Where Did Water Go?

Investigate a changing shoreline through multiple sources

OKH.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 Underline each source of geographic information, circle what it can show, and number the sources you would compare to investigate why the Aral Sea changed.

Investigating the Aral Sea

1. On a map made in the 1960s, the Aral Sea stretches between Kazakhstan and Uzbekistan. Ports sit beside its shore. Today, satellite images show a much smaller body of water and wide areas of exposed lakebed. That contrast raises a geographic question: Why did the shoreline retreat from communities once built beside it? A historical map locates the old shore, while a recent image locates water now. Neither source alone explains the change. To investigate the cause, a geographer also needs evidence about what happened to the rivers that supplied the sea.

2. During the Soviet period, large irrigation projects diverted water from the Amu Darya and Syr Darya rivers to grow crops, especially cotton. River-flow records can show changes in how much water reached the sea, while records of irrigation plans help explain why water was redirected. Read together with the two shoreline sources, they support a link between diversion and shrinking water. Yet the sources differ in what they measure: a satellite image shows the surface at one time, and a flow record measures water passing a particular station. Neither directly records every family's experience.

3. The pattern is not identical everywhere. A dam completed in 2005 helped the northern part of the Aral Sea in Kazakhstan recover some water, while much of the southern part remains greatly reduced. Comparing satellite images from different years can reveal that uneven pattern. An interview with a former port worker might describe longer trips to reach water, but one person's account cannot establish how all communities changed. A careful answer to a geographic question names its places and dates, checks different kinds of sources against each other, and explains what those sources cannot show.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two sources would you compare to find out how the Aral Sea's shoreline moved? What would each source show?

2. A satellite image shows that the sea shrank, but not why. Which two other kinds of records help investigate the cause, and what does each add?

3. How could you use satellite images from different years to check whether the northern and southern parts of the sea changed in the same way?

4. A former port worker says reaching the water now takes a longer trip. What other sources in the passage could help check the geographic change behind that claim, and what could they not confirm?

3 YOUR TURN

Your own words

Write a new geographic question about a possible effect of the Aral Sea's changing shoreline. Name two kinds of sources you would seek, explain what you would compare, and identify one limit of your evidence.

ANSWER KEY

Where Did Water Go?

HIGH SCHOOL · OKH.P.2.3.A

PART 1 · READ AND MARK

Underline each source of geographic information, circle what it can show, and number the sources you would compare to investigate why the Aral Sea changed. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two sources would you compare to find out how the Aral Sea's shoreline moved? What would each source show?	**Compare a 1960s map showing the former shoreline with a recent satellite image showing where water is now.**
2	A satellite image shows that the sea shrank, but not why. Which two other kinds of records help investigate the cause, and what does each add?	**River-flow records show changes in water reaching the sea. Irrigation plans show why water was redirected.**
3	How could you use satellite images from different years to check whether the northern and southern parts of the sea changed in the same way?	**Compare the water shown in each part across the images. The northern part recovered some water after the 2005 dam, while much of the southern part remained greatly reduced.**
4	A former port worker says reaching the water now takes a longer trip. What other sources in the passage could help check the geographic change behind that claim, and what could they not confirm?	**A historical map and a recent satellite image could show the port's position relative to the old and current shorelines. They could not confirm the worker's actual travel time or route.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

How has exposed lakebed affected air quality in nearby towns? I would compare satellite images showing exposed ground in different years with air-quality measurements from the same towns in those years. I would look for changes in the measurements as more lakebed became exposed. Even if the changes match, other sources of dust could also affect air quality.

Accept other source combinations when the student explains what each source contributes and does not claim it proves more than it can show. For Part 3, the question must be new and the proposed comparison must help investigate it.