

Educational Resources from *Phenomenon Science Education*

Student Proficiency Goals for NGSS K-ESS3-3



Information about K-ESS3-3

NGSS Performance Expectation K-ESS3-3.

Communicate solutions that will reduce the impact of, humans on the land, water, air, and/or other living things in the local environment.*

Clarification Statement.

Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.

Assessment Limits.

No specific assessment limits are listed for this Performance Expectation.

Science and Engineering Practice (Obtaining Evaluating and Communicating Information)

- Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.

Disciplinary Core Idea (ESS3.C: Human Impacts on Earth Systems)

- Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.

Disciplinary Core Idea (ETS1.B: Developing Possible Solutions)

- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary)

Crosscutting Concept (Cause and Effect)

- Events have causes that generate observable patterns.

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Student Proficiency Goals for **NGSS K-ESS3-3**



Student Proficiency Goals

SEP (Obtaining, Evaluating and Communicating Information):

- Students communicate information about positive and negative effects humans have on local environments.
- Students create models and/or drawings that show solutions to negative effects people have on local environments, providing details about scientific ideas.
- Students communicate information, both orally and/or through writing using their models and/or drawings, about solutions that reduce negative effects people have on local environments.

DCI (ESS3.C Human Impacts on Earth Systems):

- Students know that people make choices that help them live more comfortably.
- Students know that these choices can affect the land, water, air, and/or other living things in their local environments in positive and/or negative ways.
- Students know that people can make choices to avoid or reduce their impacts on the land, water, air, and/or other living things in their local environments.

DCI (ETS1.B Developing Possible Solutions):

- Students know that designs can be shown through sketches, drawings, and/or physical models.
- Students know that sketches, drawings, and physical models are useful in communicating ideas to other people.
- Students know that they can use sketches, drawings, and/or physical models to communicate their designs for solutions.

CCC (Cause and Effect):

- Students notice patterns in how things people do to live comfortably can affect the land, water, air, and/or other living things.
- Students consider specific impacts that people can have on local environments because of their choices.
- Students consider things that people can do to reduce their impacts on local environments.