Climate Clue Hunt

Use location clues and long-term data to explain climate differences.

E.4.9B.2 "Construct explanations about regional climate differences using maps and long-term data from various regions."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each region's location clue in the passage. Circle sentences that explain how ocean air or land height can affect climate.

Three Places, Different Climates

1 Three made-up regions sit near an ocean and a mountain range. Sand Cove lies beside the ocean, west of the mountains. Cloud Peak sits high on the mountains' west side. Dust Valley lies beyond the mountains to the east. These written location clues give information a map could show. The table gives long-term climate averages.

MADE-UP CLIMATE AVERAGES OVER 30 YEARS

Region	Average rain each year (inches)	Average temperature (°F)
Sand Cove	42	58
Cloud Peak	64	40
Dust Valley	12	54

2 The table shows made-up averages for 30 years, not a single storm or hot day. Winds carry moist air from the ocean toward the mountains. As the air climbs the west side, it cools and can drop rain. Air that crosses to the east side often has less moisture left.

3 The ocean can also keep nearby places from getting too hot or too cold. Higher land is often cooler than lower land nearby. A climate average combines many years of weather, so one unusual week does not tell you what a region is usually like. Look at both location and long-term numbers.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why does Cloud Peak likely get more rain than Dust Valley? Use their locations and the table.

2. Explain why Cloud Peak is cooler than Sand Cove. Use a location clue and both temperatures.

3. Compare the rain at Sand Cove and Dust Valley. How do their locations help explain the difference?

4. Someone says Dust Valley has a wetter climate than Sand Cove because it rained there yesterday. Use the table and location clues to explain why yesterday's rain is not enough evidence.

3 YOUR TURN

Your own words

Stone Shelf is a new region on a high plateau east of the mountains. Predict whether its average temperature would be above or below Dust Valley's 54°F and whether its yearly rain would be closer to Dust Valley's 12 inches or Cloud Peak's 64 inches. Explain both predictions using its location and the table.

ANSWER KEY

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GRADE 4 · E.4.9B.2

PART 1 · READ AND MARK

Underline each region's location clue in the passage. Circle sentences that explain how ocean air or land height can affect climate. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why does Cloud Peak likely get more rain than Dust Valley? Use their locations and the table.	**Cloud Peak is high on the west side, where moist ocean air climbs and drops rain. It averages 64 inches a year, while Dust Valley, east of the mountains, averages 12.**
2	Explain why Cloud Peak is cooler than Sand Cove. Use a location clue and both temperatures.	**Cloud Peak is high on the mountains, where air is often cooler. Its average temperature is 40°F, compared with 58°F at Sand Cove beside the ocean.**
3	Compare the rain at Sand Cove and Dust Valley. How do their locations help explain the difference?	**Sand Cove is west of the mountains near the ocean and averages 42 inches of rain. Dust Valley is east of the mountains, where less ocean moisture reaches it, and averages 12 inches.**
4	Someone says Dust Valley has a wetter climate than Sand Cove because it rained there yesterday. Use the table and location clues to explain why yesterday's rain is not enough evidence.	**One rainy day does not show a region's climate. Over 30 years, Dust Valley, east of the mountains, averages 12 inches of rain a year, while Sand Cove, west of the mountains near the ocean, averages 42.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I predict Stone Shelf would average below 54°F because it is on higher land than Dust Valley. Its yearly rain would probably be closer to 12 inches than to 64 inches because it is east of the mountains, where less ocean moisture reaches the land.

Accept predictions for Stone Shelf that use its higher elevation and east-side location with the table data. Students should treat the predictions as likely, not certain.