Weather and Climate: Lesson 8

Essential Question: How can we prevent a storm from becoming a disaster?

Focus Question: How do we describe weather?

Phenomenon Question: How does weather change throughout a year?

Objective: Graph and analyze yearlong temperature and precipitation data to describe weather conditions throughout a year.	**Materials:** Pencil	**Projected Slides:** 86-96

Share the following items with families in advance of the lesson.

- Links: Lesson 8 Daily Video, Science Journal Lesson 8
- Materials list
- Assignment: After watching the video, students identify the average temperature for December in Boston, MA, in 2017, describe how the average temperature changed throughout the year, find the total precipitation for December in Boston, MA in 2017, and describe how the amount of precipitation changed throughout the year.

Remote Learning Recommendations

Type		Pacing	Activity	Notes
Hybrid (in-class synchronous and remote asynchronous)	Asynchronous (in Sync)	10–15 minutes	Daily Video	Video description: Students use weather data to build class graphs that show weather conditions experienced each month throughout a year.
		10 minutes	Assignment	The video asks students to identify the average temperature for December in Boston, MA, in 2017, describe how the average temperature changed throughout the year, find the total precipitation for December in Boston, MA in 2017, and describe how the amount of precipitation changed throughout the year.
		15 minutes	Virtual Class Meeting (Optional): Science Discourse	Ideally this meeting is held after students watch the video and complete the assignment: • *Graph Temperature and Precipitation Data Remote Alternative* Use local weather data to graph temperature and precipitation by making a bar graph for each month's average temperature and each month's total precipitation. Facilitate a discussion to allow students to guide the process. Once each month's graph is complete, facilitate a discussion about what students notice about how average temperature and amount of precipitation changed throughout the graphed year. Note any students who need support in describing and summarizing weather conditions for the entire year. Ask students to describe the trends they notice in smaller intervals such as every three months. Once students describe the weather conditions they noticed during these smaller intervals, ask them to apply those trends to the whole year.

	Synchronous	5 minutes	Launch	Refer to Teacher Edition to conduct lesson Launch (Projected slides 86-88). • Analyze Graphs Give all students a chance to participate either in-person or virtually.
		37 minutes	Learn	Refer to the Teacher Edition to conduct lesson Learn (Projected slides 89-94). • Plan to Collect and Graph Data • Graph Temperature and Precipitation Data • Analyze Yearlong Data Give all students a chance to participate either in-person or virtually.
		3 minutes	Land	Refer to the Teacher Edition to conduct lesson Land (Projected slides 95-96). • Assign Optional Homework Give all students a chance to participate either in-person or virtually.
Additional Instruction			Extension (Optional)	Ask students to record different observations and clues that signal the end of one season and the beginning of another season. For example, students may note that the start of a new school year signals the end of summer and the beginning of fall.

Asynchronous	Synchronous	Hybrid
Remote students using in Sync with optional virtual class meeting	Some students in-class and some remote, but all participating live	In-class students are synchronous and remote students asynchronous