What Did You Hear?

How attention and surroundings shape perception

SS24.P.7b "Explain how perceiving can differ from sensing, including how attention and environmental cues can impact what is perceived and what is sensed."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two details about sensory input, circle two details about interpretation, write A beside an effect of attention, and write E beside two different effects of the surroundings.

The Platform Change

1. At a crowded train station, a speaker announces a platform change. Sound waves from the speaker reach travelers' ears, where receptors convert vibrations into nerve signals. That detection is sensing. Perceiving happens when the brain organizes and interprets the signals, perhaps recognizing the words “platform four” rather than hearing an unclear string of sounds. The two processes are connected, but they are not identical. A traveler can sense that a voice is speaking without perceiving every word. Another traveler may recognize a familiar destination name in the same announcement. What reaches the ears matters, but so does what the brain makes of it.

2. Maya is scanning her ticket for a departure time while Leo is waiting for an announcement. When the speaker crackles, both may receive sound waves from it, but Leo directs attention toward the voice. He may pick out the platform number while Maya only notices that someone spoke. Attention can also change how strongly the brain processes incoming sensory signals. It does not mean Maya's ears receive no sound at all. If Maya stops reading and listens closely when the message repeats, she may then identify the number. Her change in perception need not require a louder announcement.

3. Environmental cues matter in two ways. As a train pulls in, its rumble partly covers the speaker's words, so less clear speech reaches the travelers' ears. This interference affects the sensory information available, even if everyone listens carefully. Later, the train moves away and the same announcement is repeated clearly. A sign overhead reads “Platform 4,” giving Maya a visual cue that helps her interpret a muffled “four” she heard earlier. But a sign could also mislead her if it displayed an outdated platform number. The brain uses surrounding information to interpret signals, and that information is not always reliable.

2 ANSWER WITH EVIDENCE

Use the passage

1. A traveler hears a voice but cannot make out the words. What has the traveler sensed, and what has the traveler not perceived?

2. Maya and Leo may receive sound waves from the same announcement. Why might Leo identify the platform number while Maya does not?

3. How does the train's rumble affect what the travelers can sense, even if they listen carefully?

4. How could the overhead sign change Maya's interpretation of the muffled announcement, and why might that interpretation be wrong?

3 YOUR TURN

Your own words

In four or five sentences, describe a situation outside a station in which someone senses something but interprets it differently depending on attention or surroundings. Explain what reaches a sense organ, how attention matters, how one environmental cue changes the sensory information, and how another cue helps or misleads interpretation.

ANSWER KEY

What Did You Hear?

HIGH SCHOOL · SS24.P.7b

PART 1 · READ AND MARK

Underline two details about sensory input, circle two details about interpretation, write A beside an effect of attention, and write E beside two different effects of the surroundings. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	A traveler hears a voice but cannot make out the words. What has the traveler sensed, and what has the traveler not perceived?	**The traveler has sensed sound from a voice but has not perceived the spoken words.**
2	Maya and Leo may receive sound waves from the same announcement. Why might Leo identify the platform number while Maya does not?	**Leo attends to the voice, while Maya focuses on reading her ticket. Their attention can lead them to process and perceive the announcement differently.**
3	How does the train's rumble affect what the travelers can sense, even if they listen carefully?	**The rumble covers some of the speech, so less clear speech reaches their ears.**
4	How could the overhead sign change Maya's interpretation of the muffled announcement, and why might that interpretation be wrong?	**The sign could lead Maya to interpret the muffled word as "four." That interpretation could be wrong if the sign shows an outdated platform number.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

At a school play, sound from an actor's speech reaches my ears. While I study my program, I notice a voice but do not understand the line; when I focus on the stage, I make out more words. A noisy fan masks part of the speech, making the sound reaching my ears less clear. A prop suitcase suggests the actor is leaving, so I interpret an unclear line as a goodbye, though that clue could mislead me.

Accept accurate distinctions between sensory input and interpretation. For the open task, the two environmental cues should have different roles: one changes the available sensory information, while the other influences its interpretation.