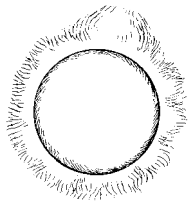


NAME _____



Build an Eclipse

Sometimes the movements of the Earth and moon block the sun's light from reaching each other. When the moon blocks the sun from our view, we have a *solar eclipse*. A *lunar eclipse* occurs when the moon passes through Earth's shadow.

THINK & PREDICT

? What arrangement of the sun, moon, and Earth do you think causes a solar eclipse? Sketch it here:

? What arrangement of the sun, moon, and Earth do you think causes a lunar eclipse? Sketch it here:

OBSERVE & EXPERIMENT

1 Form two balls out of clay—one the size of a pea, the other about the size of a Ping-Pong ball. Stick the toothpick into the pea-sized ball for a handle.

2 Turn on the flashlight and set it and the larger ball on a desk so the light shines directly on the ball. The flashlight represents the sun's light, the larger ball the Earth, and the smaller ball the moon.

YOU'LL NEED

- strong flashlight
- toothpick
- dark-colored modeling clay

HELPFUL HINT

The room doesn't have to be dark to do this activity. However, try to avoid direct sunlight or bright lights.

3 Hold the moon by its handle and position it in orbit around the Earth to create a solar eclipse. Draw your setup here:



4 Next, position the moon in orbit around the Earth to create a lunar eclipse. Draw your setup here:



WHAT HAPPENED?

Compare your first sketches with the ones you drew based on your experiment. Were your predictions correct? Why or why not? _____

THINK & WRITE

Say you're watching a lunar eclipse. What do you see? What's happening to cause the eclipse?

Say you're watching a solar eclipse. What do you see? What's happening to cause the eclipse?

THINK HARDER!

Eclipses are rare events. Why do you think they don't happen every month as the moon travels around the Earth? _____
