

Volcano Word Detectives

Use word parts and context to unlock science words.

ELA.4.V.1.2 "Apply knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in grade-level content."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline geologists, transport, inspect, and portable in the passage. Circle geo, port, spect, and -able in those words, respectively. Use the numbered questions to explain the meanings.

Watching a Volcano

- ① On a rocky island, geologists study a volcano and the Earth beneath it. Scientists measure small shakes and collect rock samples. Their work helps them learn how the volcano changed over time. They cannot know exactly when it will erupt, but careful records can reveal useful patterns. At a nearby station, a computer stores each measurement for the team.
- ② Before a visit, workers transport water, food, and tools to the station. They also inspect the paths that lead up the slope. During an inspection, a worker looks closely for cracks, loose stones, or steam. Keeping supplies portable is important because workers may need to carry them quickly when vehicles cannot reach the station.
- ③ Scientists sometimes use a seismograph to record ground motion. The device makes a line that shows how the ground moved. Team members compare new lines with older ones. If the lines change, they may recheck their equipment and share the information with others. This process helps the group communicate clearly about changes near the volcano.

2 ANSWER WITH EVIDENCE _____ Use the passage

- 1** In geologists, the Greek root geo means Earth. How does that root and one passage detail help explain what geologists study?

- 2** In transport, the Latin root port means carry. How does the sentence about supplies help confirm the word's meaning?

- 3** In inspect, the Latin root spect means look. Use that root and the next sentence to explain what a worker does during an inspection.

- 4** Use port, meaning carry, and the suffix -able, meaning able to be, to explain portable. Why would portable supplies help these workers?

3 YOUR TURN

Your own words

Try a new word: Scientists study geothermal heat from deep inside Earth. The roots are geo (Earth) and therm (heat). Write two sentences: explain geothermal using the roots and context, then use geothermal correctly in a new sentence.

Apply the word parts

Explain how both roots contribute to the meaning. In your new sentence, use geothermal to describe something connected with heat from inside Earth. Underline geothermal in that sentence.

PART 1 • READ AND MARK

Underline geologists, transport, inspect, and portable in the passage. Circle geo, port, spect, and -able in those words, respectively. Use the numbered questions to explain the meanings. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	In geologists, the Greek root geo means Earth. How does that root and one passage detail help explain what geologists study?	They study Earth. The passage says they study the volcano and Earth beneath it, and collect rocks; these details support the root's meaning.
2	In transport, the Latin root port means carry. How does the sentence about supplies help confirm the word's meaning?	Workers carry or move water, food, and tools to the station. That action fits port, meaning carry.
3	In inspect, the Latin root spect means look. Use that root and the next sentence to explain what a worker does during an inspection.	The worker looks closely at or examines the paths for cracks, loose stones, or steam. Spect gives the looking clue, and the details show careful checking.
4	Use port, meaning carry, and the suffix -able, meaning able to be, to explain portable. Why would portable supplies help these workers?	Portable means able to be carried. The workers may need to carry their supplies quickly when vehicles cannot reach the station.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Geothermal means related to Earth's heat because geo means Earth and therm means heat. The scientists measured geothermal heat below the ground.

Geo, port, and spect are roots; port in transport and spect in inspect should not be labeled standalone base words. The suffix -able contributes able to be. A base word can stand alone, as check does in recheck; re- adds again. Marking targets are the four specified words, with meanings explained in the response fields rather than crowded margins. The new-word task applies geo and therm to context; accept other accurate sentences using geothermal. Underline the word itself rather than printing literal underscore characters.