Educational Resources from *Phenomenon Science Education*

Student Proficiency Goals for **NGSS K-PS3-1**

Information about K-PS3-1

NGSS Performance Expectation K-PS3-1.

Make observations to determine the effect of sunlight on Earth's surface.

Clarification Statement.

Examples of Earth's surface could include sand, soil, rocks, and water.

Assessment Limits.

Assessment of temperature is limited to relative measures such as warmer/cooler.

Science and Engineering Practice (Planning and Carrying Out Investigations)

- Make observations (firsthand or from media) to collect data that can be used to make comparisons.

Disciplinary Core Idea (PS3.B: Conservation of Energy and Energy Transfer)

- Sunlight warms Earth's surface.

Crosscutting Concept (Cause and Effect)

- Events have causes that generate observable patterns.

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Student Proficiency Goals for **NGSS K-PS3-1**

<table>
<tr><th colspan="2">Student Proficiency Goals</th></tr>
<tr><td colspan="2">SEP (Planning and Carrying Out Investigations):

• Students make observations (firsthand or from grade-appropriate media) of Earth materials in both direct sunlight and shade.
• Students use data from their observations to compare relative warmness or coolness of Earth materials in both direct sunlight and shade.</td></tr>
<tr><td>DCI (PS3.B Conservation of Energy and Energy Transfer):

• Students know that sunlight warms Earth’s surface.</td><td>CCC (Cause and Effect):

• Students use cause-and-effect to think about the temperature of Earth materials in both direct sunlight and shade.
• Students consider the pattern of Earth materials often being warm in direct sunlight and cool in the shade.</td></tr>
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