Mars Sample Mystery

Use nearby details to infer precise word meanings.

CCSS.ELA-Literacy.L.7.4a "Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each word in brackets. Circle the nearby words or phrases that help you infer its meaning, then number each clue group 1 through 4.

Packing Rocks From Mars

(1) NASA's Perseverance rover landed in Jezero Crater on Mars in 2021. Scientists chose this site because it once held a lake and river delta, where flowing water dropped layers of mud and sand. The rover's cameras scan the [rugged] ground, which is rough, rocky, and difficult to cross. Its instruments study minerals in the ancient rocks. By examining these materials, researchers look for signs that Mars may once have supported microbial life in the distant past.

(2) Perseverance carries a drill that removes small, tube-shaped rock samples. Instead of testing every sample on Mars, the rover seals selected cores in metal tubes. These tubes form a [cache] that could be brought to Earth by a future mission years later. The careful storage is essential because a sample can reveal details that a photo cannot. Scientists want to use laboratories on Earth, where larger tools can make precise measurements of the rocks' chemistry.

(3) Before any tube can be studied, it must remain [pristine] during travel. Engineers prevent dirt, air, and living things from Earth from mixing with the sample. This protection helps scientists decide whether any possible life-related chemicals truly came from Mars. The mission also sends thousands of images. Researchers [scrutinize] these pictures closely, searching for cracks, layers, and places where the rover can travel safely. Each observation helps the team choose the next location to explore.

2 ANSWER WITH EVIDENCE

Use the passage

1. What does [rugged] mean in the first paragraph? Which nearby words support your answer?

2. What is a [cache] in the second paragraph? Use details about the tubes to explain.

3. What does [pristine] most likely mean? Use the actions engineers take as clues.

4. What does [scrutinize] mean in the last paragraph? What details reveal its meaning?

3 YOUR TURN

Your own words

Write a two-sentence mini-passage that uses one challenging word a reader can infer from context. Include at least two clues that reveal the word's meaning.

ANSWER KEY # Mars Sample Mystery

PART 1 · READ AND MARK

Underline each word in brackets. Circle the nearby words or phrases that help you infer its meaning, then number each clue group 1 through 4. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What does [rugged] mean in the first paragraph? Which nearby words support your answer?	**Rugged means rough and hard to travel across. The clues are "rough, rocky, and difficult to cross."**
2	What is a [cache] in the second paragraph? Use details about the tubes to explain.	**A cache is a stored collection of rock samples kept in tubes for a future mission.**
3	What does [pristine] most likely mean? Use the actions engineers take as clues.	**Pristine means clean and unchanged, without Earth dirt, air, or living things mixed into the sample.**
4	What does [scrutinize] mean in the last paragraph? What details reveal its meaning?	**Scrutinize means examine very closely. Researchers search the images for cracks, layers, and safe travel places.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

During the experiment, Aisha was meticulous, checking every label twice and lining up the tools in order. Her careful, exact notes allowed the class to repeat each step.

Accept reasonable synonym answers when students support them with accurate nearby clues from the passage. For the open task, accept any two-sentence passage with a challenging word and at least two context clues that clearly suggest its meaning.