Signals Before Shore

Fluency monitoring through a complex informational text.

12.DSR.A "Read a variety of grade-level complex text with accuracy, automaticity, appropriate rate, and meaningful expression in successive readings to support comprehension…"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Read the passage once silently and once aloud. Underline up to three words whose recognition you need to confirm, circle punctuation that tells you to pause or shift your voice, and place a 1 beside any sentence that becomes clearer on the second reading.

How Tsunami Warnings Work

(1) In March 2011, a magnitude 9.0 earthquake struck beneath the Pacific Ocean off northeastern Japan. The seafloor shifted abruptly, displacing water and generating a tsunami that crossed the ocean. In the United States, the National Oceanic and Atmospheric Administration, or NOAA, used data from seismic instruments, coastal tide gauges, and deep-ocean buoys to track the event. A buoy does not predict an earthquake. Instead, it detects changes in water pressure after a wave has formed, helping forecasters estimate when and where waves may arrive. Those estimates gave officials time to issue warnings and tell residents to move away from shore.

(2) The warning system depends on precise communication as much as on instruments. When analysts see an unusual pressure signal, they compare it with readings from other stations and with computer models. A model is not a prophecy; it is a calculation based on available measurements. Because waves can reach different coastlines at different times and heights, an alert may be revised as new data arrive. That revision can sound uncertain, yet it often shows that forecasters are monitoring evidence rather than repeating an outdated estimate without testing it.

(3) An alert has value only if people understand what to do. In Japan, evacuation routes and signs in coastal communities can direct residents toward higher ground. However, a sign cannot guarantee safety: people must recognize the warning, decide quickly, and avoid returning merely because the water appears calm. Tsunami waves may arrive as a series, and later waves can be as large as, or larger than, the first. Clear wording therefore matters. A message that names the hazard, location, and action can reduce confusion during the brief interval before waves reach shore.

2 ANSWER WITH EVIDENCE

Use the passage

1. Use the sentence beginning "Instead, it detects" to confirm what a buoy does in this warning system. What does it detect, and how does that help forecasters?

2. Reread the sentence, "A model is not a prophecy; it is a calculation based on available measurements." Which punctuation mark signals a break between related ideas, and what two ideas does it separate?

3. After rereading paragraph 2, what does the phrase "That revision" refer to?

4. When you read the sentence about tsunami waves arriving as a series, which words or phrase should receive emphasis to preserve the warning's meaning? Explain why.

3 YOUR TURN

Your own words

Choose one long or syntactically complex sentence from the passage. Copy it, then write two sentences explaining how you would use punctuation, phrase grouping, or context to read it accurately and expressively and to confirm its meaning.

ANSWER KEY

Signals Before Shore

GRADE 12 · 12.DSR.A

PART 1 · READ AND MARK

Read the passage once silently and once aloud. Underline up to three words whose recognition you need to confirm, circle punctuation that tells you to pause or shift your voice, and place a 1 beside any sentence that becomes clearer on the second reading. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Use the sentence beginning "Instead, it detects" to confirm what a buoy does in this warning system. What does it detect, and how does that help forecasters?	**It detects changes in water pressure after a wave has formed, helping forecasters estimate when and where waves may arrive.**
2	Reread the sentence, "A model is not a prophecy; it is a calculation based on available measurements." Which punctuation mark signals a break between related ideas, and what two ideas does it separate?	**The semicolon signals the break. It separates the idea that a model is not a prophecy from the idea that it is a calculation based on measurements.**
3	After rereading paragraph 2, what does the phrase "That revision" refer to?	**It refers to revising an alert as new data arrive.**
4	When you read the sentence about tsunami waves arriving as a series, which words or phrase should receive emphasis to preserve the warning's meaning? Explain why.	**Emphasize "series" and "later waves can be as large as, or larger than, the first." The emphasis shows that danger may continue after the first wave.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

In the United States, the National Oceanic and Atmospheric Administration, or NOAA, used data from seismic instruments, coastal tide gauges, and deep-ocean buoys to track the event. I pause around "or NOAA" because the commas set off the abbreviation. I group the three data sources as a list, which makes clear that NOAA combined several kinds of evidence.

Accept equivalent explanations that accurately identify a punctuation, context, or phrase-grouping feature in the selected sentence. The response should connect that feature to both fluent reading and the sentence's meaning.