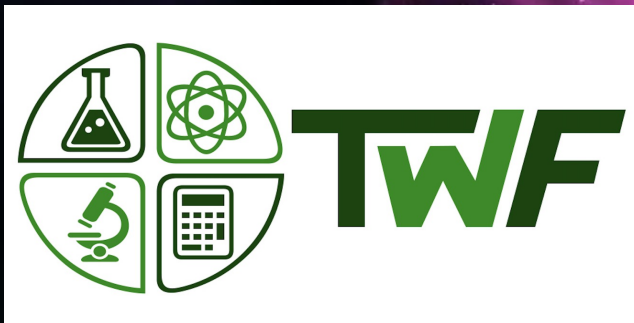


Eclipse – Solar and Lunar

5E Lesson

The 5E model is a scientifically proven method to improve student engagement and learning in your classroom

- ✓ Engagement
- ✓ Exploration
- ✓ Explanation
- ✓ Elaborate
- ✓ Evaluate



Complete Teacher Instructions

Eclipse 5E Lesson

Grades 7-10	Eclipse	Ongoing Lesson
Lesson Objective: Students will learn about: • Solar eclipse • Lunar eclipse • What causes eclipses • Dangers of solar eclipses		
Possible Student Misconceptions: • Eclipses can harm unborn babies. • There are no total solar eclipses at Earth's North or South Poles. • The moon turns completely black during a total solar eclipse. • The Sun's corona has always been observed during a total solar eclipse • Eclipses are portents or bad luck. • Hundreds of years pass between eclipses.		
Materials: • 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 • A means of projecting a PowerPoint presentation • Internet access • General classroom objects		
Teacher Notes: ➤ All videos can be accessed directly from the PowerPoint. To retrieve the icon while in slideshow mode and it will automatically open for you. If it reason, right-click on the image and click Edit Hyperlink or something ➤ I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/cCIKIP9SAQ ➤ I don't believe in long lessons. If you feel your students are losing their Stop the PowerPoint and give them a 5-minute break. If you'd like to share my video collection here - http://www.teachwithfergy.com/ are tons of brain-break videos to choose from all grouped by category.		

Eclipse – 5E Lesson

Engagement Phase Your students will watch the video <i>'What creates a solar eclipse?'</i> and complete the following: 1. Watch the video and answer the questions. The video can be found here - https://www.youtube.com/watch?v=Qog18tiNnqg Teacher Notes: - The video is about 4 minutes long - You may need to show the video more than once or pause when an answer is given to one of the questions.	Te le ur ☐ ☐ ☐
Exploration Phase Exploration – Lab Station Activity • In groups of 2-3, have your students complete <i>Exploration – Lab Station Activity</i>. Once they're done, they will submit their passport to you. Teacher Notes: • The complete instructions for my Lab Station activity can be found in the <u>START HERE – Instructions</u> file.	Dr Te le ur ☐ ☐
Explanation Phase PowerPoint Lessons • The lesson is found in the folder – <i>Explanation – Eclipse Lesson</i> • This lesson is designed to be completed over one day • There are multiple embedded videos, a simulation, and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson • The lesson covers the following topics: ➢ Overview ➢ Solar eclipse ➢ Lunar eclipse Teacher Notes: • All videos can be accessed directly from the PowerPoint. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If they don't open, right-click the image and select Edit Hyperlink or something similar. • I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCIKIP9SaDQ • I have also enclosed a .PDF version of both the teacher and student versions.	Dr Te co m pr ☐ ☐ ☐ ☐

<u>Elaborate Phase</u> Elaborate – Scavenger Hunt Your students will complete – <i><u>Elaborate – Scavenger Hunt</u></i>. This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop their understanding. Teacher Notes: - Students will work individually or in small groups - Students will need one device per group.	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations
<u>Evaluate Phase</u> Quiz Have your students complete - <i><u>Evaluate – Eclipses Quiz</u></i> Teacher Notes: ➢ It's sometimes best to have the students peer evaluate ➢ Placing students in small groups and having them exchange papers to mark will accomplish two things 1) Provide immediate feedback on the questions they just completed 2) Significantly reduce your marking time ➢ Peer evaluation is not needed, only suggested when appropriate	Duration: 30 min Teacher Role – Distribute and collect evaluation Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

Each phase is clearly described

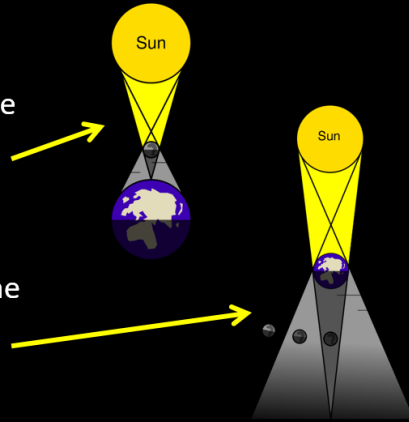
A Complete Lesson

Solar vs. Lunar Eclipse

- What's the difference?

A solar eclipse is when the Moon blocks the Sun from the Earth

A lunar eclipse is when the Earth blocks the Sun from the Moon

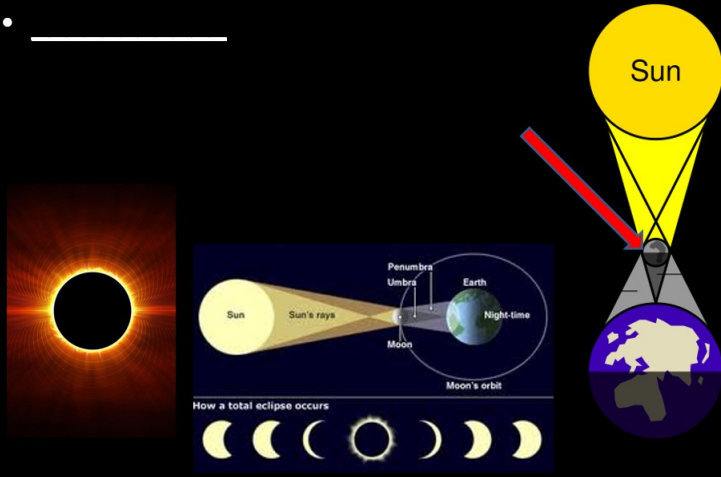


Make sure your students are on track

Student copies with blanks
Videos embedded right into
your slideshow

Solar Eclipse

- _____



The Solar Eclipse In Varanasi – July 22, 2009



Interactive and Engaging Activities

Device-Based Scavenger Hunt Eclipse

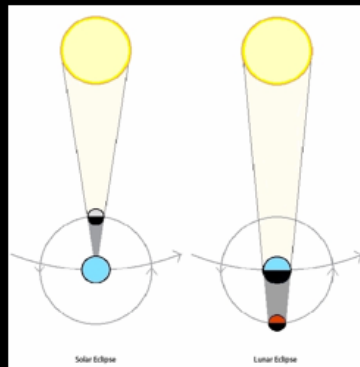


Includes

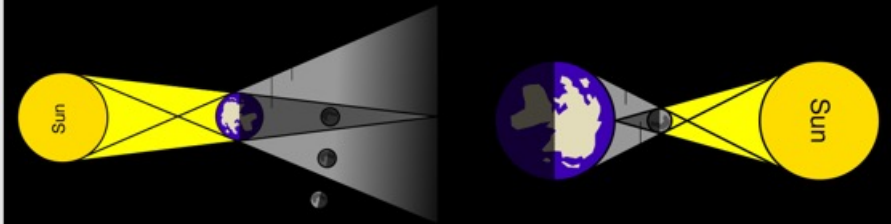
- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- **100% Digital**
- Simulations
- Quizzes
- Videos
- Games
- and more



Eclipse Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Get away from tired practices and unengaged students



Provide a Scientifically-Proven means of instruction



Incorporate Technology and Increase Collaboration

