Shade Evidence Lab

Use facts from an informational text to support a conclusion.

CCSS.ELA-Literacy.WHST.6-8.9 "Draw evidence from informational texts to support analysis, reflection, and research."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two details that support the idea that the school should investigate ways to make its yard cooler, then number the details 1 and 2. Use these details when you explain your reasoning.

The Hot Schoolyard

1 On hot days, paved schoolyards can become much warmer than nearby grassy areas. Asphalt and concrete absorb sunlight, then release stored heat slowly. This effect is part of an urban heat island, a place where buildings and pavement raise local temperatures. Researchers study heat islands because extra heat can make outdoor activity harder and increase the need for air conditioning. At one school in Phoenix, students and scientists compared surface temperatures in sunlit and shaded areas during the same afternoon.

2 They used an infrared thermometer, a tool that measures surface temperature without touching the ground. At 2 p.m., the blacktop in full sun measured 154°F. A shaded section of the same blacktop measured 111°F. The scientists noted that surface temperature is not the same as air temperature, but it affects how hot a space feels to people nearby. Their observations gave the school a reason to examine ways to add shade, especially where students line up or play at recess outside.

3 School leaders considered several options. They could plant drought-tolerant trees, build shade structures, or repaint some dark pavement with lighter, reflective coatings. Each choice has limits. Young trees need water and time before they provide broad shade. Structures can cool an area quickly, but they cost money. Reflective coatings may lower pavement temperature, yet they do not create a place where students can sit under shade. The temperature comparison does not prove which option is best, but it shows why the school should investigate solutions.

2 ANSWER WITH EVIDENCE

Use the passage

1. What conclusion about the schoolyard does the passage support? Give two details from the text that support your answer.

2. How does the comparison between 154°F and 111°F support the idea of adding shade?

3. Which option may lower pavement temperature but does not provide a shaded place for students to sit? Use evidence from the passage.

4. Why does the passage say the temperature comparison does not prove which option is best? Use details about at least two options in your answer.

3 YOUR TURN

Your own words

Write a three-sentence recommendation to the school leaders. Choose one cooling option, support it with two details from the passage, and address one limit of your choice.

ANSWER KEY

Shade Evidence Lab

GRADE 7 · WHST.6-8.9

PART 1 · READ AND MARK

Underline two details that support the idea that the school should investigate ways to make its yard cooler, then number the details 1 and 2. Use these details when you explain your reasoning. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What conclusion about the schoolyard does the passage support? Give two details from the text that support your answer.	**The school should investigate ways to make the yard cooler. The sunlit blacktop measured 154°F while shaded blacktop measured 111°F, and the passage explains that extra heat can make outdoor activity harder.**
2	How does the comparison between 154°F and 111°F support the idea of adding shade?	**The shaded blacktop was 43°F cooler than the blacktop in full sun, so the comparison shows that shade can make paved spaces much less hot.**
3	Which option may lower pavement temperature but does not provide a shaded place for students to sit? Use evidence from the passage.	**Lighter, reflective pavement coatings. The passage says they may lower pavement temperature, yet they do not create a place where students can sit under shade.**
4	Why does the passage say the temperature comparison does not prove which option is best? Use details about at least two options in your answer.	**The choices have different limits. Young trees need water and time, shade structures cost money, and reflective coatings do not provide sitting shade, so the temperature data alone cannot choose the best option.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I recommend adding shade structures above the line-up area first. The passage says that shaded blacktop measured 111°F while blacktop in full sun measured 154°F, so shade could make that space feel less hot. Structures cost money, but they can cool an area quickly.

Accept recommendations that name one listed option, use two accurate text details, and acknowledge a relevant limit. Students may quote or accurately paraphrase the evidence.