

Alternative Assessment—Unit 2.1

Modeling Moon Phases and Eclipses

Grade 6 Science

Overview

Students model the location of the moon relative to the Earth and the Sun during moon phases or eclipses.

Content Standards

GLE 0607.6.4 Describe the different stages in the lunar cycle.

GLE 0607.6.7 Describe the causes of lunar and solar eclipses.

GLE 0607.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.

GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

MCS Learning Outcome: Use models of the Sun, Moon, and Earth to explain the mechanics of phases of the moon. Analyze the conditions under which the Moon and Earth's shadows cause eclipses.

Materials

Models of Earth and Moon, lamp for the sun OR paper cutouts for models

Resources

Students select models or materials to construct models of the Earth, Moon, and Sun. They randomly draw a task to illustrate (full moon, new moon, half moon, solar eclipse, or lunar eclipse). See Tennessee Holt Science and Technology, TE p. 296 for a description of this assessment.

Assessment Rubric

Criteria	Advanced	Proficient	Below standard
Modeling	Accurately and proficiently selected and used appropriate materials for models, arranged the models in correct relationship for the phenomenon on the first attempt	Selected and used appropriate materials for models and arranged the models in correct relationship for the phenomenon on the second attempt	Selected and used appropriate materials for models and arranged the models in correct relationship for the phenomenon on the third attempt or with assistance
Explanation	Presented a clear explanation using appropriate terminology detailing the causes of the selected phenomenon	Presented a clear explanation using scientific terminology when assisted by leading questions	Presented a clear explanation using some scientific terminology only when assisted by the teacher