Reading the Heat

Compare what digital sources show, explain, and leave uncertain.

7.DL.11 "Compare and contrast the effectiveness of techniques used in a variety of digital sources to generate and answer literal, interpretive, and applied questions and create new understandings."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline one technique each digital source uses to share information, and circle one limit of each source. Number the two sources you would combine to choose places to check again.

What Can Mina Learn About the Schoolyard?

1. On a hot afternoon, Mina searches for evidence about her schoolyard. A short video shows a student pointing an infrared thermometer at sunny blacktop and then shaded grass. Close-up shots show the screen reading 44°C on blacktop and 31°C on grass, making the displayed numbers easy to find. But both sunlight and surface type change between shots. Either factor, or both, might explain the difference. The video cannot isolate the effect of sunlight or surface type.

2. Next, Mina opens an interactive schoolyard map. Clicking a dot reveals where and when a student took a surface reading and what the thermometer displayed. Dots near the basketball court show higher readings than dots near the trees, so the map helps Mina choose places to check again. However, students took the readings at different times of day. The map shows patterns in the recorded readings, not the cause of those patterns or the temperature at any spot right now.

3. Finally, Mina reads a school nurse's digital heat guide. Its question-and-answer headings explain that a thermometer aimed at the ground reports surface temperature, not the air temperature children breathe. The guide advises checking current weather and seeking shade during very hot conditions. Unlike the video, it explains a safety action; unlike the map, it does not identify a particular spot in this yard. Together, the sources suggest places to check more closely before planning outdoor time, not a guaranteed safe route for every day.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do the video's close-ups and the map's clickable dots help Mina answer different literal questions?

2. Why can't Mina use the video to decide whether sunlight or surface type caused the difference in readings?

3. If Mina wants to choose schoolyard spots to measure again today, which source is most useful? Explain one limit of that source.

4. How does the heat guide change what Mina can conclude from the video's readings? What question about the yard does it still leave unanswered?

3 YOUR TURN

Your own words

Your class wants to choose a spot for a temporary outdoor reading area on a hot day. In four sentences, propose a new digital source, say what evidence it would show, compare its usefulness with both the video and the map, and explain how you would use it with the guide to make a careful choice.

ANSWER KEY

Reading the Heat

GRADE 7 · 7.DL.11

PART 1 · READ AND MARK

Underline one technique each digital source uses to share information, and circle one limit of each source. Number the two sources you would combine to choose places to check again. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do the video's close-ups and the map's clickable dots help Mina answer different literal questions?	**The close-ups show the thermometer's displayed numbers. The dots show where and when students took readings, along with the displayed numbers.**
2	Why can't Mina use the video to decide whether sunlight or surface type caused the difference in readings?	**The student measures sunny blacktop and shaded grass, changing both factors. Either factor, or both, might explain the difference.**
3	If Mina wants to choose schoolyard spots to measure again today, which source is most useful? Explain one limit of that source.	**The map identifies spots with different recorded readings. Because readings were taken at different times, it cannot show each spot's temperature right now.**
4	How does the heat guide change what Mina can conclude from the video's readings? What question about the yard does it still leave unanswered?	**The guide shows that the video's numbers are surface readings, not air temperatures. It does not tell Mina which particular yard spot is best for outdoor time.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would make a digital chart of surface readings from possible reading spots, taken at the same time, with each spot's shade and surface type listed. Unlike the video, it would compare several spots without changing the time of day, although shade and surface type could still differ. Unlike the map, it would show readings collected at the same time for this decision. I would follow the guide's advice to check current weather and seek shade, then inspect a possible spot before placing the reading area.

Accept other well-supported comparisons that distinguish recorded surface readings from current conditions. Responses must not claim that the video isolates the effect of sunlight or surface type.