The Changing Shore

Investigate a geographic change through multiple sources

AWH.P.2.3.A "Actively engage in asking and answering geographic questions by acquiring, organizing, and analyzing multiple sources of data and information about the world's past and present."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Number the planning records, satellite images, and fisher interviews as three sources of evidence. Underline a place-based change each source helps investigate, and circle the geographic question in the passage.

What Happened to the Aral Sea?

(1) In 1960, the Aral Sea spread across a vast basin between what are now Kazakhstan and Uzbekistan. Two rivers, the Amu Darya and Syr Darya, fed it. Starting in the Soviet era, irrigation canals diverted much of their water to farms, especially cotton fields. Planning records show where canals were built and how river water was allocated. Those records help explain why less water reached the sea, but a plan does not prove that every canal took exactly the amount assigned. A useful geographic question is: How did changing river use affect different shores of the Aral Sea?

(2) Satellite images from different decades show that the Aral Sea lost much of its surface area after the diversions. Images also show a striking contrast: the northern section in Kazakhstan remains a body of water, while large parts of the southern section have dried out. Satellites can reveal where a shoreline moved, but they cannot show directly why a family left a town or how much water a farmer used. To investigate those questions, researchers must pair images with other evidence. They also need to compare images from similar seasons, because seasonal changes can alter the visible shoreline.

(3) Interviews with fishers from the northern shore describe a return of fishing after Kazakhstan completed the Kok-Aral Dam in 2005. The dam holds water from the Syr Darya in the northern section, so a local recovery is possible even while the southern section remains severely reduced. Memories can describe work and daily life, but individual accounts cannot measure the whole sea. A comparison of river-flow measurements and satellite images from before and after 2005 could test how water supply and shoreline changes relate. Together, these sources suggest that the answer depends on which shore and which year is examined.

2 ANSWER WITH EVIDENCE

Use the passage

1. How could planning records and satellite images together help explain the sea's shrinking? State what each source contributes.

2. What evidence suggests recovery was uneven? Identify the two sections you would compare.

3. A student says satellite images prove a family left because canals took too much water. What can the images show, and what other source could help investigate the family's decision?

4. What sources and time periods could you compare to test whether the dam affected the northern shoreline? Why should the images be from similar seasons?

3 YOUR TURN

Your own words

Choose a different place where a shoreline, river, or flooded area might be changing. Write one geographic question about change over time, name two different sources you would acquire, explain what each could show, and give one limitation of either source.

ANSWER KEY

The Changing Shore

HIGH SCHOOL · AWH.P.2.3.A

PART 1 · READ AND MARK

Number the planning records, satellite images, and fisher interviews as three sources of evidence. Underline a place-based change each source helps investigate, and circle the geographic question in the passage. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How could planning records and satellite images together help explain the sea's shrinking? State what each source contributes.	**Planning records show where canals were built and how water was allocated. Satellite images show that the sea's surface area shrank after the diversions.**
2	What evidence suggests recovery was uneven? Identify the two sections you would compare.	**Satellite images show a remaining northern section but large dried areas in the southern section. Interviews describe a return of fishing on the northern shore.**
3	A student says satellite images prove a family left because canals took too much water. What can the images show, and what other source could help investigate the family's decision?	**The images can show shoreline movement, not why the family left. An interview with the family or other former residents could help investigate their reasons.**
4	What sources and time periods could you compare to test whether the dam affected the northern shoreline? Why should the images be from similar seasons?	**Compare river-flow measurements and satellite images from before and after 2005. Use images from similar seasons so seasonal shoreline changes do not confuse the comparison.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Has flooding along the creek near my school reached more streets since 2000? I would compare dated city flood reports with rainfall records from those years. Flood reports could identify streets where flooding was recorded, but a missing report would not prove a street stayed dry. Rainfall records could show whether heavy storms occurred in years with more reported flooding.

Accept other source combinations when students explain what each can and cannot establish. For Part 3, look for a question tied to a specific place and a comparison across time.