Kindergarten

3.3.K.E Earth and Space Sciences: Earth and Human Activity

Students who demonstrate understanding can *communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.*

Clarifying 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 Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • Communicate information with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas.	**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. **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.	**Cause and Effect** • Events have causes that generate observable patterns.

Pennsylvania Context: Examples of Pennsylvania context include habitat destruction, and industrial operations, or examples of how humans affect the environment by their actions. Wastewater treatment, landfills, and recycling centers provide additional context.

PA Career Ready Skills: Engage in reciprocal communication with peers and adults.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.06.01.01.a: Research and explain the foundational cycles in AFNR (e.g., water cycle, nutrient cycle, carbon cycle, etc.).
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 3.1.C. Identifying and critiquing alternative solutions and courses of action: Learners develop plans, including possible design solutions, for addressing selected local environmental issues.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.1.K.A.1: Know number names and write and recite the count sequence.
PA Standards: Social Studies	5.2.K.B: Identify a problem and discuss possible solutions.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-4B: Illustrate helpful and harmful effects of technology.