Knowing and Doing

Read a garden scene to compare two kinds of memory.

P.4.6 "Compare and contrast between explicit (semantic) and implicit (procedural) memory."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two sentences about what semantic memory helps Maya know, and circle two sentences about what procedural memory helps her do. Write 1 beside a sentence that shows why knowing about a task is different from performing it.

A Tour of the Garden

1. At a community garden, Maya leads visitors past rows of tomatoes. She can tell them that tomatoes originated in the Americas and that the garden's rain barrels collect water from a shed roof. These facts are part of semantic memory, a kind of explicit memory. She can deliberately call up the information and explain it in words. A visitor can learn the same facts by reading the garden signs, even without touching a plant. Semantic memory holds general knowledge and meanings, not just memories of particular events. Knowing a fact, however, does not guarantee that Maya can perform a garden task.

2. Before the tour, Maya ties a sturdy knot to fasten a climbing bean vine to its support. At first she had to watch each movement, but repeated practice made her fingers quicker and steadier. The learned skill relies heavily on procedural memory, a kind of implicit memory. Now she can tie the knot while talking, without deliberately recalling a list of steps. A visitor who can recite the steps may still struggle to make the knot. In contrast, Maya might tie it smoothly yet find it hard to describe exactly how her fingers move.

3. Both semantic and procedural memory help Maya work in the garden, and both can grow with experience. Yet they store different kinds of learning and show themselves in different ways. To check semantic memory, the garden coordinator asks Maya where tomatoes originated; a spoken answer reveals what she knows. To check procedural memory, the coordinator asks her to secure a vine; watching the result reveals what she can do. If Maya forgets a fact about tomatoes, she may still tie the knot well. If she learns a fact about knot tying, she still needs practice to improve the movement.

2 ANSWER WITH EVIDENCE

Use the passage

1. How is Maya's memory of where tomatoes originated different from her memory for tying the knot?

2. How could a visitor learn the garden facts, and how did Maya improve at tying the knot? What does this difference suggest about the two kinds of memory?

3. Why does the coordinator ask Maya a question to check one kind of memory but watch her work to check the other?

4. If Maya forgets where tomatoes originated, does the passage suggest she will also forget how to tie the knot? Explain the contrast.

3 YOUR TURN

Your own words

Think of a skill you have practiced outside the garden. In 4 to 5 sentences, name a related fact you can explain and an action you can perform, compare how you would show each kind of memory, and explain why knowing the fact does not prove you can perform the action.

Knowing and Doing

PART 1 · READ AND MARK

Underline two sentences about what semantic memory helps Maya know, and circle two sentences about what procedural memory helps her do. Write 1 beside a sentence that shows why knowing about a task is different from performing it. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How is Maya's memory of where tomatoes originated different from her memory for tying the knot?	**The tomato fact is semantic memory that Maya can state. Tying the knot is a practiced skill that relies on procedural memory.**
2	How could a visitor learn the garden facts, and how did Maya improve at tying the knot? What does this difference suggest about the two kinds of memory?	**A visitor could read the signs to learn facts, while Maya improved her knot tying through repeated practice. Knowing information and performing a skill involve different kinds of learning.**
3	Why does the coordinator ask Maya a question to check one kind of memory but watch her work to check the other?	**Maya can show semantic memory by stating a fact. The coordinator must watch her secure a vine to check her procedural skill.**
4	If Maya forgets where tomatoes originated, does the passage suggest she will also forget how to tie the knot? Explain the contrast.	**No. She may forget the semantic fact while still retaining the practiced procedural skill.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I know that a guitar's standard tuning uses the notes E, A, D, G, B, and E. That fact is semantic memory because I can say it aloud. I can also change between two chords quickly after practicing, which uses procedural memory. Saying the tuning notes would not prove that my fingers can change chords smoothly; someone would need to watch me play.

Accept other accurate contrasts between a fact a student can explain and a skill a student can demonstrate. For Part 3, the fact and action should relate to the same activity, and the response should explain why stating the fact does not establish the skill.