

A Smarter Line

Follow a student council as it solves a school problem.

6.22.B “use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Number the passage details 1 through 7 to show these steps: identify the problem, gather information, list options, consider advantages, consider disadvantages, choose and act, and evaluate the result.

The Refill Station Line

- ① At Riverview Middle School, students noticed that the water bottle refill station near the gym often had a long line after lunch. Some students skipped getting water because the bell rang before their turn. The student council named the problem clearly: too many students needed one station during a short time. Before suggesting a fix, council members counted people in line for five days. They also asked students and coaches when the line was busiest and checked whether another station could be used.
- ② The counts showed that Tuesday and Thursday lines were longest, especially on days with gym classes. The council listed three options. It could ask students to use a second refill station in the science wing, add a new station by the gym, or create a two-minute early release for some gym classes. The science-wing station cost nothing, but it was farther away. A new station would be convenient but expensive. Early release might shorten the line, but students could miss class time.
- ③ Council members chose the science-wing station because it could be used immediately and did not interrupt classes. For two weeks, they placed signs near the gym and asked coaches to tell students about the second station. They kept counting the gym-station line after lunch. The average line fell from 18 students to 7, and fewer students said they skipped water. However, some sixth graders did not know where the science wing was. The council decided the solution was mostly effective and planned to add a clearer sign at the hallway corner.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How did the council gather information before choosing a solution, and how did that information help?

2 Which option had no cost, and what was one disadvantage of that option?

3 Why did the council choose the science-wing station instead of adding a new station or releasing students early? Give two reasons.

4 What evidence showed that the solution was mostly effective, and what problem still needed to be fixed?

3 YOUR TURN _____ Your own words

Choose a small problem at school or in your community. Complete the table to show how you would gather information, compare options, act on a solution, and evaluate whether it worked.

PROBLEM-SOLVING STEP	YOUR PLAN

PART 1 • READ AND MARK

Number the passage details 1 through 7 to show these steps: identify the problem, gather information, list options, consider advantages, consider disadvantages, choose and act, and evaluate the result. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did the council gather information before choosing a solution, and how did that information help?	They counted people in line for five days, asked students and coaches when the line was busiest, and checked whether another station could be used. This showed when the problem was worst and whether an option was possible.
2	Which option had no cost, and what was one disadvantage of that option?	Using the science-wing refill station had no cost. It was farther away from the gym.
3	Why did the council choose the science-wing station instead of adding a new station or releasing students early? Give two reasons.	The science-wing station could be used immediately and did not interrupt classes. A new station was expensive, and early release could cause students to miss class time.
4	What evidence showed that the solution was mostly effective, and what problem still needed to be fixed?	The average line dropped from 18 students to 7, and fewer students said they skipped water. Some sixth graders still did not know where the science wing was.

PART 3 • YOUR TURN (SAMPLE ANSWER)

PROBLEM-SOLVING STEP	YOUR PLAN
Identify the problem	The library checkout line is too long during lunch.
Gather information	Count students waiting for five days and ask students when the line is longest.
List options	Open a second checkout desk, use self-checkout, or release one class early.
Consider advantages and disadvantages	A second desk is fast but needs staff. Self-checkout costs less but needs training. Early release saves time but cuts class time.
Choose and implement	Choose self-checkout and have the librarian show students how to use it for two weeks.
Evaluate the solution	Track waiting time and ask students if checkout is easier. If lines stay long, add a second desk during lunch.

Accept any reasonable problem and plan that includes all six process steps. In the evaluation row, students should name evidence they would collect and explain how they would use it to judge the solution.