Water, Rules, Work

Trace how environmental and political changes reshape a regional economy.

WG.C.6.5 "Explain how changes in the physical environment and political environment influence changes in economic activity within a region."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline changes in the physical environment, circle changes in laws or rules, and draw arrows from those changes to the economic effects they help cause.

Changing Work in the San Joaquin Valley

1 In California's San Joaquin Valley, farms grow almonds, grapes, and vegetables for markets far beyond the region. These crops depend on irrigation because summers are hot and dry. During droughts, less rain and mountain snow leave less water in rivers and reservoirs. Farms that receive less surface water may pump more groundwater or leave some fields unplanted. Pumping requires energy and costs money, while unplanted fields produce no harvest to sell. Those choices affect farmworkers, truck drivers, and packing businesses as well as growers. A change in the physical environment can therefore spread through several parts of the regional economy.

2 Water use also changes when laws and rules change. California's 2014 Sustainable Groundwater Management Act requires many groundwater basins to develop plans to avoid long-term depletion. Local groundwater agencies carry out those plans and can limit pumping. A grower who cannot replace lost river water with groundwater may switch to a crop that needs less irrigation or reduce planted acreage. Less acreage can mean fewer seasonal jobs and smaller orders for farm suppliers. The law did not cause the drought. It changes which responses to drought are possible and encourages growers to plan for a more reliable water supply.

3 These pressures can also change where businesses invest. A food-processing company needs a steady flow of crops before it expands a plant. If drought reduces harvests and pumping limits make water supplies less predictable, the company may delay an expansion, even if the soil remains productive. Other businesses may find opportunities: a firm that installs drip irrigation could gain customers as growers try to use less water. Neither the weather nor a rule determines a single outcome for every farm. Together, physical water shortages and political decisions about groundwater shape costs, jobs, and the kinds of work that grow in the valley.

2 ANSWER WITH EVIDENCE

Use the passage

1. How can a drought affect both a grower's costs and a packing business in the valley?

2. How can a limit on groundwater pumping change what a grower plants when river water is scarce?

3. Why might a food-processing company delay an expansion? Explain the roles of both the drought and the pumping limits.

4. How could the same water pressures reduce some jobs while creating business for a drip-irrigation firm?

3 YOUR TURN

Your own words

Imagine that storm surges often flood a coastal port's main road. The local government builds a rail line on higher ground to an inland hub and requires freight firms to use the hub for port shipments. In one paragraph, explain how both changes could affect two kinds of economic activity, including one possible opportunity.

ANSWER KEY

Water, Rules, Work

HIGH SCHOOL · WG.C.6.5

PART 1 · READ AND MARK

Underline changes in the physical environment, circle changes in laws or rules, and draw arrows from those changes to the economic effects they help cause. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How can a drought affect both a grower's costs and a packing business in the valley?	**With less surface water, a grower may pay to pump groundwater or leave fields unplanted. A smaller harvest gives packing businesses less produce to handle.**
2	How can a limit on groundwater pumping change what a grower plants when river water is scarce?	**If the grower cannot replace scarce river water by pumping, the grower may switch to a crop that needs less irrigation or plant fewer acres.**
3	Why might a food-processing company delay an expansion? Explain the roles of both the drought and the pumping limits.	**Drought can reduce harvests, and pumping limits can make it harder to replace lost surface water. The company may delay expanding because it needs a steady supply of crops.**
4	How could the same water pressures reduce some jobs while creating business for a drip-irrigation firm?	**Growers who plant fewer acres may hire fewer seasonal workers. Growers trying to use less water may buy drip-irrigation systems, creating customers for the installation firm.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Frequent storm surges could close the port road, delaying deliveries for seafood exporters and trucking firms. The new rule would shift port shipments to the inland rail hub, reducing those delays but requiring firms to change how they move cargo. Seafood exporters might face new transfer costs. Trucking firms could lose long trips to the port but gain short trips between warehouses and the hub. A warehouse near the hub could also gain customers. Together, flooding and the government's response would shift some jobs and investment inland rather than end port trade.

Accept other passage-supported cause-and-effect explanations, including effects on farm suppliers or transport. For Your Turn, look for a distinct effect of the flooding, an effect of the rail-hub rule, and a plausible interaction that affects two economic activities.