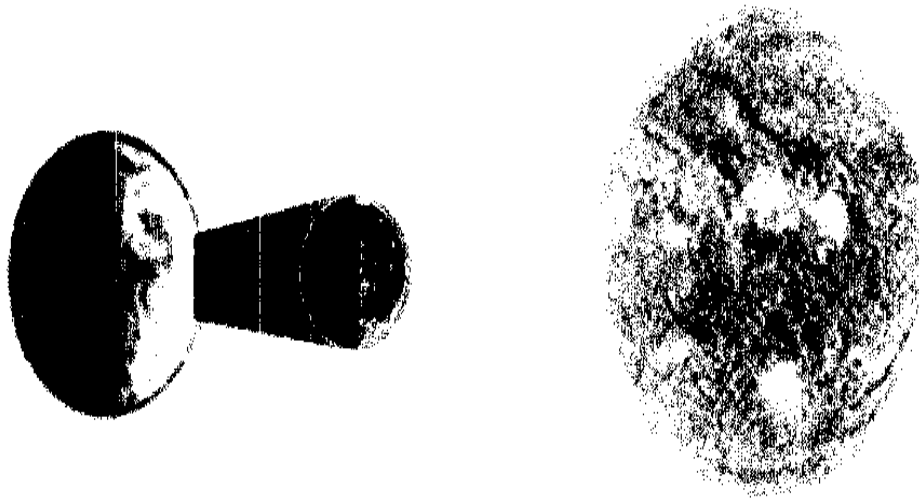


Science and Health

SOLAR ECLIPSE





To the Learner

You learned that the moon revolves around the sun. The earth casts a shadow on the moon, causing lunar eclipse. Because it continues to move around the earth, the moon can cast a shadow on the earth, causing solar eclipse. You will learn more on this module.



Let's Learn This

Explain why a solar eclipse occurs during a new moon.



Let's Try This

Look at the drawing. Then answer each statement below with true or false.

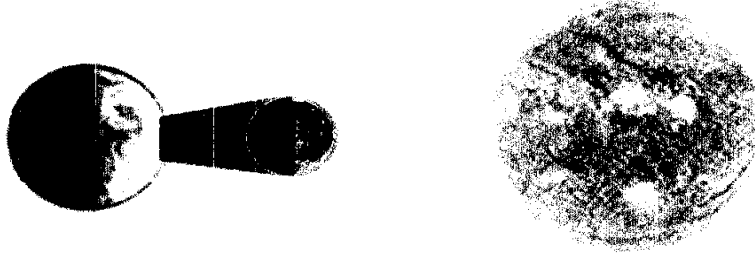


- _____ 1. The sun shines on the moon all the time.
- _____ 2. Only one-half of the moon gets light from the sun.
- _____ 3. The moon revolves around the sun.
- _____ 4. One-half of the moon is always dark.
- _____ 5. The earth revolves around the sun.



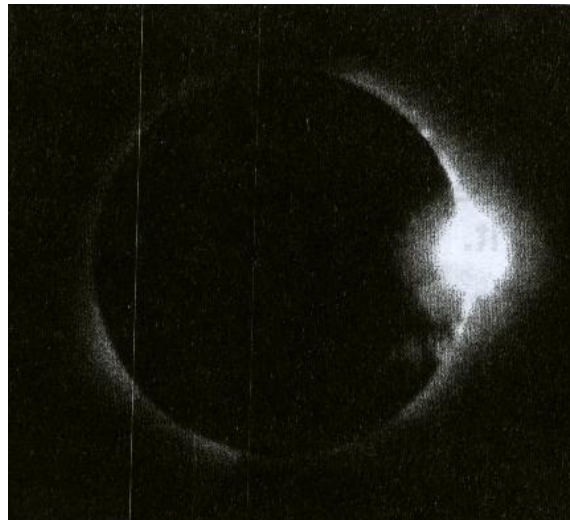
Let's Study This

The sun shines all the time. The moon gets its light from the sun one side of the moon is lighted by the sun, the other side is dark.



You know that the earth and the moon get light from the sun. You also know that the moon revolves around the earth. When the moon is between the sun and the earth, the shadow of the moon falls on the earth. This is called eclipse of the sun or **solar eclipse**.

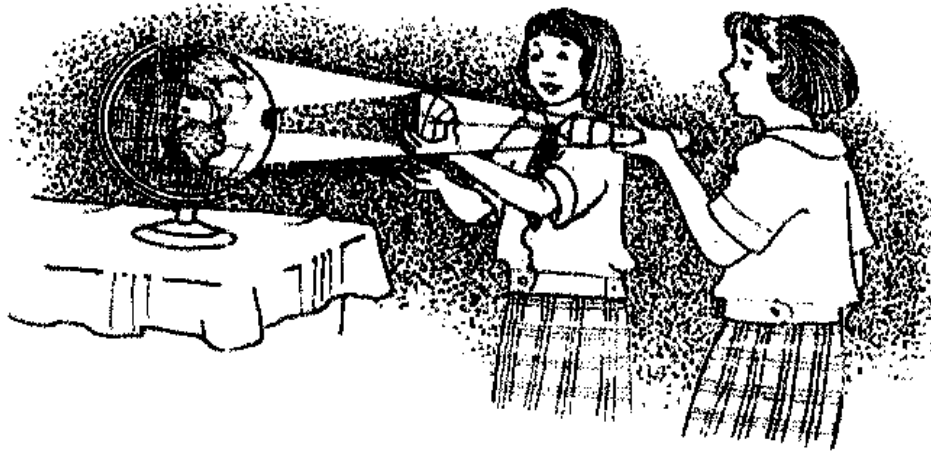
During the new moon, the sun, moon and earth are aligned and the moon casts a shadow on the earth for only a few minutes.



This is what you see during a solar eclipse.



Let's Do This



Place a big ball on the table.

Darken the room.

Ask a classmate to focus a flashlight on the globe.

Hold a small ball between the flashlight and the big ball.

The big ball represents the earth and the small ball represents the moon. Observe the part of the earth as the moon blocks the light.

1. Are all parts of the Earth blocked by the moon?
Yes or No _____
2. What phase of the moon will solar eclipse happen? _____
3. Where should the moon be, so that there could be a solar eclipse? Draw it.



sun



earth

4. Where should the earth be, so that there could be a solar eclipse? Draw it.



sun



moon



Let's Do More

A. A SOLAR ECLIPSE LASTS FOR A FEW MINUTES ONLY. WHY?

B. WHY DO YOU THINK SOLAR ECLIPSE HAPPENS ONLY DURING A NEW MOON?



Let's Remember This

A solar eclipse occurs when the moon is between the sun and the earth. This could happen during a new moon.



Let's Test Ourselves

Fill in the blank to complete the statement.

1. The _____ shines on the moon at all time.
2. One half of the _____ is always dark.
3. Only _____ of the moon gets light from the sun.
4. The earth revolves around the _____.
5. The moon revolves around the _____.



Science Fact File

- Solar eclipses can only occur during a new moon.
- Solar eclipses can occur at least 2 and no more than 5 times a year.
- The maximum time for a total solar eclipse is 7 minutes and 40 seconds.
- The maximum time for an annular solar eclipse is 12 minutes 24 seconds.
- Solar eclipses are visible in a narrow path a maximum of 167 miles wide (269 km.)



Answer Key

Let's Try This

1. True 2. True 3. False 4. True 5. False

Let's Do This

1. No
2. New Moon
3.



sun



moon



earth

4.



sun



moon



earth

Let's Do More

- A. Solar eclipse only last a few minutes because the moon continues to revolve around the earth.
- B. Solar eclipse can only happen during new moon because this is when the moon, the earth and the sun are aligned and the moon is in between where it can cast a shadow over earth.

Let's Test Ourselves

1. sun
2. moon
3. One-half
4. sun
5. Earth