

3-ESS2-1 Earth's Systems

Students who demonstrate understanding can:

- 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.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

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.

Disciplinary Core Ideas

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.

Crosscutting Concepts

Patterns

- Patterns of change can be used to make predictions.

Observable features of the student performance by the end of the grade:

1	Organizing data	
	a	Students use graphical displays (e.g., table, chart, graph) to organize the given data by season using tables, pictographs, and/or bar charts, including:
		<ul style="list-style-type: none"> i. Weather condition data from the same area across multiple seasons (e.g., average temperature, precipitation, wind direction). ii. Weather condition data from different areas (e.g., hometown and nonlocal areas, such as a town in another state).
2	Identifying relationships	
	a	Students identify and describe* patterns of weather conditions across:
		<ul style="list-style-type: none"> i. Different seasons (e.g., cold and dry in the winter, hot and wet in the summer; more or less wind in a particular season). ii. Different areas (e.g., certain areas (defined by location, such as a town in the Pacific Northwest), have high precipitation, while a different area (based on location or type, such as a town in the Southwest) have very little precipitation).
3	Interpreting data	
	a	Students use patterns of weather conditions in different seasons and different areas to predict:
		<ul style="list-style-type: none"> i. The typical weather conditions expected during a particular season (e.g., "In our town in the summer it is typically hot, as indicated on a bar graph over time, while in the winter it is typically cold; therefore, the prediction is that next summer it will be hot and next winter it will be cold."). ii. The typical weather conditions expected during a particular season in different areas.