Will Rain Return?

Read weather data and plan a way to check a forecast.

E.4.9B "Students will demonstrate an understanding of weather and climate patterns. Analyze and interpret data (e.g., temperature, precipitation, wind speed/direction, relative humidity, or cloud types) to predict changes in weather over time..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle the rain amounts from Tuesday through Thursday. Underline the sentence that tells you how to spot a pattern in the reports.

A Forecast for Cedar Park

1 At Cedar Park, a footpath runs beside a small stream. After heavy rain, puddles can cover the path. The park team wants to know whether it may rain again on Friday. Weather is what the air is like over a short time. A forecast is a careful guess, not a promise.

2 At the same time each day, the team records wind speed and the sky. They also measure the rain that fell since the last check. The table shows four daily reports from one week. To spot a pattern, look at how each kind of reading changes. A single report cannot show a trend.

CEDAR PARK WEATHER REPORTS

Day	Rain since last check (mm)	Wind speed (km/h)	Sky
Monday	0	5	Clear
Tuesday	2	8	Some clouds
Wednesday	7	12	Mostly cloudy
Thursday	15	18	Thick gray clouds

3 To test a forecast, the team can collect fresh measurements on Friday and compare them with the earlier reports. A weather instrument needs to give readings people can repeat. Builders can try a first design, check its readings, then change one part that causes trouble. A forecast and a tool both improve when people use evidence.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did the amount of rain change from Tuesday to Thursday? Use two numbers from the table.

2. How did wind speed change from Monday to Thursday? What pattern do the daily readings show?

3. What might the park team predict about Friday's rain and wind? Use both rain and wind readings to explain.

4. Suppose Friday has 0 mm of rain and a wind speed of 4 km/h. What would those readings tell the team about a forecast of continued wet, windy weather?

3 YOUR TURN

Your own words

The park team needs to measure Friday's rain. Sketch a rain gauge made from everyday materials and label how you would read the amount. Write how you would test it and one change you would make if its readings were hard to see.

ANSWER KEY

Will Rain Return?

GRADE 4 · E.4.9B

PART 1 · READ AND MARK

Circle the rain amounts from Tuesday through Thursday. Underline the sentence that tells you how to spot a pattern in the reports. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did the amount of rain change from Tuesday to Thursday? Use two numbers from the table.	**Rain increased from 2 mm on Tuesday to 15 mm on Thursday.**
2	How did wind speed change from Monday to Thursday? What pattern do the daily readings show?	**Wind speed rose from 5 km/h to 18 km/h. It increased each day.**
3	What might the park team predict about Friday's rain and wind? Use both rain and wind readings to explain.	**Friday may be rainy and windy. Rain rose from 0 to 15 mm, and wind speed rose from 5 to 18 km/h during the four days.**
4	Suppose Friday has 0 mm of rain and a wind speed of 4 km/h. What would those readings tell the team about a forecast of continued wet, windy weather?	**The forecast did not match Friday's readings. Friday was dry, and its wind was slower than on any day in the table.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Sketch: A straight-sided, clear jar stands on level ground away from trees. A ruler is taped to its side, with zero lined up with the inside bottom of the jar. I would compare its reading after rain with a second rain gauge. If the marks were hard to see, I would replace the ruler with one that has darker marks.

Accept cautious Friday predictions supported by the rising rain and wind readings. For the design, look for a way to read rainfall, a test of the gauge, and a change that addresses a problem found during testing.