Where Water Changed

Compare geographic sources to investigate a changed coastline.

USG.P.2.3 "Demonstrate a mastery of geographic concepts and the use of geographic tools to understand the impact of geography on the past and present. Actively engage in asking and answering geographic questions by acquiring, organizing..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two clues about location or spatial patterns, circle two actions people took, and number one physical change and one effect on people as 1 and 2.

The Netherlands Remakes a Shoreline

1 In 1900, a map of the Netherlands showed the Zuiderzee, a saltwater inlet connected to the North Sea. Fishing towns stood along its shore, and storm winds could push seawater toward low-lying homes. A present-day satellite image shows a long barrier, the Afsluitdijk, across the inlet's northern opening. To compare the two sources, locate the same towns and coastline, check their scales, and then trace where water became land or was separated from the sea. The map records an earlier shoreline; the image records surfaces visible today. Neither source alone tells us why the changes happened.

2 Dutch leaders completed the Afsluitdijk in 1932 to reduce flooding and create opportunities for new land. The barrier cut the inlet off from tidal seawater, and the IJsselmeer became a freshwater lake as rivers fed it. Later, workers drained parts of the lake to build polders, including Flevoland, which now has farms, towns, and roads. On a satellite image, the barrier forms a straight line and the polders have sharp edges, unlike the curved shorelines of the older inlet. Engineering records explain the sequence of decisions that the two images can only suggest.

3 The new land supported housing and agriculture, but the decision also changed ecosystems. Fish that needed the former inlet's saltwater habitat lost much of it south of the barrier; freshwater species gained lake habitat. Dikes, pumps, and water controls now keep the reclaimed ground dry, so people still depend on costly maintenance. A satellite image can show straight shorelines and fields, but it cannot measure salinity or reveal who paid for the project. Compare it with water measurements and public spending records before judging all its effects. Ask whose flood risk fell, whose work changed, and what environmental costs followed.

2 ANSWER WITH EVIDENCE

Use the passage

1. Before comparing the old map and present-day satellite image, what should you check? Name one spatial change the sources could then reveal.

2. What evidence in the passage links the changed shoreline to human decisions rather than only natural processes?

3. How did the project change both land use and habitat south of the barrier?

4. Which additional source could test whether the inlet became freshwater, and why are the map and satellite image insufficient?

3 YOUR TURN

Your own words

Write a short proposal for a new geographic investigation of this region. Ask a question the passage does not answer directly, name two sources you would compare, describe a spatial pattern you would seek, and explain how that pattern could help test an effect of the project.

ANSWER KEY

Where Water Changed

HIGH SCHOOL · USG.P.2.3

PART 1 · READ AND MARK

Underline two clues about location or spatial patterns, circle two actions people took, and number one physical change and one effect on people as 1 and 2. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Before comparing the old map and present-day satellite image, what should you check? Name one spatial change the sources could then reveal.	**Match towns and coastline and check scale. The sources could reveal where inlet water became land.**
2	What evidence in the passage links the changed shoreline to human decisions rather than only natural processes?	**Leaders completed a barrier across the inlet in 1932, and workers later drained parts of the lake to build polders.**
3	How did the project change both land use and habitat south of the barrier?	**Reclaimed land gained farms, towns, and roads, while fish lost much of their former saltwater habitat south of the barrier.**
4	Which additional source could test whether the inlet became freshwater, and why are the map and satellite image insufficient?	**Water measurements could test salinity. The map and satellite image show surfaces, not how salty the water is.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Did new roads concentrate on reclaimed land or along the former shore? I would compare a 1900 road map with a current road map, aligning the same towns and checking scale. I would look for clusters of roads within former water areas and compare them with changes near the old shore. More roads on reclaimed land would suggest that the project created new travel routes, though population records would help test other reasons for road growth.

Accept other supported spatial changes and effects for Questions 1 and 3. For the open task, accept a different question if the proposed sources could reveal its spatial pattern and the explanation does not treat a pattern alone as proof of cause.