

Grade 3: Overview

Human Interactions

In grade 3, students develop and sharpen their skills at obtaining, recording and charting, and analyzing data in order to study their environment. They use these practices to study the interactions between humans and earth systems, humans and the environment, and humans and the designed world. They learn that these entities not only interact but influence behaviors, reactions, and traits of organisms. Grade 3 students analyze weather patterns and consider humans' influence and opportunity to impact weather-related events. In life science they study the interactions between and influence of the environment and human traits and characteristics. They use the engineering design process to identify a problem and design solutions that enhance human's interactions with their surroundings and to meet their needs. Students consider the interactions and consequent reactions between objects and forces, including forces that are balanced or not. Students reason and provide evidence to support arguments for the influence of humans on nature and nature on human experience.

Grade 3: Earth and Space Sciences

3-ESS2 Earth's Systems	
3-ESS2-1. Use graphs and tables of local weather data to describe and predict typical weather during a particular season in an area. [Clarification Statement: Examples of data could include average temperature, precipitation, wind direction and wind speed.] [Assessment Boundary: Graphical displays are limited to pictographs and bar graphs. Assessment does not include climate change.]	
3-ESS2-2. Obtain and summarize information about the climate of different regions of the world to illustrate that typical weather conditions over a year vary by region.	
The performance expectations above were developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :	
Science and Engineering Practices	Disciplinary Core Ideas
Analyzing and Interpreting Data <ul style="list-style-type: none"> Represent data in tables and various graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. (3-ESS2-1) Obtaining, Evaluating, and Communicating Information <ul style="list-style-type: none"> Obtain and combine information from books and other reliable media to explain phenomena. (3-ESS2-2) 	ESS2.D: Weather and Climate <ul style="list-style-type: none"> 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) Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)
<i>Common Core State Standards Connections:</i> ELA/Literacy – RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-ESS2-2) RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-ESS2-2) RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic. (3-ESS2-2) Mathematics – 3.MD.B.3 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 bar graphs. (3-ESS2-1)	

3-ESS3 Earth and Human Activity	
3-ESS3-1. Evaluate the merit of a design solution that reduces the impacts of a weather-related hazard.* [Clarification Statement: Examples of design solutions to a weather-related hazard could include a barrier to prevent flooding, a wind-resistant roof, and a lightning rod.]	
The performance expectations above were developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :	
Science and Engineering Practices	Disciplinary Core Ideas
Engaging in Argument from Evidence <ul style="list-style-type: none"> 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) 	ESS3.B: Natural Hazards <ul style="list-style-type: none"> 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) (Note: This Disciplinary Core Idea is also addressed by 4-ESS3-2.)