The Dam Decision

Use what you know and what the text reveals to examine a river decision.

RI.9-10.10 "Routinely and flexibly develop and apply background knowledge along with a variety of comprehension strategies to understand and analyze grade-appropriate, complex informational text independently."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle a detail that challenges an assumption about rivers, underline two cause-and-effect links, and mark one short-term effect 1 and one long-term effect 2. Use your marks to check how your understanding changes as you read.

What Happens When a Dam Comes Down?

1 From a bridge, an old dam can look like a permanent part of the river. But many dams were built for jobs they no longer do, such as powering a mill that closed decades ago. A dam slows the current, creating a reservoir where sand and mud settle instead of traveling downstream. That trapped material is called sediment. The wall can also block fish that need to reach upstream breeding grounds. These effects are easy to miss if a calm reservoir seems healthier than a fast, muddy river. In a moving river, however, mud and sand are not always signs of damage.

2 Removing a dam can reconnect stretches of river, allowing fish to move and sediment to reach downstream habitats. Yet taking out the wall does not instantly produce a healthy river. Sediment stored behind it may wash downstream in a sudden pulse, clouding water and covering places where fish lay eggs. Engineers often study how much sediment has accumulated and may remove a dam in stages to limit that pulse. Even then, some species may take years to return, especially if other barriers remain upstream. The same action can therefore help a river over time while creating short-term problems.

3 People also depend on what a dam holds back. A reservoir may supply drinking water, offer recreation, or reduce certain flood risks; another dam might generate electricity. Before removal, a community has to ask which benefits still exist and whether other systems can replace them. Keeping a dam has costs, too: aging structures require maintenance, and a barrier can change the flow of water and sediment for decades. The question is not whether dams are simply good or bad. It is whether this dam's current benefits outweigh its costs, and how removal could be managed if the balance has shifted.

2 ANSWER WITH EVIDENCE

Use the passage

1. A reader might assume that clear, still water is healthier than muddy, moving water. Which two details in paragraph 1 challenge that assumption, and how?

2. Trace a cause-and-effect chain from removing a dam to a possible short-term problem for fish.

3. Removal can help a river, yet some fish may take years to return. Which details in paragraph 2 explain both parts of that statement?

4. A town says its dam is old, so it must come down immediately. Which two details from the passage complicate that conclusion?

3 YOUR TURN

Your own words

A town's unused mill dam blocks fish, but families get drinking water from its reservoir. Write four or five sentences recommending how the town should investigate the dam's future. Connect what you know about flowing water to one possible effect, weigh a benefit against a cost, and identify information the town needs before deciding.

ANSWER KEY

The Dam Decision

HIGH SCHOOL · RI.9-10.10

PART 1 · READ AND MARK

Circle a detail that challenges an assumption about rivers, underline two cause-and-effect links, and mark one short-term effect 1 and one long-term effect 2. Use your marks to check how your understanding changes as you read. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	A reader might assume that clear, still water is healthier than muddy, moving water. Which two details in paragraph 1 challenge that assumption, and how?	**The calm reservoir traps sand and mud that would otherwise travel downstream, and the dam can block fish from breeding grounds. Its clear, still appearance does not show those effects.**
2	Trace a cause-and-effect chain from removing a dam to a possible short-term problem for fish.	**Removal can release stored sediment in a sudden pulse. The sediment may cover places where fish lay eggs.**
3	Removal can help a river, yet some fish may take years to return. Which details in paragraph 2 explain both parts of that statement?	**Removal reconnects stretches of river so fish can move. Their return may still take years if other barriers remain upstream.**
4	A town says its dam is old, so it must come down immediately. Which two details from the passage complicate that conclusion?	**The town may still depend on the reservoir for drinking water or another benefit. It may also need to study stored sediment and remove the dam in stages to limit a harmful downstream pulse.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Because flowing water carries loose material, removing the dam could send stored sediment downstream and cover fish eggs. Removal could also reopen a route to upstream breeding grounds. The town should measure the sediment and find out how families would get safe drinking water without the reservoir. Those findings could guide a staged removal or support keeping the dam until a replacement water supply exists.

Accept equivalent inferences supported by the passage. For the open task, students may favor keeping or removing the dam if they consider drinking water, fish passage, and a possible downstream effect.