



Science Virtual Learning

**7th Grade Science**

**Eclipses**

April 22, 2020



## 7th Grade Science

### Lesson: April 22

### **Objective/Learning Target:**

I can describe the difference between solar and lunar eclipses.

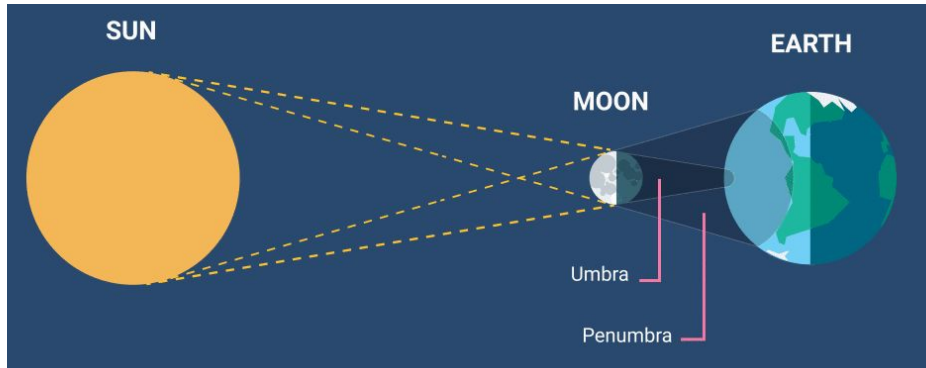
### **Warm-Up:**

What do you remember about the total Eclipse of 2017? Write down three sentences about your memories on a separate sheet of paper. Watch this [video](#) to jog your memory.

# Practice

**Important Terms to Remember:** Write these on a separate sheet of paper to use later on your quiz. Be sure to add the diagrams, too.

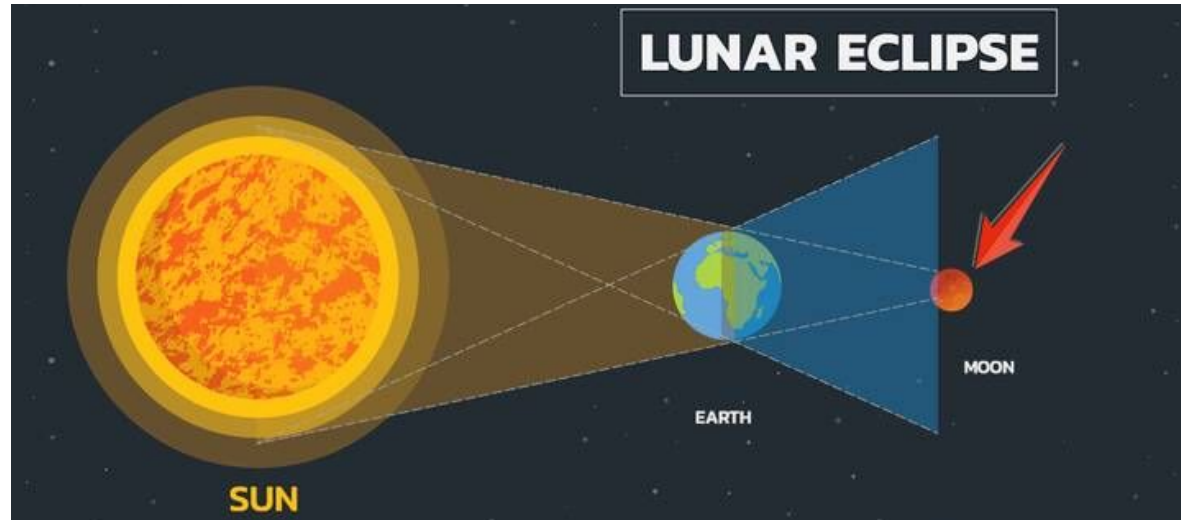
1. Solar Eclipse: A **solar eclipse** occurs when the moon passes in front of the sun, blocking it out partially or completely. The **eclipse** results in parts of the earth being covered in the shadow of the moon.



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# Practice continued

2. Lunar Eclipse: **Lunar eclipses** occur when Earth's shadow blocks the sun's light, which otherwise reflects off the moon.

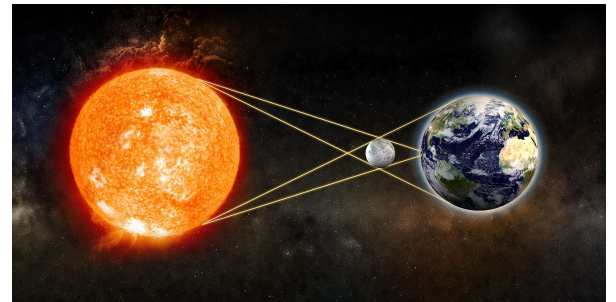


# Practice continued:

## Solar Eclipses:

Watch this [video](#) and answer the following questions on a separate sheet of paper.

1. A solar eclipse happens when a new moon moves between the \_\_\_\_\_ and the \_\_\_\_\_, blocking \_\_\_\_.
2. How does the Sun, which is 400 times wider than the moon, appear to be the same size as the moon during a solar eclipse?
3. What is an umbra?
4. What is a penumbra?
5. What happens during a partial solar eclipse?
6. What are two safe ways to view a solar eclipse?
7. How long does totality during a solar eclipse last?
8. How long will it be before the moon will be too far away from Earth to totally cover the sun?





# Practice continued:

Solar Eclipses: **Check your answers.**

1. A solar eclipse happens when a new moon moves between the **\_\_Earth\_\_** and the **\_Sun\_\_**, blocking **\_some or all of the Sun's rays\_\_**.
2. How does the Sun, which is 400 times wider than the moon, appear to be the same size as the moon during a solar eclipse? **The Sun is 400 times farther away from the Earth than the moon, making it appear to be the same size in the sky.**
3. What is an umbra? **The small, dark shadow the Moon casts on the Earth.**
4. What is a penumbra? **A larger, less dark shadow the Moon casts on the Earth.**
5. What happens during a partial solar eclipse? **The Sun appears to be only partially blocked.**
6. What are two safe ways to view a solar eclipse? **By using certified eclipse-watching glasses and by using a pinhole viewer.**
7. How long does totality during a solar eclipse last? **Less than three minutes.**
8. How long will it be before the moon will be too far away from Earth to totally cover the sun? **In about 1 billion years**

# Practice continued:

## Lunar Eclipses:

Watch this [video](#) and answer the following questions on a separate sheet of paper.

1. A lunar eclipse happens when the Earth blocks some or all of \_\_\_\_\_.
2. What causes the moon to appear red during a total lunar eclipse?
3. How many lunar eclipses can there be each year? \_\_\_\_\_



# Practice continued:

## Lunar Eclipses: Check your answers.

1. A lunar eclipse happens when the Earth blocks some or all of the Sun's light from reaching the Moon.
2. What causes the moon to appear red during a total lunar eclipse? Longer, red wavelengths of light are bent towards the Moon.
3. How many lunar eclipses can there be each year? Up to 3 times a year





# Practice continued

Watch this [Brainpop about eclipses](#) and try the [review challenge](#).



# Practice continued

Test your skills! Take this [Quizizz](#) and see how much you know about eclipses!

