Cooling Claim Check

Weigh evidence behind a schoolyard proposal

10.6.R.3 "Students will evaluate the relevance, reliability, and validity of the information gathered."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each claimed temperature difference, circle details about how the information was gathered, and put a question mark beside evidence that cannot establish what new trees would do within one year.

How Much Cooler?

1. At Cedar High, the outdoor basketball court becomes uncomfortable on hot afternoons. A student group proposes planting trees along its western edge and says the trees will lower the court's air temperature by 10°F within a year. To support that number, the group shares an advertisement from a local nursery: "Trees can make outdoor spaces 10°F cooler." The ad does not name a study, describe where temperatures were taken, or say whether it means air or pavement temperature. The nursery sells the trees the group hopes to buy. Its claim could persuade a reader, but its evidence is hard to check.

2. A science class offers a closer look at the court. On one July afternoon, students used a handheld thermometer to take five air readings beside an existing tree and five over open pavement. Their average readings differed by 3°F. They recorded the readings, location, and time in a shared notebook, so others can inspect what they did. However, the students visited the shaded spot first and the pavement 30 minutes later. They also took all ten readings with one thermometer. The difference might reflect changing weather or the order of measurement, not just shade. One afternoon cannot establish what new trees would do within a year.

3. The regional weather office publishes calibrated air readings from a station six miles from Cedar High. Its records show that the town had unusually hot afternoons that July, which helps explain why students raised the issue. Yet a station six miles away cannot tell how much cooler this court would become after planting. A stronger test would compare air readings from shaded and unshaded spots on the court at the same times across many afternoons, using checked thermometers. Even that test would estimate the effect of existing shade, not guarantee how large new trees will be after one year.

2 ANSWER WITH EVIDENCE

Use the passage

1. What two details make the nursery advertisement difficult to trust as evidence for the group's exact claim?

2. Why are the weather office records useful for understanding the issue but not for predicting the effect of trees on the court?

3. How does the science class's measurement schedule weaken its conclusion about shade?

4. Does the passage provide enough valid evidence to support a 10°F drop in the court's air temperature within a year? Explain.

3 YOUR TURN

Your own words

A student proposes shade sails over the lunch benches and claims they will make the air there 8°F cooler. In four sentences, describe what information you would gather, how you would make the measurements trustworthy and fair, and one limit on what your results could prove.

ANSWER KEY

Cooling Claim Check

GRADE 10 · 10.6.R.3

PART 1 · READ AND MARK

Underline each claimed temperature difference, circle details about how the information was gathered, and put a question mark beside evidence that cannot establish what new trees would do within one year. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What two details make the nursery advertisement difficult to trust as evidence for the group's exact claim?	**The nursery would profit from selling the trees, and its ad names no study or method. It also does not clarify whether 10°F refers to air or pavement.**
2	Why are the weather office records useful for understanding the issue but not for predicting the effect of trees on the court?	**They establish that the town had unusually hot afternoons, but the station is six miles from the court and does not measure the effect of shade there.**
3	How does the science class's measurement schedule weaken its conclusion about shade?	**Students measured the shaded spot first and the pavement 30 minutes later, so changing weather could account for some of the 3°F difference.**
4	Does the passage provide enough valid evidence to support a 10°F drop in the court's air temperature within a year? Explain.	**No. The ad's 10°F claim has no stated method or clear temperature type, and the class found a 3°F difference under limited conditions. Neither source measures the effect of newly planted trees after one year.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would measure air temperature at the benches before and after the sails are installed, and at nearby uncovered benches. I would use checked thermometers and keep a dated record of every reading. I would measure both areas at the same times on many afternoons so changing weather is less likely to explain a difference. Even if the covered benches are cooler, the results might not show the same effect in another season.

Accept other passage-supported concerns about the ad, including its unclear setting. For the open task, look for relevant air measurements, a checkable method, a fair comparison, and a realistic limit.