* by Étienne Léopold Trouvelot and it was created in 1882. Ask students: what do you see, think or wonder? Ask students the guided question:

What do you think Étienne Léopold Trouvelot used to create this artwork in 1882 almost 150 years ago?

Call on 2-4 students to briefly discuss their thoughts.

Move to Slide 10. Tell students: This artwork is called *Red Circle* by Dwinell Grant. He used oil paint to create the artwork in 1938. Ask students: what space vocabulary can you use to describe this artwork? What do you think Dwinell Grant represented in his painting?

Move to Slide 11. Tell students that they will now create their own representation of an eclipse. Tell students that they will choose a medium, or a type of art style. They will choose paper collage, drawing using markers, colored pencils, crayons or chalk, or painting. (Choose mediums based on the time that students will have to create; ex. for a shorter block of time, choose paper and glue or drawing using markers and crayons etc.).

Ask students to decide how they want to express their experience with the eclipse. What colors will you use? What is the focus of the artwork? What have you learned about the eclipse? How would you show your experience through art? What words would you use to show what you know about the eclipse?

Give students at least 10 minutes to create and complete their artwork.

Lesson Closure (5 minutes):

Move to Slide 12. Bring students back together as a whole group for a discussion of their artwork. Tell students that usually in museums, like the Dayton Art Institute, artworks have something called a Wall Didactic next to it. The Wall Didactic is used in museums to teach the viewer information about the artist, the type of artwork, or any message that the artist wants to share with their audience.

Ask students to think about their artwork and what information they might include on a Wall Didactic. Tell students they can think about sharing information about how the artwork was created, the students' experiences with the eclipse, the science of an eclipse or what they chose to represent. Call on 2-4 students (or as many as time allows) to share what they would teach their audience about their artwork.

Evaluation

Students will choose and implement an art medium they find appropriate. They will choose between collage, drawing or painting. Students will then use their chosen art medium to articulate their scientific understanding of a Total Solar Eclipse and to showcase their personal experiences with the eclipse. Students will be able to explain why the Total Solar Eclipse occurred using scientific terms like “rotation, revolution, shadow, axis, orbit, etc.”.

Learner Accommodations

For learning diverse students or younger students, consider dictating their explanation or key words on the back of their artwork.

Multimodal PowerPoint presentation created with many grade levels and proficiency levels in mind

Visually-Rich use of Artworks and display of materials

Differentiated writing extension activity

Academic Video to support learners with visual or auditory needs

Built-in scaffolding and inquiry questions to support all learners

Differentiated use of materials for students with diverse learning needs

Extension Activities

Students can extend their thinking by creating a physical Wall Didactic for their artwork. Students can write 2 to 6 sentences (depending on their grade level and writing proficiency) on the Wall Didactic Example Worksheet. This can support students when sharing their artwork and thoughts aloud with peers. The Wall Didactic can also be used as a means of formative assessment of the standards on a rubric scale.

Another extension activity would be to conduct a gallery or museum walk of the students' art. Students will lay their artwork on their tables or desks and everyone will circulate on a museum walk. Arrange students in groups of 3 to 5. Each group will circulate around a group of artworks and have a discussion using the guided questions from the Main Learning Activity.

Student Gallery Walk Guided Questions:

- *What size objects, shapes or colors do you see in the artwork?*
- *What do you think the artist is representing?*
- *What is similar about the artworks? What is different?*
- *Where do you see something from space reflected in this artwork?*
- *What do you think shows rotation, revolution or movement?*
- *What do you think shows how light affects the earth?*

Materials & Resources

Computer or Laptop

Screen/Projector

[National Geographic Video Link](#) from Slide 6. Copy and paste this link into your browser:

https://youtu.be/cxrLRbkOwKs?si=_UKBdRsP9gFY67ru

[Example of Student Artworks](#) Blog Post by Mrs. Knight. Copy and paste this link into your browser:

<https://dolvinartknight.blogspot.com/2017/08/solar-eclipse-illustrations-in-45.html>

Construction Paper or Collage Paper

Glue Sticks

Scissors

Markers

Crayons

Colored Pencils

Optional Materials: watercolor paint, cups of water, washable paint, paint brushes, paper towels, chalk, color pastels etc.

References

Atget, E. (1912). *Pendant l'eclipse* [Photograph].

Grant, D. (1938). *Red Circle* [Oil Paint on Canvas].

Knight, H. H. (2017, August 26). Mrs. Knight's Smartest Artists: Solar eclipse illustrations in 4/5. *Mrs.*

Knight's Smartest Artists. <https://dolvinartknight.blogspot.com/2017/08/solar-eclipse-illustrations-in-45.html>

Ohio Department of Education. (2022). Ohio's Learning Standards. Columbus: Ohio Department of Education.

<https://education.ohio.gov/Topics/Learning-in-Ohio/OLS-Graphic-Sections/Learning-Standards>.

Accessed 22 Feb. 2024.

Safer, J. (2001-2002). *Pathway* [Stainless Steel].

Solar eclipse 101 | National Geographic. (n.d.). Retrieved March 28, 2024, from <https://www.youtube.com/watch?v=cxrLRbkOwKs>

Trouvelot, E. L. (1882). *Total Eclipse of the Sun* [Color Pastel on Paper]

Unknown. (1587). *The Comet Book* [Print].

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Guided Video Worksheet

Name: _____ Date: _____

1. Why does an eclipse happen? Circle the correct answer.

The sun blocks the earth.

The moon blocks the sun.

2. Fill in the sentence.

During an eclipse, the _____ and the _____ look the same size from earth.

3. How many types of solar eclipses are possible? Circle one.

- a. One (1)
- b. Four (4)
- c. Zero (0)
- d. Three (3)

4. Write one tip for safely watching an eclipse:

5. Will we always be able to see an eclipse? Circle one.

YES

NO

