

Research Question Match

Investigate a question using two records, then refine its scope.

ELA.9.C.4.1 "Conduct research to answer a question, drawing on multiple reliable and valid sources and refining the scope of the question to align with findings."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Use this fictional school research packet. Underline the two source names. Circle facts each source can establish, and mark a limitation. Use both records to investigate the sleep question.

Studying Sleep at Brookside (Research Simulation)

- ① The student council began with this question: "Would a later opening bell improve student sleep?" Brookside has not changed its bell time. This packet contains two fictional records: an official enrollment summary and a student survey report. Investigate what these sources can tell you now, and refine the question so its scope matches the findings. These records cannot establish the effect of a bell-time change.
- ② **Source A: Registrar's enrollment summary.** Brookside has 600 enrolled students, with 150 in each of grades 9, 10, 11 and 12. The registrar checked the counts against the current student register on October 1. Each grade therefore makes up 25 percent of the school. This source is appropriate for enrollment counts. It contains no observations of student sleep or stress.

③ **Source B: Student council survey report.** During October 7-11, council members invited students to complete an anonymous form. It asked their grade and usual school-night sleep hours. The table summarizes all 180 replies. Participation was voluntary, so students who replied may differ from those who did not. Hours are self-reports, not measured sleep. The council checked arithmetic, but cannot claim the results represent every Brookside student. Compare its respondents with Source A before refining your question.

SOURCE B: VOLUNTARY SLEEP SURVEY

Grade	Replies	Average reported sleep (hours)
9	81	7.1
10	36	6.9
11	36	6.7
12	27	6.4

2 ANSWER WITH EVIDENCE _____ Use the passage

① Can these records establish whether a later bell improves sleep? Explain what evidence is missing.

② Use both sources to compare grade 9's share of enrollment with its share of replies. Show the comparison.

③ Explain one reason to use each source for this investigation and one limit on what each can tell you.

- 4** What does the survey show about grade 9 and grade 12 respondents? State a finding without claiming that grade level caused it.

3 YOUR TURN _____ Your own words

Complete a brief research note using both packet sources. State a refined question that matches these findings. Answer it with one fact from each named source, explain how a limitation changed your question's scope, and identify one additional source or collection step needed for the original bell-time question.

[illegible]

PART 1 • READ AND MARK

Use this fictional school research packet. Underline the two source names. Circle facts each source can establish, and mark a limitation. Use both records to investigate the sleep question. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Can these records establish whether a later bell improves sleep? Explain what evidence is missing.	No. The school has not changed the bell time, and the records do not compare sleep under different bell times. They describe enrollment and reported sleep only.
2	Use both sources to compare grade 9's share of enrollment with its share of replies. Show the comparison.	Source A: $150/600 = 25$ percent. Source B: $81/180 = 45$ percent. Grade 9 is overrepresented by 20 percentage points.
3	Explain one reason to use each source for this investigation and one limit on what each can tell you.	The registrar checked the current register, so Source A is appropriate for enrollment counts, but says nothing about sleep. Source B directly asks students about sleep, but voluntary self-reports may not represent all students or measured sleep.
4	What does the survey show about grade 9 and grade 12 respondents? State a finding without claiming that grade level caused it.	Grade 9 respondents reported an average of 7.1 hours and grade 12 respondents 6.4 hours, a difference of 0.7 hour. This describes the replies, not a causal effect or necessarily all students.

PART 3 · YOUR TURN (SAMPLE ANSWER)

Refined question: What sleep differences appear among survey respondents, and how well are grades represented? Source B reports 7.1 hours for grade 9 respondents and 6.4 for grade 12. Source A shows each grade is 25 percent of enrollment, but grade 9 supplied 45 percent of replies. Voluntary self-reporting narrows my conclusion to respondents. To investigate the original question, collect sleep records before and after a bell-time change, with a comparable school and attention to other changes.

Require an actual source-based finding using both provided records, not just a plan to search later. Accept other answerable refinements if their scope follows the evidence and its limits. The data and institutions in this packet are fictional classroom materials. Before-and-after data alone do not establish causation; comparison conditions and other influences matter.