Word Parts at Work

Use roots, affixes, and context to uncover precise meanings.

12.RV.1.C "Use structural analysis of roots, affixes, and etymology to understand the meanings of unfamiliar and complex words."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline four complex words in the passage, circle a meaningful prefix, root, or suffix in each, and number one nearby context clue that helps you infer each word's meaning.

Mapping a Hidden Ridge

1. At dawn, the research vessel Calypso stopped above a deep ridge in the Pacific Ocean. Instead of dragging nets across fragile coral, the crew began a hydroacoustic survey. A transmitter sent pulses downward, and receivers recorded the returning echoes. On a monitor, those measurements became a detailed map of ledges, caves, and steep channels. The map helped the scientists choose safe routes for their remotely operated vehicle. Because the crew could study the ridge before approaching it, they avoided scraping equipment against formations that may have taken centuries to grow.

2. Near one overhang, the vehicle's camera captured brief blue flashes from drifting animals. The researchers described this display as bioluminescent, then collected water samples without disturbing the animals. Later, a marine biologist compared the flashes with observations from other dives. She wanted to learn whether the light appeared during feeding, defense, or communication. The team also attached noninvasive tracking tags to several larger animals. The tags released after a few days, allowing the animals to continue moving normally while the scientists gathered information about depth, temperature, and travel patterns.

3. Back on deck, geologists examined narrow sediment cores lifted from the ridge. Each layer held tiny mineral grains, shell fragments, and occasional pollen carried from distant land. By comparing layers, the team began building a paleoecological record of the area. The record could show how long-term shifts in ocean conditions affected life around the ridge. No single clue settled the question. Instead, the scientists combined maps, samples, and observations, revising their interpretation whenever new evidence complicated an earlier conclusion about environmental change across many centuries.

2 ANSWER WITH EVIDENCE

Use the passage

1. Use the roots and context clues in hydroacoustic to infer what kind of survey the crew conducted.

2. What does bioluminescent most likely mean in this passage? Use one detail from the paragraph to support your inference.

3. How does the prefix non- change the meaning of invasive in noninvasive? Explain how the tags fit that meaning.

4. Use the beginning of paleoecological and the details about sediment layers to infer what a paleoecological record studies.

3 YOUR TURN

Your own words

Choose one word: geothermal, circumnavigation, or multilingual. In two sentences, identify at least two meaningful parts and infer the word's meaning in the first sentence, then use the word in a context that confirms your inference in the second sentence.

ANSWER KEY

Word Parts at Work

GRADE 12 · 12.RV.1.C

PART 1 · READ AND MARK

Underline four complex words in the passage, circle a meaningful prefix, root, or suffix in each, and number one nearby context clue that helps you infer each word's meaning. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Use the roots and context clues in hydroacoustic to infer what kind of survey the crew conducted.	**A survey that uses sound in water to map underwater features.**
2	What does bioluminescent most likely mean in this passage? Use one detail from the paragraph to support your inference.	**It means producing light while alive. The drifting animals gave off brief blue flashes.**
3	How does the prefix non- change the meaning of invasive in noninvasive? Explain how the tags fit that meaning.	**Non- means not, so noninvasive means not disturbing or harming the animals. The animals continued moving normally while wearing the tags.**
4	Use the beginning of paleoecological and the details about sediment layers to infer what a paleoecological record studies.	**It studies past ecosystems or past environmental conditions and their effects on life.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

In geothermal, geo means earth and thermal means heat, so the word refers to heat from within Earth. The town uses geothermal energy to warm buildings with underground heat.

Accept equivalent explanations of word parts and meanings when they fit the passage context. For the open task, accept accurate identification of two meaningful parts, a logical inferred meaning, and a second sentence that demonstrates that meaning.