

## 1-ESS1-1 Earth's Place in the Universe

Students who demonstrate understanding can:

- 1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.** [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.] [Assessment Boundary: Assessment of star patterns is limited to stars being seen at night and not during the day.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

### Science and Engineering Practices

#### Analyzing and Interpreting Data

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.

### Disciplinary Core Ideas

#### ESS1.A: The Universe and its Stars

- Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.

### Crosscutting Concepts

#### Patterns

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

#### Connections to Nature of Science

#### Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes natural events happen today as they happened in the past.
- Many events are repeated.

### Observable features of the student performance by the end of the grade:

1	Organizing data
a	With guidance, students use graphical displays (e.g., picture, chart) to organize data from given observations (firsthand or from media), including: <ol style="list-style-type: none"> <li>Objects (i.e., sun, moon, stars) visible in the sky during the day.</li> <li>Objects (i.e., sun, moon, stars) visible in the sky during the night.</li> <li>The position of the sun in the sky at various times during the day.</li> <li>The position of the moon in the sky at various times during the day or night.</li> </ol>
2	Identifying relationships
a	Students identify and describe* patterns in the organized data, including: <ol style="list-style-type: none"> <li>Stars are not seen in the sky during the day, but they are seen in the sky during the night.</li> <li>The sun is at different positions in the sky at different times of the day, appearing to rise in one part of the sky in the morning and appearing to set in another part of the sky in the evening.</li> <li>The moon can be seen during the day and at night, but the sun can only be seen during the day.</li> <li>The moon is at different positions in the sky at different times of the day or night, appearing to rise in one part of the sky and appearing to set in another part of the sky.</li> </ol>
3	Interpreting data
a	Students use the identified patterns of the motions of objects in the sky to provide evidence that future appearances of those objects can be predicted (e.g., if the moon is observed to rise in one part of the sky, a prediction can be made that the moon will move across the sky and appear to set in a different portion of the sky; if the sun is observed to rise in one part of the sky, a prediction can be made about approximately where the sun will be at different times of day).
b	Students use patterns related to the appearance of objects in the sky to provide evidence that future appearances of those objects can be predicted (e.g., when the sun sets and can no longer be seen, a prediction can be made that the sun will rise again in the morning; a prediction can be made that stars will only be seen at night).