

Disciplinary Core Idea

3.ESS2.D: Weather and Climate

Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)

Disciplinary Core Idea

3.ESS2.D: Weather and Climate

Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)

Disciplinary Core Idea

3.ESS3.B: Natural Hazards

A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1)

Performance Expectation

3-ESS2-1: Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.

Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.

Performance Expectation

3-ESS2-2: Obtain and combine information to describe climates in different regions of the world.

Clarification Statement: none

Assessment Boundary: none

Performance Expectation

3-ESS3-1: Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.

Assessment Boundary: none

Science and Engineering Practice

Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

Represent data in tables and various graphical displays (bar graphs and pictographs) to reveal patterns that indicate relationships. (3-ESS2-1)

Science and Engineering Practice

Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).

Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-ESS3-1)

Science and Engineering Practice

Obtaining, Evaluating, and Communicating Information

Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.

Obtain and combine information from books and other reliable media to explain phenomena. (3-ESS2-2)

Crosscutting Concept

Patterns

Patterns of change can be used to make predictions (3-ESS2-1), (3-ESS2-2)

Crosscutting Concept

Cause and Effect

Cause and effect relationships are routinely identified, tested, and used to explain change. (3-ESS3-1)

Connection to Nature of Science

Science Is a Human Endeavor

Science affects everyday life. (3-ESS3-1)

Connection to Engineering, Technology, and Applications of Science

Influence of Science, Engineering, and Technology on Society and the Natural World

Engineers improve existing technologies or develop new ones to increase their benefits (e.g., better artificial limbs), decrease known risks (e.g., seatbelts in cars), and meet societal demands (e.g., cell phones). (3-ESS3-1)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.3.1 - Key Ideas and Details

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-ESS2-2), (3-ESS3-1)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.3.9 - Integration of Knowledge and Ideas

Compare and contrast the most important points and key details presented in two texts on the same topic. (3-ESS2-2)

Common Core State Standards for ELA/Literacy

Card Type name

W.3.1 - Text Types and Purposes

Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-ESS3-1)

Common Core State Standards for ELA/Literacy

Card Type name

W.3.7 - Research to Build and Present Knowledge

Conduct short research projects that build knowledge about a topic. (3-ESS3-1)

Common Core State Standards for ELA/Literacy

Card Type name

W.3.8 - Research to Build and Present Knowledge

Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-ESS2-2)

Common Core State Standards for Mathematics

Measurement & Data

3.MD.A.2 - Solve problems involving measurement and estimation.

Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-ESS2-1)

Common Core State Standards for Mathematics

Measurement & Data

3.MD.B.3 - Represent and interpret data.

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. (3-ESS2-1)

Common Core State Standards for Mathematics

Mathematical Practices

MP.2 - Reason abstractly and quantitatively

Reason abstractly and quantitatively. (3-ESS2-1), (3-ESS2-2), (3-ESS3-1)

Common Core State Standards for Mathematics

Mathematical Practices

MP.4 - Model with mathematics

Model with mathematics. (3-ESS2-1), (3-ESS2-2), (3-ESS3-1)

Common Core State Standards for Mathematics

Mathematical Practices

MP.5 - Use appropriate tools strategically

Use appropriate tools strategically. (3-ESS2-1)