

# Needs of Plants

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**Grade Level** 5th Grade

**Course** Earth Science

What is in a phenomenon-driven three-dimensional (3D) instructional set? These science resources use phenomena to facilitate engaging and meaningful learning, instruction, and formative assessment. Each resource set contains a guiding document and three other types of documents: an Instructional Task (IT), a corresponding formative Assessment Task (AT), and a corresponding Pattern Analysis of Student Thinking (PAST). These resources are not intended to be a complete lesson plan. Three-dimensional learning is not limited to one specific type of lesson format and is compatible with most lesson plan models. The IT proposes two or more possible phenomena that could be used to drive an instructional sequence addressing a specific OAS-S standard. It also provides suggestions for engaging students with the phenomena through meaningful learning experiences in three dimensions. The AT focuses on a phenomenon-associated scenario. It contains one or more tasks designed to give students opportunities to show their thinking and provide evidence-based explanations about the disciplinary core ideas (DCIs) using crosscutting concepts and scientific practices for that standard. This resource set does not include a PAST document.

# Performance Expectation (PE)

Support an argument that plants get the materials they need for growth chiefly from air and water.

# Disciplinary Core Ideas (DCI)

The energy released from food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water).

# Resource Attachments

**Phenomenon-Based Instructional Task**

- 5.LS1.1 IT—Needs of Plants.pdf
- Guide to Using a Phenomenon-Driven Three-Dimensional Instructional Set.pdf

**Formative Assessment Task**

- 5.LS1.1 AT—Needs of Plants.pdf

**Pattern Analysis of Student Thinking (PAST)**

- Guide to Using a Phenomenon-Driven Three-Dimensional Instructional Set—Needs of Plants.pdf