Farms of Tomorrow

Predict how one food-growing innovation could shape communities.

6.18.C "make predictions about future social, political, economic, cultural, and environmental impacts that may result from future scientific discoveries and technological innovations."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline every sentence that predicts a future impact. In the margin, write one code for each underlined sentence: S for social, P for political, E for economic, C for cultural, or N for environmental.

Growing Up, Not Out

1. Vertical farms grow vegetables in stacked indoor trays instead of open fields. LED lights provide light, and pumps deliver water and nutrients to plant roots. Computers can measure temperature and moisture, so growers can adjust conditions quickly. Some vertical farms already sell lettuce, herbs, and other greens near cities. They use electricity, but they can use far less land than field farms. Engineers are testing ways to make the lights, pumps, and building systems use less energy.

2. Future vertical farms could reduce the amount of land cleared for crops, leaving more habitat for wildlife. This effect would depend on how much electricity the buildings use. A farm company might sell fresh greens to nearby stores year-round and employ technicians to maintain sensors and pumps. That change could create jobs requiring new training. In neighborhoods far from supermarkets, a local vertical farm could make fresh vegetables easier to buy. This change could affect families' food choices.

3. City leaders may need to decide whether unused warehouses can become vertical farms and which safety rules will apply. Those decisions could shape where farms are built. Some cooks may begin using locally grown greens in new recipes or festivals. This change could influence which foods a community connects with local identity. Future results are not certain because energy prices, public policies, and customer choices can change.

2 ANSWER WITH EVIDENCE

Use the passage

1. What environmental impact could result if vertical farms spread?

2. What condition could affect whether the environmental impact happens?

3. What economic impact might a vertical farm have?

4. Name one political prediction and one cultural prediction from the passage.

3 YOUR TURN

Your own words

Choose a future technology that is different from vertical farming. Write five labeled predictions, one each for a social, political, economic, cultural, and environmental impact it could have.

ANSWER KEY

Farms of Tomorrow

GRADE 6 · TEKS 6.18.C

PART 1 · READ AND MARK

Underline every sentence that predicts a future impact. In the margin, write one code for each underlined sentence: S for social, P for political, E for economic, C for cultural, or N for environmental. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What environmental impact could result if vertical farms spread?	**They could reduce land cleared for crops, leaving more habitat for wildlife.**
2	What condition could affect whether the environmental impact happens?	**It would depend on how much electricity the buildings use.**
3	What economic impact might a vertical farm have?	**It could create jobs for technicians who maintain sensors and pumps, and those jobs may require new training.**
4	Name one political prediction and one cultural prediction from the passage.	**Political: City leaders may decide whether warehouses can become farms and which safety rules apply. Cultural: Cooks may use local greens in new recipes or festivals.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Technology: Delivery drones. S: Delivery drones could help homebound people receive medicine more easily. P: Cities may create flight rules to protect people near drone routes. E: Stores could pay less for some local deliveries. C: Some neighborhoods may change their ideas about seeing machines in the sky. N: Drones could reduce car trips for small deliveries, lowering exhaust pollution.

Accept the stated impact category when the student's answer matches the prediction in the passage. For the open task, accept plausible, clearly labeled predictions that connect one technology to all five types of impact.