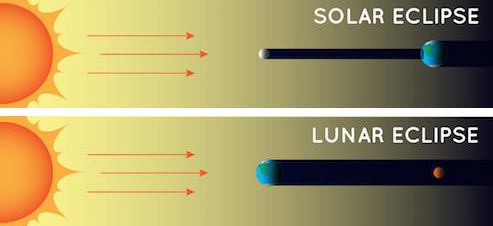
Title: What is the Difference between a Solar Eclipse and a Lunar Eclipse?

Student Sheet

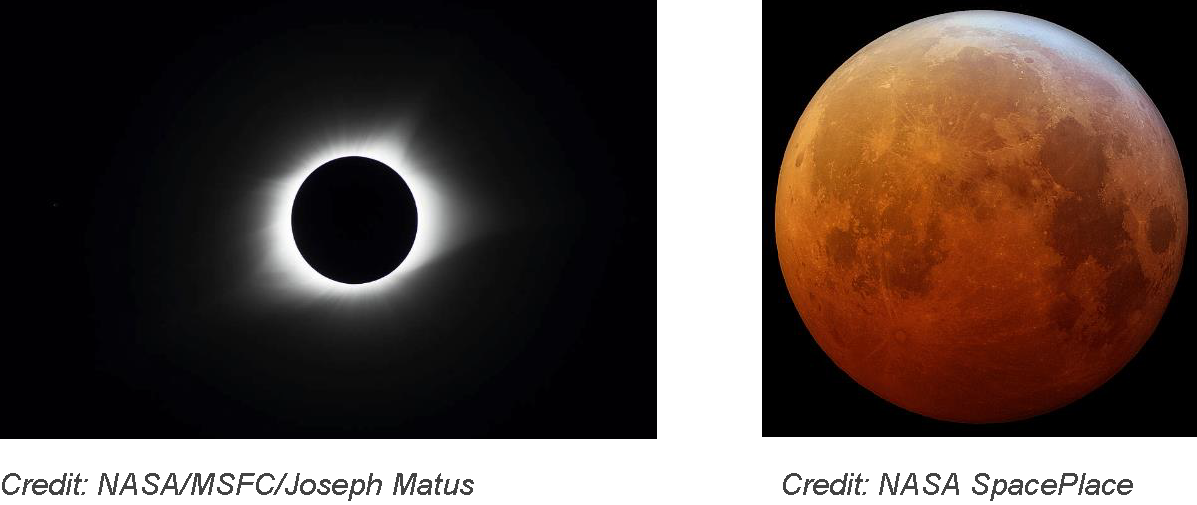
1. Examine the diagrams. One shows a solar eclipse. The other shows a lunar eclipse. Answer the following questions:



Solar and Lunar eclipse diagrams, Diagrams not to scale, Credit: NASA Space Place, https://mynasadata.larc.nasa.gov/sites/default/files/inline-images/Solar%20and%20lunar%20eclipse.png

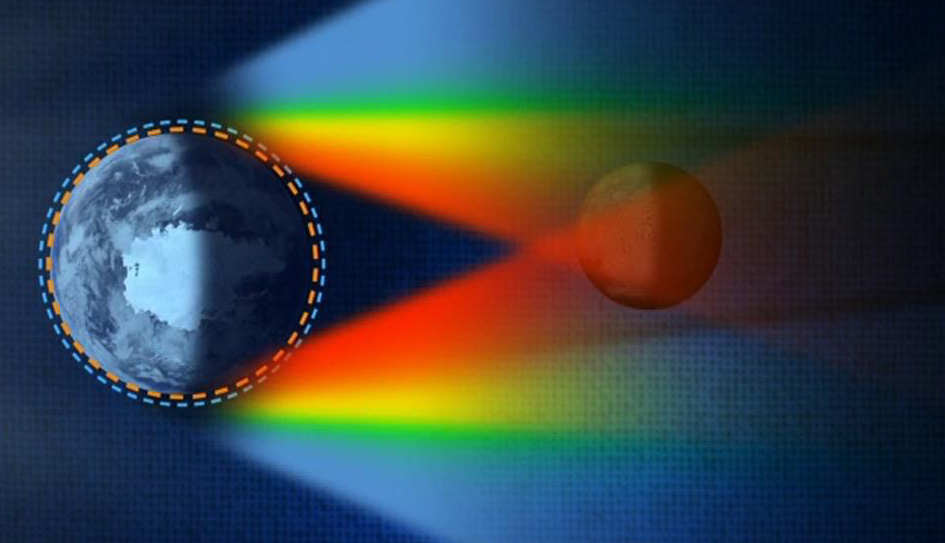
* + What are the similarities between these two types of eclipses?
  + What are the differences between these two types of eclipses?
  + Which object casts a bigger shadow, Earth or the Moon?
  + Which eclipse could more people on Earth experience at the same time? Support your claim with evidence and reasoning.

|  |
| --- |

1. Predict:
   * Which image is of a solar eclipse taken from Earth? Which image is of a lunar eclipse taken from Earth?
   * Record your observations about each image.

https://mynasadata.larc.nasa.gov/sites/default/files/inline-images/eclipse%20images.png

| **Solar Eclipse** | **Lunar Eclipse** |
| --- | --- |
|  |  |

1. Why does the Moon look the way it does during a lunar eclipse? 

[Credit: NASA Goddard Space Flight Center/Scientific Visualization Studio](https://svs.gsfc.nasa.gov/14143) \*This image is not to scale. https://mynasadata.larc.nasa.gov/sites/default/files/inline-images/solar%20and%20lunar%20eclipses.png

* Why does the Moon appear red during a lunar eclipse?
* What is another example of Earth’s atmosphere scattering sunlight?

Click and drag to move

1. Why does the Sun look the way it does during a total solar eclipse?

During a total solar eclipse, the disk of the Moon blocks out the bright light of thephotosphere. This exposes the Sun’s atmosphere, or the corona. The corona can only be seen during a total solar eclipse, or using special equipment, like NASA has.

Examine the [Mind-Melting Facts about the Sun graphic](https://www.nasa.gov/mission_pages/sunearth/the-heliopedia) and text found at <https://www.nasa.gov/mission_pages/sunearth/the-heliopedia>, and answer the following questions:

* Which layer of the Sun is normally visible, on a bright, sunny day?
* Why are scientists so interested in viewing the corona - what is the “Puzzle of Coronal Heating”?

1. Model:What objects could you use to model a solar eclipse and a lunar eclipse? Draw your plans for each model.

​