

Open Up the Textbook (OUT)

Enlarge

Complicate

Contest

Vivify

In this OUT analysis, 4th students will study the Hoover Dam, from construction to its current use, in order to better understand the positive and negative consequences of huge public works. This OUT analysis provides students with documents that are meant to deliberately enlarge and vivify the textbook.

You may want to watch this [video](#) as an appropriate scaffold into the OUT. Although it focuses on Nevada's drought, it helps students contextualize the Hoover Dam.

This strategy is implemented most effectively when students collaborate to analyze the texts in small, heterogeneous groups. The texts that accompany the textbook are complex and often include difficult vocabulary and syntax. (For a few words that are likely unknown to students and unidentifiable based upon context clues, helpful synonyms are provided in the footnotes.) Students should first annotate each text and then collaborate to answer the text-dependent and specific questions that follow. Questions will highlight sourcing and perspective of the author, close reading of key details from the document that enlarge, complicate, contest, or vivify the textbook, as well as questions that help students corroborate (or not) the accuracy of individual documents. The writing task that follows is an independent activity wherein students will employ evidence from multiple sources to justify their analysis, synthesis, and evaluation.

Standards Addressed: H3.4.4; G8.4.2; RI.4.1; RI.4.2; RI.4.4 RI.4.10

Objective: Students will synthesize multiple sources to support a claim based on evidence from the text.

Source A: The Textbook – [Nevada, Our Home, page 173]

Hard Labor

More than 13,000 men worked to build the Hoover Dam. Some carried water, and some climbed the cliffs high above the river. Men working in the tunnels had to deal with unbearable heat. Much of the work was very dangerous, and things didn't always go well.

Many men were hurt and over 100 men died. No one had ever built a dam this big before. Building a cement wall between two steep canyon walls was an engineering marvel. Tons of steel and concrete were used to make the dam.

Today, the wall of the dam stands 726 feet high and 1,244 feet across. The highway that runs across the top of the dam connects Arizona and Nevada.

When the dam was almost finished, President Franklin Roosevelt came to Nevada to dedicate it. One of the workers said this about the president's visit: *Everybody was excited.... That was quite impressive, hearing him dedicate that dam. After that we went right back to work, moving that pipe again.* –Dean Pulsipher.

Source A Questions for Consideration

1. The author writes that many men were hurt and died building the Hoover Dam. What reasons does the author give for why some men were hurt and died?

2. What clue in the last paragraph tells you the men Building Hoover Dam took their work seriously?

3. Read the following sentence from the section “Hard Labor.”

Building a cement wall between two steep canyon walls was an engineering marvel.

Which sentence from the section supports the conclusion that Hoover Dam was an “engineering marvel?”

- A. Much of the work was very dangerous, and things didn’t always go well.
- B. Many men were hurt and over 100 men died.
- C. Today, the wall of the dam stands 726 feet high and 1,244 feet across
- D. The highway that runs across the top of the dam connects Arizona with Nevada

Source B: Secondary, The Hoover Dam by Michael Stahl Retrieved from http://www.readworks.org/sites/default/files/passages/1230_the_hoover_dam.pdf December 8, 2014

1 The Hoover Dam

2 By Michael Stahl

3

4 It took quite a while for the outlining of formal plans for a
5 new dam in that area to be agreed upon. For almost thirty
6 years, there were disagreements on where the dam should be
7 built and how it should be built. However, during that time,
8 the technology only improved. In a way then, the delays only
9 helped create a more outstanding final product. Finally, in
10 1928, President Coolidge approved the building of what
11 would become the Hoover Dam. More planning took place
12 that spanned three additional years. It was decided that the
13 dam would be 726 feet tall, 1200 feet wide at its crest, and
14 660 feet thick at its base. 6.6 million tons of concrete would
15 be needed then for the 91.8 billion cubic-foot facing. Finally,
16 in 1931 President Herbert Hoover, the man which the dam
17 would eventually be named after, ordered that the work
18 begin on the \$40 million project, which, in 2013, would now
19 cost in excess of \$700 million.

20

21 Thirty-five miles north of the dam site in the state of Nevada
22 was a small city called Las Vegas. Once word got out that the
23 **tremendous** new dam would be built at the Nevada-Arizona
24 border, tens of thousands unemployed workers who were
25 suffering through some of the peak years of The Great
26 Depression flocked to the nearby city and its population
27 quadrupled almost instantly. Though the working conditions
28 were extremely difficult due to high summer temperatures
29 (sixteen people died in just one month from heat stroke), the
30 new Las Vegas citizens were desperate to take any work they
31 could get. Employment for the dam peaked at over 5,000
32 workers being paid at one time in 1934. By the time the
33 Hoover Dam was completed two years later, 112 people had
34 died during its construction, while many more fell ill from
35 pneumonia caused by the working conditions over the course
36 of the months and years to come. Some of those cases
37 resulted in unfortunate fatalities as well. A memorial tribute
38 to the workers who lost their lives rests on the dam site with
39 the inscription: "They died to make the desert bloom." And
40 bloom it did.

41

done by
rules

over a
period of
time

death

Source B Questions for Consideration

1. It took 30 years for formal plans—plans done by rules—to be agreed upon. Why did it take so long for these plans to be agreed upon?
2. Based on details from the passage, when could you reasonably estimate that plans for the Hoover Dam began?
3. In line 23 the author uses the words “tremendous” to describe the dam. What evidence supports the conclusion that the dam is tremendous?
4. Michael Stahl writes, “tens of thousands unemployed workers who were suffering through some of the peak years of The Great Depression flocked to the nearby city and its population quadrupled almost instantly. What can you conclude “flocked” means?
5. Reread lines 27 through 36. What was a positive outcome from building the dam? What was a negative consequence of building the dam?

Source C: The Textbook, Nevada, Our Home, page 171

Taming a River

When the Colorado River flooded the farmlands of southern California, a huge lake formed where many farms used to be. People frustrated by the problem needed help. The Southern Pacific Railroad stepped in to help get the river back on course. People wanted to prevent a flood like this from happening again.

Proposals to dam the mighty Colorado River began a few years after the flood. However, plans to build it didn't come together for almost 20 years.

There were many good reasons besides flood control to dam America's wildest river. The dam would also help slow the flow of the river, making it easier for boats to travel along it. But the biggest reason to build the dam was the millions of gallons of water that could be used to generate electricity for farms and homes in the area.

Source C Questions for Consideration

1. The Southern Pacific Railroad "stepped in" to "get the river back on course." Why would the Southern Pacific Railroad choose to step in or get involved?

2. To tame means to curb or subdue. Why were people interested in "taming" the Colorado River?

Source D:



Source D Questions for Consideration

1. Look over the images above. How does the information from the images support the conclusion that the Colorado River needed to be “tamed?”
2. The Southern Pacific Railroad stepped in to help get the river back on course. How do the images help you understand why the Southern Pacific Railroad chose to or elected to help? (Refer to Document C for information about the Southern Pacific Railroad.)

Source E: Genre (secondary) – From Desert USA, retrieved January 30, 2015

Dam Benefits

Colorado River water irrigates more than a million acres of land in the U.S., and nearly half a million acres in Mexico. The water helps meet the municipal and industrial needs of over 14 million people. As it passes through Hoover's turbines, the water generates low-cost hydroelectric power for use in Nevada, Arizona and California. About 4 billion kilowatt-hours of energy, enough for 500,000 homes, are generated annually.

Water that was once muddy is now sparkling clear in reservoirs and in stretches of the Colorado River. Hoover and other dams on the Colorado have tamed the turbulent flow, creating clean bodies of water that provide recreation for more than 10 million people each year. These waters have also provided habitats for fish and wildlife in areas that were once nearly barren.

Colorado River water stored behind Hoover Dam irrigates some of America's richest farmlands. Valley and mesa lands in the warm desert climate along the river grow a wide variety of fruits, vegetables and other non-surplus crops throughout the year. Major irrigation projects which benefit from Hoover's control and regulation of the Colorado River include the Palo Verde Valley, the Colorado River Indian Reservation, the Yuma and Gila projects in Arizona, and the Imperial and Coachella valleys in California.

Source E Questions for Consideration

1. Reread paragraph one. According to this paragraph, what are two current advantages or benefits of having the Hoover Dam?
2. In Document C you learned what "tame" means. From paragraph two, what examples does the author give to show the consequences or results of having tamed the Colorado River?
3. The author claims that the "Hoover Dam irrigates some of America's richest farmlands." How does the author support this claim? What evidence does he use?
4. The title of the selection is "Dam Benefits." Reread your answers to questions one, two and three. List the benefits you found.

Source F (secondary) from the University of Minnesota, Retrieved February 19, 2016
from <http://www.tc.umn.edu/~dama0023/hydroelectric.html>

Hydroelectric Power

Hydroelectric power is electricity generated by hydropower. The electricity is typically created when the water is passed over large mechanical turbines, the water pressure forces the turbines to turn, the mechanical energy created is then converted into electricity.

Disadvantages of Hydroelectricity

Like all power plants, hydroelectric plants are very expensive to build, and must be built to a very high standard. The high cost means that plants must operate for a long time to become profitable. The creation of dams can also create flooding of land, which means natural environment and the natural habitat of animals, and even people, may be destroyed.

The building of dams for hydroelectric power can also cause a lot of water access problems. The creation of a dam in one location may mean that those down river no longer have control of water flow. This can create controversy in places where neighboring countries share a water supply.

Source F Questions for Consideration

1. The root *hydro/hydra* means water. What words from the passage have this root? What can you guess the words you found mean?

2. The author claims there are disadvantages or problems with building hydroelectric plans. How does the author support this claim?

Writing Task

This is an informational writing task based on NVACS standards W.4.2, and W.4.9. Students will demonstrate their understanding of the texts as well as the ways in which the textbook was enlarged and complicated.

There were many positive things to happen because the Hoover Dam was built. There were also negative effects from having the Hoover Dam built. Decide: **Do you think the construction of the Hoover Dam was mostly positive or negative?**

- Answer the above question using evidence from at least four of the documents. Write a clear claim and provide all the appropriate pieces of evidence to support your idea. After each piece of evidence cited in a direct quote or paraphrase (your own words), please add the source letter in parentheses, for example (Source B).
- For each piece of evidence, clearly reason (explain) why this piece of evidence helps support your claim. Underline your reasoning. Reasoning can be in the same sentence or the evidence or come before or after the sentence that includes the evidence.
- Choose 2 of the important vocabulary terms from the box below to include in your writing. Add at least two context clues for each term to demonstrate your understanding. Circle your context clues for each term.

tame	formal	turbulent	tremendous
benefits	advantages	fatalities	course