

Teacher Guide

SEP Data Analysis Lab

How can you predict how a solar eclipse will look to an observer at various positions?






Go Further presents another opportunity for students to practice making claims by analyzing information and data and supporting their claims with evidence and reasoning.

ABOUT THE LAB

- Make sure all students correctly locate the umbra and penumbra.

ANALYZE AND INTERPRET DATA

1. and 2. See sample data table below.

Location of Observer	Description of What the Observer Sees	Example Drawing
Point A (umbra)	Students should draw a total eclipse with the Moon completely blocking out the Sun.	
Point B (penumbra)	Students should draw a partial eclipse with the Moon almost completely covering the Sun.	
Point C (umbra)	Students should draw a total eclipse with the Moon completely blocking out the Sun.	
Point D (penumbra)	Students should draw a partial eclipse with a small Moon covering a tiny portion of the larger Sun.	
Point E (penumbra)	Students should draw an annular eclipse with a small Moon centered over a larger Sun.	

3. Students should identify the type of eclipse represented in each drawing, and explain how they identified the eclipses. For example, students should explain that an observer in the umbra would experience a total solar eclipse, and the Sun is completely blocked out during this event.