

Weather Clue Hunt

Use front symbols and weather data to predict what comes next.

S4E4.b "Interpret data from weather maps, including fronts (warm, cold, and stationary), temperature, pressure, and precipitation to make an informed prediction about tomorrow's weather."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each clue that tells what may happen in Pineville tomorrow. Circle the words or numbers that show temperature, pressure, or precipitation. Inspect the printed map: circle the approaching front symbols and draw a movement arrow toward Pineville. Match each mapped place to its temperature, pressure and precipitation.

A Front Near Pineville

- ① On Tuesday afternoon, a weather map shows conditions around Pineville. The map has a cold front west of town. Triangles point east, showing the front is moving toward Pineville. A warm front is far south. The map labels list Tuesday's readings from nearby places. The printed black-and-white practice map uses shapes rather than front colors; north is up and it is not a current forecast.
- ② Westfield, just behind the cold front, is cooler than Pineville and has lower pressure. It also has light rain. These clues show unsettled weather near the front. As the front moves east, Pineville may get clouds or rain. After it passes, Pineville's temperature will likely drop because cooler air follows a cold front.
- ③ North of Pineville, a stationary front lies near Lake Town. It is not moving much, so clouds or light precipitation can last there. Southport is warm and dry ahead of the distant warm front. The map clues help forecasters compare places and make a careful prediction for the next day.

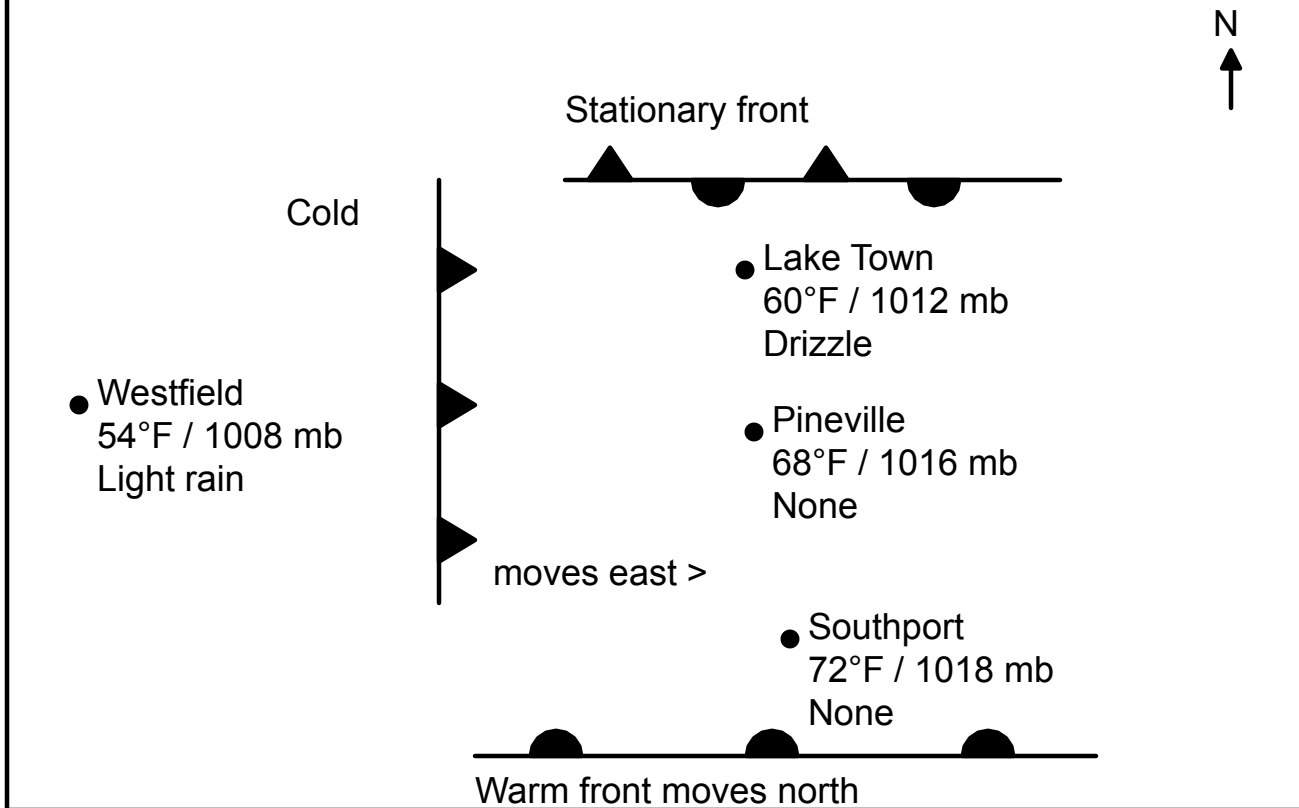
1 STORY ILLUSTRATIONS

Use with the story

Look closely at the supplied picture details. Use this page with the story and questions.

WEATHER MAP FOR PINEVILLE

Tuesday afternoon: fictional practice map



KEY: triangles = cold; semicircles = warm

Alternating opposite-side symbols = stationary

Cold/warm symbols point toward movement.

No scale; positions show relative locations.

2 ANSWER WITH EVIDENCE Use the passage

1 Which place has the lowest air pressure? What precipitation is reported there?

2 Predict Pineville's weather as the cold front arrives. Use its mapped position/direction and one mapped weather reading as evidence.

3 What weather may last near Lake Town tomorrow? Why?

4 How will Pineville's temperature most likely change after the cold front passes? Compare Pineville and Westfield on the map and explain.

3 YOUR TURN Your own words

A new report says Oakview is 64°F with an air pressure of 1014 mb and cloudy skies. A cold front west of Oakview is moving east, and a place behind it is 50°F, 1007 mb, and rainy. Write exactly two sentences predicting Oakview's weather tomorrow. Use at least two clues from the report.

PART 1 • READ AND MARK

Underline each clue that tells what may happen in Pineville tomorrow. Circle the words or numbers that show temperature, pressure, or precipitation. Inspect the printed map: circle the approaching front symbols and draw a movement arrow toward Pineville. Match each mapped place to its temperature, pressure and precipitation. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Which place has the lowest air pressure? What precipitation is reported there?	Westfield has the lowest pressure, 1008 mb, and it has light rain.
2	Predict Pineville's weather as the cold front arrives. Use its mapped position/direction and one mapped weather reading as evidence.	Pineville may get clouds or rain, then become cooler. The cold front is moving east toward Pineville, and Westfield behind it is cooler, has lower pressure, and has light rain.
3	What weather may last near Lake Town tomorrow? Why?	Clouds or light precipitation may last near Lake Town because the stationary front is not moving much.
4	How will Pineville's temperature most likely change after the cold front passes? Compare Pineville and Westfield on the map and explain.	Pineville will likely become cooler: Westfield behind the approaching cold front is 54°F, compared with Pineville's 68°F, a 14°F difference.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Oakview will likely become cooler and may get rain tomorrow. The cold front is moving east toward town, and the cooler, rainy, lower-pressure air is behind it.

Accept predictions that connect the approaching cold front to cooler temperatures and possible clouds or rain. Students may cite the direction of movement, lower pressure, cooler temperature, or rain as supporting clues. Use the actual printed map before predictions: triangles on the west-of-Pineville cold front point east; Westfield is behind it at 54°F/1008 mb/light rain versus Pineville 68°F/1016 mb/no precipitation. This is 14°F cooler and 8 mb lower, evidence for possible unsettled weather then cooling, not a guarantee from pressure alone. Lake Town is near the stationary alternating opposite-side symbols; clouds/drizzle may persist. The distant warm front has semicircles pointing north. Black-and-white symbols correspond to conventional blue/red front shapes; no color-dependent answer required. Check the learner mapped symbol/movement mark and two map-grounded clues. Retain the Oakview transfer report as additional reasoning, not a substitute for the actual map task. Primary symbol reference: NOAA JetStream, How to read Surface Weather Maps.