The Case for Shade

Study how a writer uses sourced evidence for a school audience.

9-10.W.2.b "Develop the topic utilizing credible sources with relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline one fact from the EPA and one from the NWS. Circle the definition of the urban heat island effect, then write 1 beside a concrete waiting-area detail and 2 beside a sentence that connects evidence to a school decision.

Where Should Students Wait?

1 On a hot afternoon, a student waiting for a bus may stand beside a wide patch of asphalt with no nearby tree. The air temperature tells only part of that student's story. According to the U.S. Environmental Protection Agency (EPA), roads and buildings absorb and release more heat than many natural surfaces, contributing to the urban heat island effect. This effect means built-up areas can be warmer than nearby places with more vegetation. For a school deciding where to place a bus shelter, that definition turns a broad environmental issue into a practical question: What will students feel while they wait?

2 Shade can make a measurable difference, but the measurement needs careful wording. The EPA reports that shaded surfaces can be 20 to 45 degrees Fahrenheit cooler than the hottest unshaded surfaces. That figure compares surface temperatures, not the air temperatures shown on a weather app. Imagine two students at dismissal: one stands near a sunlit metal railing, while the other stands beneath a roof beside a shaded wall. The comparison gives school planners a concrete reason to consider where shelter roofs cast shade. It does not promise that every shaded bus stop will cool the air by 20 degrees.

3 Humidity adds another concern for students walking to a stop. The National Weather Service (NWS) uses the heat index to describe how hot it feels when air temperature and humidity are combined. The NWS notes that its heat index values are calculated for shade; exposure to full sun can raise the apparent temperature by as much as 15 degrees Fahrenheit. For a principal choosing between a bare curb and a roofed waiting area, this fact explains why shade matters even when both locations share the same forecast temperature. A roof will not erase a heat wave, but it can reduce direct sun exposure while students wait.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which sentence defines the urban heat island effect? Explain why that definition helps a school audience consider a bus shelter.

2. Why would the claim "Shade lowers air temperature by 20 to 45 degrees" misrepresent the EPA fact in paragraph 2?

3. Which NWS fact supports choosing a roofed waiting area over a bare curb? Explain the connection.

4. What does the students-at-dismissal example add that the EPA temperature figure alone does not? What does the figure add?

3 YOUR TURN

Your own words

Write one paragraph of 80 to 110 words recommending shade for a school courtyard, not a bus stop. Address the school board, use one accurately attributed fact from the EPA and one from the NWS in the passage, propose a concrete courtyard feature, and explain how the facts support your recommendation without confusing surface and air temperatures.

ANSWER KEY

The Case for Shade

HIGH SCHOOL · 9-10.W.2.b

PART 1 · READ AND MARK

Underline one fact from the EPA and one from the NWS. Circle the definition of the urban heat island effect, then write 1 beside a concrete waiting-area detail and 2 beside a sentence that connects evidence to a school decision. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which sentence defines the urban heat island effect? Explain why that definition helps a school audience consider a bus shelter.	**Built-up areas can be warmer than nearby places with more vegetation. The definition helps school readers connect the surrounding pavement and buildings to conditions where students wait.**
2	Why would the claim "Shade lowers air temperature by 20 to 45 degrees" misrepresent the EPA fact in paragraph 2?	**The EPA figure compares shaded and unshaded surface temperatures, not air temperatures.**
3	Which NWS fact supports choosing a roofed waiting area over a bare curb? Explain the connection.	**Full sun can raise the apparent temperature by as much as 15 degrees Fahrenheit compared with the shaded conditions used for heat index values. A roof can reduce students' direct sun exposure.**
4	What does the students-at-dismissal example add that the EPA temperature figure alone does not? What does the figure add?	**The example helps school planners picture where students might stand and where a roof would cast shade. The EPA figure provides a sourced measure of how much shaded and unshaded surface temperatures can differ.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

School board members, I recommend adding a shade sail above the courtyard benches where students eat lunch. The EPA reports that shaded surfaces can be 20 to 45 degrees Fahrenheit cooler than the hottest unshaded surfaces. That difference concerns the benches and pavement, not the air, so place the sail where it shades seats at lunchtime. The National Weather Service says its heat index assumes shade and that full sun can increase the apparent temperature by up to 15 degrees Fahrenheit. A sail would reduce direct sun on students, even though it would not change the day's forecast.

Accept different courtyard features if the paragraph addresses the school board and explains how both attributed facts support the proposal. Do not accept claims that the EPA figure measures air temperature or that shade guarantees a 15-degree drop in apparent temperature.