South Carolina Science Standards: Human Impact

Third Grade

1. Science and Engineering Practices
    a. 3.S.1B.1
        i. Construct devices or design solutions to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the devices or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem and refine the design if needed, and (6) communicate the results.
2. Earth Science: Earth's Materials and Processes
    a. 3.E.4A.3
        i. Obtain and communicate information to exemplify how humans obtain, use, and protect renewable and nonrenewable Earth resources.
    b. 3.E.4B.3
        i. Obtain and communicate information to explain how natural events (such as fires, landslides, earthquakes, volcanic eruptions, or floods) and human activities (such as farming, mining, or building) impact the environment.
3. Life Science: Environments and Habitats
    a. 3.L.5B.1
        i. Obtain and communicate information to explain how changes in habitats (such as those that occur naturally or those caused by organisms) can be beneficial or harmful to the organisms that live there.

Fourth Grade

1. Science and Engineering Practices
    a. 4.S.1B.1
        i. Construct devices or design solutions to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the devices or solutions, (3) generate and

communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem and refine the design if needed, and (6) communicate the results.

Fifth Grade

1. Science and Engineering Practices
    a. 5.S.1B.1
        i. Construct devices or design solutions to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the devices or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem and refine the design if needed, and (6) communicate the results.
2. Earth Science: Changes in Landforms and Oceans
    a. 5.E.3B.3
        i. Construct scientific arguments to support claims that human activities (such as conservation efforts or pollution) affect the land and oceans of Earth.
3. Life Science: Interdependent Relationships in Ecosystems
    a. 5.L.4A.1
        i. Analyze and interpret data to summarize the abiotic factors (including quantity of light and water, range of temperature, salinity, and soil composition) of different terrestrial ecosystems and aquatic ecosystems.
    b. 5.L.4A.2
        i. Obtain and communicate information to describe and compare the biotic factors (including individual organisms, populations, and communities) of different terrestrial and aquatic ecosystems.
    c. 5.L.4B.4
        i. Construct scientific arguments to explain how limiting factors (including food, water, space, and shelter) or a newly introduced organism can affect an ecosystem.

Sixth Grade

1. Science and Engineering Practices
    a. 6.S.1B.1

        i. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the device or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem and refine the design if needed, and (6) communicate the results.
    b. 6.E.2A.2
        i. Critically analyze scientific arguments based on evidence for and against how different phenomena (natural and human induced) may contribute to the composition of Earth's atmosphere.

Seventh Grade

1. Science and Engineering Practices
    a. 7.S.1B.1
        i. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the device or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem and refine the design if needed, and (6) communicate the results.
2. Ecology: Interactions of Living Systems and the Environment
    a. 7.EC.5A.3
        i. Analyze and interpret data to predict changes in the number of organisms within a population when certain changes occur to the physical environment (such as changes due to natural hazards or limiting factors).
    b. 7.EC.5B.4
        i. Define problems caused by the introduction of a new species in an environment and design devices or solutions to minimize the impact(s) to the balance of an ecosystem.